



65TH | ANNUAL 2024-2025 | REPORT

राष्ट्रीय प्रौद्योगिकी संस्थान दुर्गापुर
NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

An Institute of National Importance under Ministry of Education, Government of India
Mahatma Gandhi Avenue, Durgapur- 713209, West Bengal, India

65th

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2024-25

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MAHATMA GANDHI AVENUE, DURGAPUR-713209

West Bengal, INDIA

**An Institute of National Importance under Ministry of Education
Government of India**

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From Director's Desk



It is my pleasure to publish the 65th Annual Report 2024-25 of the Institute highlighting the progress made during the last financial year

National Institute of Technology Durgapur, an Institute of National Importance fully funded by the Ministry of Education, Government of India, has traditionally been engaged in imparting quality technical education and pursuing active research in cutting edge areas. The students are also encouraged and supported to get initiated to research and innovation early. Curriculum is revised continually to facilitate flexible, multi-disciplinary learning and stimulate pursuance of their passion.

The revised curriculum and syllabus of all B. Tech, M. Tech. and MBA programs have been implemented.

The faculty and the students have 549 research articles published/accepted in top peer-reviewed journals in the last year. Eighty-nine (89) PhD degrees were awarded. Total 141 sponsored projects are being executed by the faculty members with sponsored projects from DST, DBT, MEITY, DRDO, MoES, DAE, ICMR, UGC-UKIERI, MNRE, CSIR, ICSSR, etc. NIT Durgapur has been selected as the National Coordinator for BRICS Network University Programme under the thematic area “Water Resources and Pollution Treatment”. In its pursuit towards strengthening its common research and academic infrastructure and encourage multi-disciplinary research, Utkarsha Bhavan is set up through HEFA loan and established four new advanced centres of research.

The efforts by the Institute attaining excellence in academics, research and outreach has been recognised by the NIRF-2025, where it was ranked 49th in Engineering.

The Institute has also made its mark in its outreach activity through 97 Invited Lectures that were delivered by the faculty members of different departments of the Institute and through 26 online/off-line workshops/seminars that were organized by various departments of the Institute. 721 UG & PG students were placed through in-campus interviews in the session 2024-25.

I look forward to further strides of the institute to newer heights.

Prof. Arvind Choubey

Director

National Institute of Technology Durgapur

Progress at a Glance (2024-2025)

- The faculty members of the Institute have publication 549 research articles/reviews in peer-reviewed journals, and also published 281 papers in proceedings of national and international conferences.
- Eighty-nine (89) PhD degrees were awarded by the Institute.
- The revised curriculum and syllabus of all B. Tech, M. Tech. and MBA programs have been implemented.
- Total 141 sponsored projects are being executed by the faculty members during the financial year.
- Faculty members acted as reviewers for 365 peer-reviewed journals.
- Total 97 Invited Lectures were delivered by the faculty members of the Institute and 26 online/off-line workshops/seminars were organized by various departments of the Institute.
- Twenty three (23) number of patents have been filed by the faculty members of different departments of the Institute.
- Total 721 UG & PG students were placed through in-campus interviews in the session 2024-25. Apart from that few students have opted for higher studies in various IITs and IISc. 119 companies, including most of the global players, visited the campus to recruit UG students while 53 companies recruited the M Tech, MBA, and M.Sc students.
- *Utkarsha Bhavan*, a 10-storied research-academic building constructed with the HEFA loan is completed and set up. It is ready to accommodate four centres of advanced research and central research and common laboratory facilities.
- In the academic year 2024-25, the NSS team participated in awareness events like World Blood Donor Day, International Day against Drug abuse and Swachhta Hi Sewa. Alongside they also participated in Har Ghar Tiranga campaign, Partition Horrors Remembrance Day, Hindi Pakhwada and Meri Maati Mera Desh Amrit Kalah Yatra.
- Along with its academic excellence, NIT Durgapur also has a rich heritage in games and sports. Secured Two Gold and One Silver medals in All India Inter NIT Body-Building Competition (Men) organized by NIT Surathkal during January 10-12, 2025. Secured Two Silver medals in Women Swimming Championship Organized by NIT Surathkal during January 10-12, 2025. Secured One Bronze Medal in Track & Field Meet (Women) organized by NIT Surathkal during January 10-12, 2025.



1. Introduction

1.1 Vision

To impart quality technical education and focus on research and innovation to cater to the need of the country.

1.2 Mission

1. To impart quality technical and scientific education and produce engineers, technologists, scientists and citizens who will contribute meaningfully to the growth and development of the country and excel in various disciplines of knowledge.
2. To create a research-oriented teaching-learning environment in the Institute with a focus on excellence and innovation.
3. To embark upon an inclusive growth path committed to the uplift of the community.
4. To have an increased global presence.

1.3 Historical Background

National Institute of Technology Durgapur was established as one of the 17 Regional Engineering Colleges in 1960 as a joint venture of the Government of India and the Government of West Bengal and was registered under the Register of Societies Act. With introduction of cutting-edge technology in the emerging areas, the Institute maintained its momentum with definite mission and vision, which enabled it to get the prestigious status of National Institute of Technology under full administrative and financial control of the Government of India with a “Deemed to be University” status with effect from July 03, 2003. The Institute has now been declared as an “Institute of National Importance” by the Govt. of India, vide NIT Act 2007 (29 of 2007) implemented on August 15, 2007.

It started with only four branches of engineering: Civil, Mechanical, Metallurgical and Electrical Engineering for undergraduate studies in 1960. Chemical Engineering was started in 1964. At present, the Institute offers eight B. Tech. programmes and eighteen M. Tech. programmes. Apart from this, two-year MBA programme is also offered. The Institute also runs M. Sc. programmes in Applied Geology and Geo-Informatics, Physics, Chemistry, Life Sciences and Mathematics.

1.4 Location

NIT Durgapur is located in the heartland of industrial activities and the mineral-rich region of West Bengal, also known as ‘The Ruhr of India’. The city of Durgapur is well connected by rail with Kolkata, 158 km away, and is an important railway station on the main New Delhi-Kolkata route. It is a two and a half hours’ drive from Kolkata airport along Durgapur Expressway and NH2, and there is a military airport at Panagarh, only 20 km from Durgapur, in addition there is a Civil Airport, Kazi Nazrul Islam Airport Durgapur, only 15 km from the Institute. The place is only an hour’s drive from Tagore’s Santiniketan and has quite a few tourist spots nearby. The climate is moderate.

1.5 Campus

The Institute campus, spreading over 187 acres, is known for its serene environment. Buildings housing the departments and laboratories, residential blocks for faculty and staff, students’ hostels are far outnumbered by the trees in the campus which is self-reliant with facilities like roads, water supply, power distribution network, a market complex, banks and post office.

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1.6 Notable Achievements

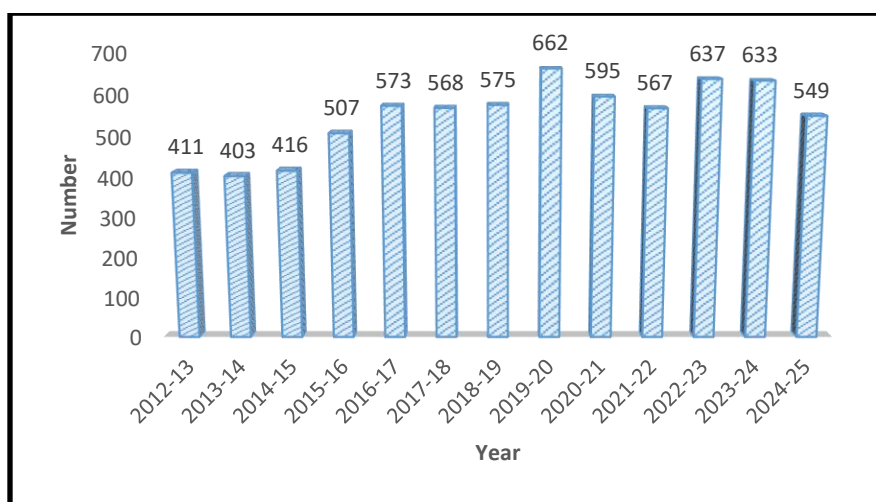


Fig. 1. Publication in journals in the last few years

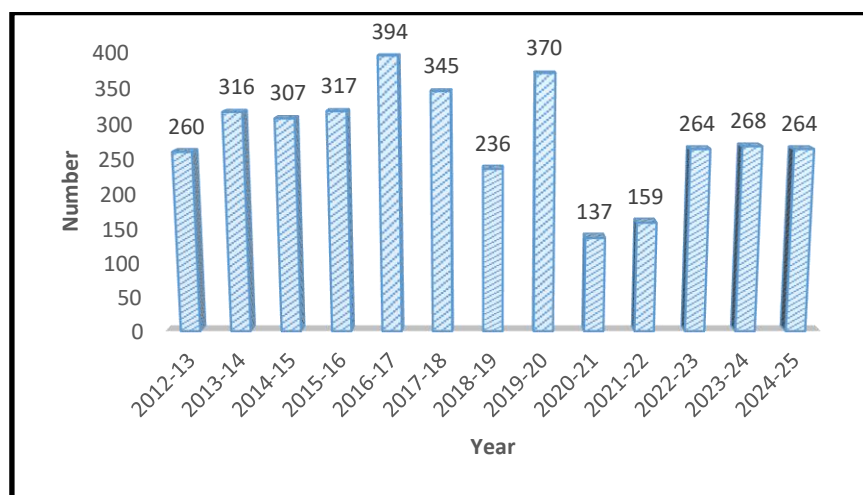


Fig. 2. Presentation in conferences/symposiums in the last few years

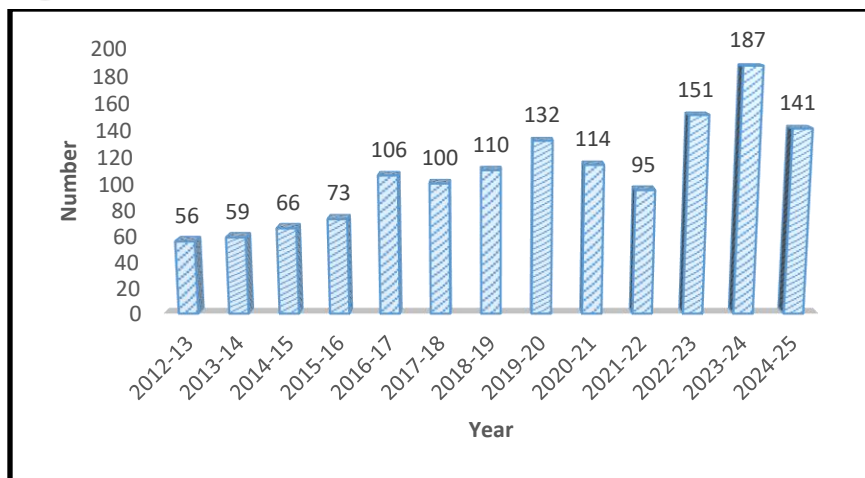


Fig. 3. Number of sponsored projects during the last

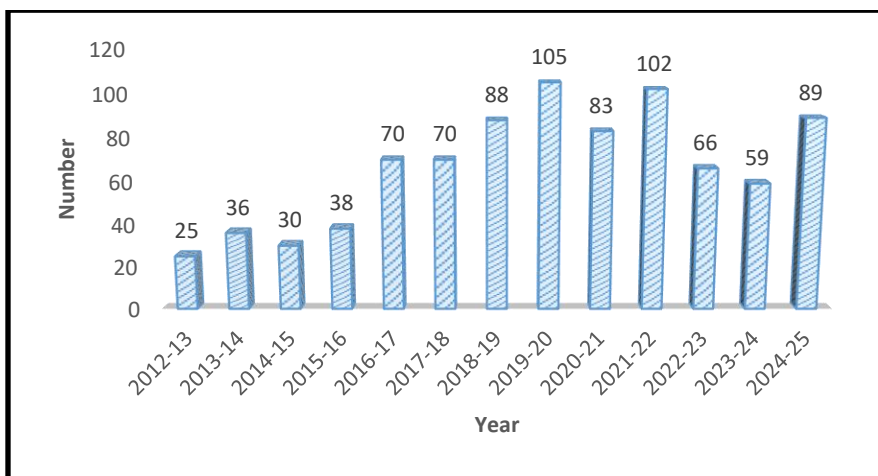


Fig. 4. Number of PhD degrees awarded during the last few years

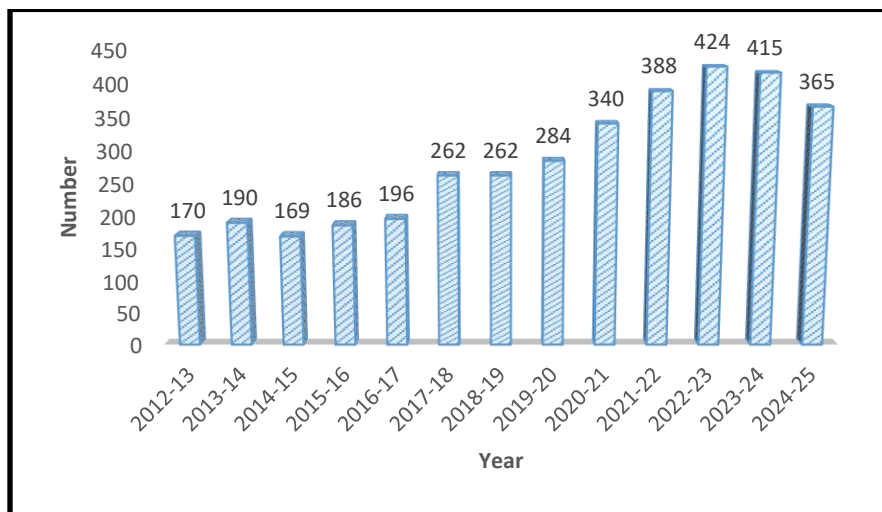


Fig. 5. Reviewers of journals/books during the last few years

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1.7 List of MoUs (active during 2024-25)

Year	MoU signed with National Institutions/Organizations/Industries and date of signing	Valid Upto
2023	Bureau of Indian Standard	For a period of five years
2021	TCG Centres for Research and Education in Science and Technology	For a period of five years
2021	Central Board of Irrigation and Power	For a period of five years
2021	National Jute Board	For a period of three years
2021	Central Manufacturing Technology Institute, Bangaluru	For a period of five years
2022	NHPC Ltd	For a period of five years
2022	SAIL	For a period of five years
2022	National Univeristy of Science and Technology, Oman	For a period of three years
2022	IOCL Haldia	For a period of five years
2022	Sister Nivedita University, Kolkata	For a period of five years
2022	Haldia Petrochemicals Ltd	For a period of five years
2024	Vilnius Gediminas Technical University	For a period of five years

1.8 Alumni

The Dean of Alumni Affairs & Outreach (AAO), together with the Student Alumni Interaction Cell (SAIC), works to strengthen connections with REC/NIT Durgapur alumni across the globe. Their initiatives focus on building research and academic collaborations with universities and organizations in India and abroad, while also driving outreach programs that enhance the Institute's visibility and global presence.

Through these efforts, alumni are actively engaged in the holistic growth and development of the Institute. By creating opportunities for meaningful interaction, AAO and SAIC foster a mutually beneficial relationship that aligns with the Institute's mission. Alumni are further encouraged to share their expertise by conducting seminars, workshops, and interactive sessions, thereby enriching the learning environment for students and faculty alike.

1.8.1 Distinguished Alumnus Award

Section	Name of the selected Alumni for Award	Batch/Discipline	Position /Contribution
Industry & Corporate	Mr. Subrata Bhattacharya	BE (MME) 1982 ME (1990)	Significant contribution in SAIL, JSL (Retired)Whole time Director on Board, Jindal Stainless Ltd.
Entrepreneurship Venture	Mr. Unmesh Mahajani	BE (Mechanical), 1982	Excellence in Entrepreneurial Venture: Aura Laserfab Private Limited, Pune
	Mr. Thomas Mookken	BE (Electrical), 1984	Excellence in Entrepreneurial Venture: NEOGEN LABS

1.8.2 Alumni Talks

Date	Alumni Talks
18th May 2024	Speaker: Rishi Agarwal, Strategy&, Senior Associate, IIM Bangalore PGP'24, Ex-HSBC, NIT Durgapur'20, Mode: Online
29th June 2024	Speaker: Vivek Kr. Shaw, Dept. of Mechanical Engineering, Batch of 2017, Mode: Online
9th November 2024	Speaker: Prabhat Rathod, American Express, Data Analyst, IIM Bangalore'25, Dept. of ECE, NIT Durgapur (2019-2023) Mode: Online
14th November 2024	Speaker: Prof. Krishanu Biswas, Professor, Dept. of Materials Science & Engineering, IIT Kanpur, B.E Metallurgical & Materials Engineering (1997), NIT Durgapur, Dept. of MME, Mode: Offline
15th November 2024	Speaker: Mouchandra Paul, Prime Minister's Research Fellowship (2022-2025), PhD Scholar, Dept. Of Chemical Engineering, IIT Kanpur, Dept. of Biotechnology, NIT Durgapur (2016-2020)



Date	Alumni Talks
	Topic: 3D Bioprinting.
27th November 2024	Speaker: Anisha Majumdar, Omni Active Health Technologies, Planning and process Excellence Manager, Dept. Of ME, NIT Durgapur (2017-2021) Mode: Offline
3rd December 2024	Speaker: Naveen Srivastava, Power grid corporation of India, Director (Operations), Dept. of EE, NIT Durgapur (1985-1989)
7th December 2024	Speaker: Ansh Jha, Unilever, UFLP Management Trainee, Dept. Of ME, NIT Durgapur (2019 - 2023)
10th January 2025	Speaker: Susanta Roy, Dept. of EE, NIT Durgapur (1997-2001).
7th February 2025	Speaker: Suvasish Mukhopadhyay, Associate Professor at COEP, Dept. of CE, NIT Durgapur (1982-1986).
22nd February 2025	Speaker: Chetan Khaitan, Founder CEO, Toolsvilla, Dept. of BT, NIT Durgapur (2010 – 2014) Mode: Online
28th February 2025	Speaker: Animesh Datta, PhD Student at University of Buffalo, Dept. of ECE, NIT Durgapur (2016-2020) Mode: Online

1.8.3 Donation Received from Alumni during 2024-2025

The total valuation of alumni donations/contributions for the year 2024–25 is ₹23,02,500/-, which includes an advanced automatic treadmill, equipment for the medical unit, a camera, and a 100 ft+ high flag mast.

1.9 New Initiatives

1.9.1 SMILE ERP

"National Institute of Technology Durgapur adopted the SMILE ERP system in the year 2019. The acronym SMILE stands for Software for Managing Institutes of Learning and Education that was developed by IIT Kharagpur and NIT Durgapur procured it through TEQIP-III under the direct funding of MoE. The available modules need customization to adopt it for various verticals like Academics, Finance, HR and Administration. At first in priority basis Faculty Annual Report data module has been launched by the Honorable Director on 16th August 2022. Other modules would be customized, contingent to availability of suitable manpower for the ERP Cell."

2. Administration

2.1 NIT Council (As per Statutes)

- The Minister in charge of the Ministry or Department of the Central Government having administrative control of the technical education, ex officio-Chairman
- The Secretary to the Government of India in charge of the Ministry or Department of the Central Government having administrative control of the technical education, ex officio- Vice-Chairman
- The Chairperson of every Board, ex officio
- The Director of every Institute, ex officio
- The Chairman, University Grants Commission, ex officio
- The Director General, Council of Scientific and Industrial Research, ex officio
- Four Secretaries to the Government of India, to represent the Ministries or Departments of the Central Government dealing with biotechnology, atomic energy, information technology and space, ex officio

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- The Chairman, All India Council for Technical Education, ex officio
- Not less than three, but not more than five persons to be nominated by the Visitor, at least one of whom shall be a woman, having special knowledge or practical experience in respect of education, industry, science or technology
- Three members of Parliament, of whom two shall be chosen by the House of the People and one by the Council of States (Provided that the office of member of the Council shall not disqualify its holder for being chosen as or for being, a member of either House of Parliament)
- Two Secretaries to the State Government, from amongst the Ministries or Departments of that Government dealing with technical education where the Institutes are located, ex officio
- Financial Advisor, dealing with the Human Resource Development Ministry or Department of the Central Government, ex officio
- One officer not below the rank of Joint Secretary to the Government of India in the Ministry or Department of Central Government having administrative control of the Technical Education, ex officio - Member-Secretary



2.2 BOG

Sl. No.	Nomination Under	Name and Designation of nominated Member	Serve as
01.	Section 11 Clause (a)	Prof. Arvind Choubey Chairperson, Board of Governors National Institute of Technology Durgapur, Durgapur-713209	Chairperson
02.	(b)	Prof. Arvind Choubey Director, National Institute of Technology Durgapur Durgapur-713209	Member
03.	(c)	Ms. Saumya Gupta Joint Secretary, Department of Higher Education, Ministry of Education, (Shiksha Mantralaya), Shastri Bhawan, New Delhi	Member
04.	(c)	Shri Anil Kumar Director (Finance), Department of Higher Education Ministry of Education, (Shiksha Mantralaya), Shastri Bhawan, New Delhi	Member
05.	(d)	Prof. Chiranjib Bhattacharya Pro-Vice Chancellor, Jadavpur University Kolkata – 700 032	Member
06	(d)	Prof. Amlan Chakraborty Professor & Director, A.K. Choudhury School of Information Technology, University of Calcutta, India, Kolkata – 700 009	Member
07.	(f)	Prof. Apurba Kumar Patra Professor, Department of Chemistry, National Institute of Technology Durgapur Durgapur-713209	Member
08.	(f)	Dr. Jayati Dey Associate Professor, Department of Electrical Engineering National Institute of Technology Durgapur Durgapur-713209	Member
09.	(g)	Prof. V.K. Tewari Director Indian Institute of Technology, Kharagpur Pin-721302, India	Member
10.	Section 18 Clause (2)	Prof. Shibendu Shekhar Roy Registrar (I/C), NIT Durgapur, Durgapur-713209	Secretary

2.3 Finance Committee

Sl. No.	Name and Designation	Chairperson/Convenor/Secretary/Member
1.	Prof. Arvind Choubey Chairperson, Board of Governors National Institute of Technology Durgapur Durgapur-713209	Chairperson
2.	Prof. Arvind Choubey Director,	Member

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Sl. No.	Name and Designation	Chairperson/Convenor/Secretary/Member
	National Institute of Technology Durgapur Durgapur-713209	
3.	Ms. Saumya Gupta Joint Secretary, Department of Higher Education Ministry of Education, (Shiksha Mantralaya), Shastri Bhawan, New Delhi	Member
4.	Shri Anil Kumar Director (Finance) Department of Higher Education Ministry of Education, (Shiksha Mantralaya), Shastri Bhawan, New Delhi	Member
5.	Prof. Apurba Kumar Patra Professor, Department of Chemistry, National Institute of Technology Durgapur Durgapur-713209	Member
6.	Prof. Shibendu Shekhar Roy Registrar (I/C), National Institute of Technology Durgapur Durgapur-713209	Member Secretary

2.4 Building and Works Committee

Sl. No.	Name of the Member	Server as
1	Prof. Arvind Choubey Director, National Institute of Technology Durgapur: 713209	Chairman
2.	Ms. Saumya Gupta Joint Secretary (NITs), Department of Higher Education Ministry of Education Shastri Bhawan, New Delhi: 110015.	Member
3.	Shri Anil Kumar Director (Finance), Department of Higher Education Ministry of Education Shastri Bhawan New Delhi: 110015	Member
4	Prof. S. Bhattacharyya Department of Civil Engineering Chairman (Construction), National Institute of Technology Durgapur: 713209.	Member
5	Prof. A. K. Banik Department of Civil Engineering Chairman (PMQCC) National Institute of Technology Durgapur: 713209	Member
6	Shri C.P. Sharma (Nominee of CPWD, Civil Wing), Superintendent Engineer (Civil), NIT Durgapur	Member
7	Mr. Israr Ahmed Executive Engineer, CPWD	Member



Sl. No.	Name of the Member	Server as
	NIT Durgapur Camp Office	
8	Prof. Shibendu Shekhar Roy Registrar (I/C) National Institute of Technology Durgapur: 713209.	Member Secretary

2.5 List of Senate Members

Sl.No.	NAME	Chairman / External Member / Member / Invited Member
1	Prof. Arvind Choubey Director	Chairman
2	Prof. Siddhartha Sen, Professor, Electrical Engg. Dept., IIT Kharagpur	External Member
3.	Prof. Swagata Dasgupta, Professor, Dept. of Chemistry, IIT Kharagpur	External Member
4	Prof. Ajitava Raychaudhuri, Professor, Dept. of Economics, Jadavpur University Kolkata	External Member
5	Prof. S. Chattopadhyay	Member
6	Prof. A. Dey	Member
7	Prof. Dalia Dasgupta Mandal	Member
8	Prof. Kaustav Aikat	Member
9	Prof. Surabhi Chaudhuri	Member
10	Prof. Sudit Sekhar Mukhopadhyay	Member
11	Prof. Dipankar Sukul	Member
12	Prof. Apurba Kr. Patra	Member
13	Prof. Milan Maji	Member
14	Prof. Rajnarayan Saha	Member
15	Prof. Sankar Ch. Moi	Member
16	Prof. P. Pal	Member
17	Prof. K.C. Ghanta	Member
18	Prof. Tamal Mandal	Member
19	Prof. A.K. Sadhukhan	Member
20	Prof. Susmita Dutta	Member
21	Prof. Gopinath Halder	Member
22	Prof. D.K. Singha Roy	Member
23	Prof. K. Bhattacharya	Member
24	Prof. A. Das	Member
25	Prof. S. Saha	Member
26	Prof. Soumya Bhattacharyya	Member
27	Prof. Atul Krishna Banik	Member
28	Prof. Amiya Kr Samanta	Member
29	Prof. Tandra Pal	Member
30	Prof. Suchismita Roy	Member
31	Prof. Subrata Nandi	Member
32	Prof. Debashis Nandi	Member
33	Prof. Subhrabrata Choudhury	Member
34	Prof. Tanmay De	Member
35	Prof. Mousumi Roy	Member
36	Prof. Gautam Bandyopadhyay	Member
37	Prof. Avijan Dutta	Member
38	Prof. A.K. Bhattacharjee	Member
39	Prof. B. Maji	Member
40	Prof. G.K. Mahanti	Member
41	Prof. Sumit Kundu	Member
42	Prof. Rowdra Ghatak	Member
43	Prof. Ashis Kr. Mal,	Member

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Sl.No.	NAME	Chairman / External Member / Member / Invited Member
44	Prof. Rajat Mahapatra	Member
45	Prof. Subrata Banerjee	Member
46	Prof. Parimal Acharjee	Member
47	Prof. Tapas Kr. Saha	Member
48	Prof. Sankar Narayan Mahato	Member
49	Prof. Chiranjib Koley	Member
50	Prof. S. S. Thakur	Member
51	Prof. K. Adhikari	Member
52	Prof. Samarjit Kar	Member
53	Prof. Seema Sarkar (Mondal)	Member
54	Prof. Indrajit Basak	Member
55	Prof. B. Halder	Member
56	Prof. Nilotpal Banerjee	Member
57	Prof. Nirmal Baran Hui	Member
58	Prof. Shibendu Shekhar Roy	Member
59	Prof. Asit Baran Puri	Member
60	Prof. Apurba Layek	Member
61	Prof. K.S. Ghosh	Member
62	Prof. Joydeep Maity	Member
63	Prof. A. K. Meikap	Member
64	Prof. Pathik Kumbhakar	Member
65	Prof. Amit Kr. Chakraborty	Member
66	Dr. Debjani Dutta HOD, Dept. of Biotechnology	Invited Member
67	Dr. Jaya Sikder HOD, Dept. of Chemical Engg.	Invited Member
68	Dr. Diptesh Das HOD, Dept. of Civil Engg.	Invited Member
69	Dr. Kaushik Mandal HOD, Dept. Management Studies	Invited Member
70	Dr. Durbadal Mandal HOD, Dept. of Electronics and Communication Engg.	Invited Member
71	Dr. Arindam Modak HOD, Dept. Humanities and Social Sciences	Invited Member
72	Dr. Lakshmi Kanta Dey HOD, Dept. of Mathematics	Invited Member
73	Dr. Supriya Bera HOD, Dept. of Metallurgical and Materials Engg.	Invited Member
74	Dr. Mrinal Kanti Mandal HOD, Dept. of Physics	Invited Member
75	Dr. Bibhash Sen HOC, Computer Centre	Invited Member
76	Prof. Shibendu Shekhar Roy Professor, Dept. of Electrical Engg. & Registrar (I/C)	Member Secretary

2.6 Staff Details

2.6.1 List of Officers

Designation	Name
Registrar	Vacant
Joint Registrar	Shri Asit Kumar Dr. Uday Chandra Mukherjee Sri Dhrubajyati Ray



Designation		Name
Deputy Registrar		Sri Ashutosh Das
Assistant Registrar		Sri Debasish Mondal
		Sri Amiya Kumar Sardar
		Sri Sayon Bhattacharjee
		Sri Ajit Kumar Bhagat
		Shri Arun Charles Minz
Executive Engineer		Sri Tanmay Halder
Library	Librarian	Vacant
	Deputy Librarian	Vacant
	Assistant Librarian	Vacant
Workshop Superintendent		Vacant
Registrar's Secretariat (Technical Officer)		Shri Santosh Kumar Saha Shri Hirendra Nath Samanta
Medical Unit-cum-Hospital	Senior Medical Officer	Dr. Banhi Kumar Sarkar
	Medical Officers	Dr. Sucharita Patra Dr. Prabhavathi Gunasekaran
SAS Officer		Sri Hillol Mukherjee

2.6.2 Sanctioned posts of officers and number in position

	Sanctioned	In position	Vacant	Remarks
Registrar	01	00	01	
Joint Registrar	Nil	03	00	Filled through DP
Dy. Registrar	04	01	00	
Asstt. Registrar	08	05	03	
Dy. Librarian	01	Nil	01	
Assistant Librarian	01	Nil	01	
Principal SAS Officer	00	Nil	00	
Sr. SAS Officer	01	Nil	01	
SAS Officer	01	01	00	
Principal Scientific/Technical Officer	02	Nil	02	
Sr. Scientific/Technical Officer	01	Nil	01	
Scientific/Technical Officer	03	02	01	
Superintendent Engineer	01	Nil	01	
Executive Engineer (Elect/Civil)	02	01	01	
Senior Medical Officer	01	01	00	
Medical Officer	02	02	00	
TOTAL	29	16	13	

2.6.3 Number of Technical and Administrative staff members 2024-25

	Name	No.
1.	Sr. Tech. Asstt.	10
2.	Tech. Asstt. (SG-II)	16
3.	Tech. Asstt. (SG-I)	05
4.	Sr. Library Infor. Asstt (SG-II)	00
5.	Sr. Technician	01
6.	Technician (SG-II)	02
7.	Tech. Asstt.	03
8.	Superintendent	02
9.	Sr. Superintendent	03

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	Name	No.
10.	Superintendent (SG-II)	04
11.	Superintendent (SG-I)	01
12.	Staff Nurse (SG-II)	01
13.	Junior Assistant	01
14.	Sr. Assistant	05
15.	Assistant (SG-II)	10
16.	Assistant (SG-I)	05
17.	Attendant	01
18.	Sr. Attendant	07
19.	Attendant (SG-II)	09
20.	Attendant (SG-I)	04
21.	Asstt. Engg. (SG-I)	01
22.	Pharmacist	01
TOTAL		92

2.6.4 New appointment of staff during the year 2024-25

Sl.No	Name	Department	Designation	Date of Joining
	NIL	NIL	NIL	NIL

2.6.5 Retirement, Resignation, Death and Voluntary Retirement of Staff during the year

Sl. No	Name	Department/Section	Designation	Date of Retirement/Resignation
1.	NIL	NIL	NIL	NA

2.6.6 Number of Faculty in position

Name of Department	Professor	Associate Prof	Asstt. Prof. Grade-I	Asstt. Prof. Grade-II	Trainee Teacher
	In position	In-position	In position	In position	In position
Biotechnology	6	5	6	0	0
Chemical Engg	6	4	2	4	0
Chemistry	5	4	1	3	0
Civil Engineering	6	5	2	5	0
Computer Science & Engineering	6	14	13	5	0
Electrical Engg	7	2	8	8	0
Electronics & Communication Engineering	6	5	3	5	0
Earth & Environmental Science	1	0	1	1	0
Humanities & Social Science	0	3	2	2	0
Management Studies	2	5	0	3	0
Mathematics	2	5	3	0	0
Mechanical Engineering	7	4	9	11	0
Metallurgical & Materials Engg.	2	7	3	2	0
Physics	3	5	2	4	0
Total	59	68	55	53	0



3. Academics

3.1 Education System:

The National Institute of Technology Durgapur is an Institute of National Importance with a reputation cutting across international boundaries. It runs four-year Bachelor of Technology programmes in Bio-Technology, Chemical Engineering, Civil Engineering, Computer Science & Engineering, Electronics & Communication Engineering, Electrical Engineering, Mathematics and Computing, Mechanical Engineering and Metallurgical & Materials Engineering.

The Institute runs five year B.Tech and M.Tech Dual Degree in Biotechnology and Chemical Engineering. And it also runs five-year Integrated M. Sc programme in Chemistry.

The Institute offers four semester M. Tech. programme. Total number of M. Tech. programme offered in the year are sixteen. A two-year full time MBA, two-year full time M. Sc and two-year full time MSW programmes have been on the offer

All the Programme offered in the academic year, as mentioned above are regular and fulltime in nature.

The Institute also offers PhD programme in fourteen disciplines.

Each academic year is spreading over the period from 1st July of the year to 30th June of the next year and is divided into two semesters of about eighteen weeks each.

3.2 Programs Offered:

3.2.1 B.Tech / Dual Degree / Integrated M.Sc Programme:

Discipline	OP	OP-PWD	EWS	EWS-PWD	SC	SC-PWD	ST	ST-PWD	OBN	OBN-PWD	TOTAL	TOTAL
BT	28	02	07	01	13	00	05	00	18	01	75	969
CH	28	02	08	00	11	00	06	00	18	02	75	
CE	32	00	08	00	11	02	06	00	19	02	80	
CS	73	03	18	01	25	02	13	01	49	02	187	
EE	38	02	10	00	14	02	06	01	26	01	100	
EC	36	02	10	00	14	01	06	01	26	01	97	
MC	23	01	06	00	09	00	04	00	16	01	60	
ME	72	04	17	01	27	02	13	01	48	02	187	
MM	28	02	07	01	11	00	05	01	19	01	75	
CH-DD	02	00	01	00	01	00	01	00	02	00	07	
BT-DD	02	00	01	00	01	00	01	00	02	00	07	
CY-INT	08	00	02	00	03	00	01	00	05	00	19	

The students from Andaman & Nicobar Islands were admitted in Supernumerary Quota as was decided by CSAB 2024.

In addition, some seats were filled up by foreign students as nominated by the Government of India under various schemes. 50% of the seats are reserved for candidates from West Bengal and remaining 50% seats are allotted to the candidates from other States based on the JEE Main results in B.Tech / Dual Degree / Integrated M.Sc Programme where 15%, 7.5%, 27% and 10 % of the total seats are reserved for SC candidates, ST candidates, OBC candidates and EWS candidates respectively with 5% of the seats are reserved for PwD candidates.

3.2.2 Post-Graduate Programmes - Sanctioned intake

3.2.2.1 Full-time programmes

The Institute offers 16 four-semester M. Tech. programmes, 5 four-semester M. Sc. Programmes, four semester MBA programme and four semester MSW programme.

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Sanctioned intake of M. Tech Programme

Specialization / Program Name	O C	OC - PW D	EW S	EW S- PW D	S C	SC- PW D	S T	ST- PW D	OB N	OB N- PW D	Sanctio ned Intake
Biotechnology	8	0	1	0	3	0	1	0	5	0	18
Geotechnical Engineering	7	1	2	0	3	0	1	0	6	0	20
Structural Engineering	9	1	3	0	4	0	3	0	7	1	28
Computer Science and Engineering	20	1	4	1	7	0	4	0	13	0	50
AI and Data Science	8	0	2	0	3	0	1	0	6	0	20
Environmental Science and Technology	7	1	2	0	3	0	2	0	5	0	20
Power Electronics and Machine Drives	8	0	2	0	3	0	2	0	4	1	20
Power Systems	7	1	2	0	3	0	1	0	6	0	20
Instrumentation and Control	6	0	2	0	2	0	1	0	4	0	15
Microelectronics and VLSI	12	0	3	0	4	1	2	1	7	0	30
Next Generation Communication and Networks	8	0	2	0	3	0	1	0	5	1	20
Operations Research	7	1	2	0	2	1	2	0	5	0	20
Fluid Mechanics and Heat Transfer	7	0	2	0	3	0	1	0	5	0	18
Machine Design	8	0	2	0	3	0	2	0	5	0	20
Thermal Engineering	8	1	2	0	3	0	1	0	5	0	20
Total:	130	7	33	1	49	2	25	1	88	3	339

3.2.2.2 Other Post-Graduate Programmes (Sanctioned Intake)

MBA

DEPTT	OP	OP-PwD	EWS	EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBN	OBN-PwD	Total
MS	17	1	4	1	6	0	3	0	11	1	44

MSW

DEPTT	OP	OP-PwD	EWS	EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBN	OBN-PwD	Total
HSS (MSW)	7	0	1	0	2	0	1	0	4	0	15

M.Sc

DEPARTMENT	OP	OP-PwD	EWS	EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBN	OBN-PwD	Total
CY	10	0	3	0	3	1	2	0	6	0	25
MA	10	1	2	0	4	0	1	0	6	1	25
PH	9	0	3	0	4	0	2	0	7	0	25
BT (LIFE SCIENCE) - DBT	4	0	1	0	1	0	1	0	3	0	10
EES (APPL GEO & GEOINFO)	9	1	2	0	3	0	2	0	6	0	23



DEPARTMENT	OP	OP-PwD	EWS	EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBN	OBN-PwD	Total
Total	42	2	11	0	15	1	8	0	28	1	108

3.3 Students

The students find the environment of the Institute conducive not only to exercise their intellectual capability but also to learn with living in cultural diversity and religious heterogeneity. In this era of open market economy, India is a part of global village unconfined to its territory. Our students are actively involved in the field of researching in higher academic institutes, and working in transnational companies that have already made their marks internationally. With a large number of students at under-graduate and post-graduate levels, the institute has excelled not only in academics but also in every field one can think of. Foreign Students are admitted supernumerary as decided by the GOI, the Ministry of External Affairs and the Ministry of Education. The students have received many prizes and awards from various other institutes in multidisciplinary activities. The NIT Durgapur is proud of producing the trained-brains where most of them get employed by campus interview itself. Some of the alumni are in the higher positions in the organisational hierarchy of the corporate sectors in India, Europe and USA.

3.3.1 Students' Strength

Sl No	Name of the programme	Total Number of Students
1	Bachelor of Technology	3495
2	B. Tech & M. Tech Dual Degree	55
3	5 Years Integrated M. Sc. Programme	63
4	Master of Technology	377
6	Master of Business Administration	69
7	Master of Science	194
8	Master of Social Work	22
9	PhD	597
TOTAL		4872

3.3.2 Eligibility

MTECH

In qualifying degree the candidates should have passed and secured at least 6.5 CGPA (on a 10-point scale) or 60% for OC/OB, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute.

MSc

Three-year regular B. Sc. (Hons./ Pass) with minimum 55% marks / 6 CGPA in the relevant discipline. A relaxation of 5% marks or 0.5 CGPA is applicable for SC/ST candidates.

MBA

Graduates (minimum 10+2+3 format) in any discipline with minimum 55% marks in graduation are eligible with a relaxation of 5 % marks for SC/ST.

MSW

Graduates (minimum 10+2+3 format) in any discipline with minimum 55% marks in graduation are eligible with a relaxation of 5 % marks for SC/ST.

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3.4 Admission Procedure

3.4.1 Under-Graduate Programmes:

As decided by the Government of India, Ministry of Education, the procedure for selection of candidates for admission to the Bachelor of Technology / Dual Degree / Integrated M.Sc programmes in National Institute of Technology Durgapur and in other NITs is on the basis of AIR in JEE (Main) and the same is executed through counseling by Joint Seat Allocation Authority (JoSAA) / Central Seat Allocation Board (CSAB) under guidance from GOI, MOE.

3.4.2 Post-Graduate Programmes:

Mode of Admission is detailed hereunder.

Sl No	Types of Student	Mode of Admission
1	Full Time GATE (M. Tech.)	CCMT / Institute level test and viva-voce for vacant seats.
2	Full Time Sponsored (M. Tech.)	B. Tech./eqv results, Institute level test and viva-voce
3	M. Sc.	CCMN
4	MBA	CAT score and Institute Level GD/PI
	MSW	Institute level entrance examination

3.5 Programme-wise enrolment with gender and caste break-up.

3.5.1 Enrolment in B.Tech programmes during 2024-2025 (Gender wise)

3.5.1.1 Enrolment of Indian students in odd semesters of B. Tech. courses during 2024-2025 Genderwise:

Semester	BT		CE		CH		CS		EC		EE		MC		ME		MM		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
B.Tech I	57	17	59	18	59	15	15	35	76	19	76	22	44	14	14	36	60	14	735	190
B.Tech III	50	20	59	17	56	16	14	38	77	23	75	21	0	0	14	38	54	17	661	190
B.Tech V	48	14	59	19	56	13	14	37	73	22	74	20	0	0	13	36	57	16	650	177
B.Tech VII	46	14	56	18	53	15	13	39	71	21	77	18	0	0	13	39	55	13	634	177
TOTAL	201	65	233	72	224	59	58	149	297	85	302	81	44	14	56	149	226	60	2680	734

Semester	BT		CE		CH		CS		EC		EE		MC		ME		MM		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F



Semester	BT		CE		CH		CS		EC		EE		MC		ME		MM		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
B.Tech II	54	17	59	17	57	15	15	35	76	19	74	22	44	13	15	35	59	14	727	187
B.Tech IV	49	20	59	17	56	16	14	38	77	23	74	21	00	01	14	38	53	17	657	190
B.Tech VI	48	14	59	19	56	13	14	37	73	22	74	20	00	05	13	36	57	15	648	176
B.Tech VIII	46	14	55	18	51	14	13	39	70	21	77	18	00	08	13	39	55	13	630	176
TOTAL	197	65	232	71	220	58	58	149	296	85	299	81	44	13	567	148	224	59	2662	729

3.5.2 Enrolment in B. Tech & M. Tech Dual Degree programmes during 2024-2025(Genderwise)

Semester	BT		ChE		Total	
	M	F	M	F	M	F
Dual Degree I	5	2	5	2	10	4
Dual Degree III	3	3	4	3	7	6
Dual Degree V	2	3	4	2	6	5
Dual Degree VII	2	1	4	2	6	3
Dual Degree IX	3	0	4	1	7	1
Total	15	9	21	10	36	19

Semester	BT		ChE		Total	
	M	F	M	F	M	F
Dual Degree II	5	2	5	2	10	4
Dual Degree IV	3	3	4	3	7	6
Dual Degree VI	2	3	4	2	6	5
Dual Degree VIII	2	1	4	2	6	3

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Dual Degree X	3	0	4	1	7	1
Total	15	9	21	10	36	19

3.5.3 Enrolment in Integrated M.Sc. programmes during 2024-2025 (Genderwise)

Semester	Chemistry		Total	
	M	F	M	F
INT M.Sc. I	9	2	9	2
INT M.Sc. III	7	3	7	3
INT M.Sc. V	13	5	13	5
INT M.Sc. VII	10	4	10	4
INT M.Sc. IX	6	4	6	4
Total	45	18	45	18

Semester	Chemistry		Total	
	M	F	M	F
INT M.Sc. II	9	2	9	2
INT M.Sc. IV	7	3	7	3
INT M.Sc. VI	11	5	11	5
INT M.Sc. VIII	10	4	10	4
INT M.Sc. X	6	4	6	4
Total	43	18	43	18

3.5.4 Enrolment of Foreign Students in B. Tech programme during 2024-2025 (Genderwise):

Semester	BT		CE		CH		CS		EC		EE		MC		ME		MM		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
B.Tech I	0	0	0	0	0	0	4	4	1	1	1	0	1	0	3	0	0	0	10	5
B.Tech III	0	0	2	0	0	0	6	4	1	0	0	0	0	0	1	0	0	0	10	4
B.Tech V	1	0	2	2	0	1	12	4	2	1	1	2	0	0	3	3	1	0	22	13



Semester	BT		CE		CH		CS		EC		EE		MC		ME		MM		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
B.Tech VII	1	2	1	0	0	1	5	2	1	0	2	0	0	0	2	0	0	0	12	5
TOTAL	2	2	5	2	0	2	27	14	5	2	4	2	1	0	9	3	1	0	54	27

Semester	BT		CE		CH		CS		EC		EE		MC		ME		MM		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
B.Tech II	0	0	0	0	0	0	4	4	1	1	1	0	1	0	3	0	0	0	10	5
B.Tech IV	0	0	2	0	0	0	6	4	1	0	0	0	0	0	1	0	0	0	10	4
B.Tech VI	1	0	2	2	0	1	10	4	2	1	1	2	0	0	3	3	1	0	20	13
B.Tech VIII	1	2	1	0	0	1	5	2	1	0	2	0	0	0	2	0	0	0	12	5
TOTAL	2	2	5	2	0	2	25	14	5	2	4	2	1	0	9	3	1	0	52	27

3.5.5 Enrolment in B. Tech. Programme during 2024-2025 (Castewise)

D e p t.	B.Tech						B.TECH						B.TECH						B.TECH					
	I Semester						III Semester						V Semester						VII Semester					
	O P S	E W S	S C T	S C T	O B T	T O	O P S	E W S	S C T	S C T	O B T	T O	O P S	E W S	S C T	S C T	O B T	T O	O P S	E W S	S C T	S C T	O B T	T O
B T	1 9	1 4	1 0	6 5	2 5	74	22	9 1	1 4	4 4	2 4	70	16	8 1	9 4	5 4	2 4	62	18	1 0	1 0	5 7	1 7	6 0
C h E	2 3	1 0	1 1	6 4	2 4	74	26	1 1	1 0	6 9	1 9	72	17	1 0	1 0	6 6	2 6	69	18	1 0	1 1	5 4	2 8	6 8
C E	2 3	1 1	1 2	6 5	2 5	77	21	1 4	1 2	6 3	2 3	76	24	1 0	1 3	6 5	2 5	78	21	1 1	1 1	6 5	2 4	7 4
C S	5 0	4 1	2 7	1 4	5 8	19	46	3 9	2 7	1 5	5 9	18	51	3 6	2 8	1 5	5 5	18	55	3 4	2 2	1 3	5 3	1 7
E C	2 8	1 5	1 4	7 2	3 2	96	33	1 6	1 6	7 8	2 0	10	27	1 5	1 4	7 2	3 2	95	35	1 1	1 3	6 7	2 2	9 2
E E	2 6	1 5	1 4	7 5	3 5	97	34	1 4	1 4	7 7	2 7	96	30	1 3	1 4	7 0	3 0	94	27	1 7	1 7	5 9	2 5	9 5
M C	1 8	1 1	7 8	4 8	1 8	58	0	0 5	0 7	0 3	0 9	0	0	0 4	0 7	0 3	0 1	0	0	0 5	0 8	0 2	0 7	0 7
M E	5 9	2 9	2 7	1 4	5 6	18	56	2 5	2 7	1 3	5 9	18	51	2 4	2 7	1 3	7 1	18	55	2 5	2 8	1 2	5 7	1 7

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M	2	1	1	5	2	74	21	1	1	6	2	71	24	1	1	6	2	73	24	1	9	6	1	6
M	4	2	3		0			0	0		4			0	1		2			0			9	8
E																								
T	2	1	1	6	2	92	25	1	1	6	2	85	24	1	1	6	2	84	25	1	1	5	2	8
o	7	5	3	9	9	5	9	3	2	4	6	1	0	2	2	5	8	2	3	2	2	8	5	1
ta	0	8	5		3			8	7		3			6	6		5			8	1		1	1
l																								

3.5.6 Enrolment in B.Tech & M. Tech Dual Degree Programmes during 2024-2025 (Castewise):

Dep t.	Dual Degree						Dual Degree						Dual Degree						Dual Degree					
	I Semester						III Semester						V Semester						VII Semester					
	O P	EW S	S C	S T	OB C	TO T	O P	EW S	S C	S T	OB C	TO T	O P	EW S	S C	S T	OB C	TO T	O P	EW S	S C	S T	OB C	TO T
BT	1	2	1	1	2	7	0	1	1	1	3	6	2	1	1	1	0	5	0	1	1	1	0	3
ChE	3	1	1	0	2	7	2	1	1	1	2	7	1	1	1	0	3	6	0	1	1	1	3	6
Total	4	3	2	1	4	14	2	2	2	2	5	13	3	2	2	1	3	11	1	2	2	2	3	09

Dep t	Dual Degree					
	IX Semester					
	O P	EW S	S C	S T	OB C	TO T
BT	0	1	1	0	1	3
ChE	0	2	1	0	2	5
Total	0	3	2	0	3	8

3.5.7 Enrolment in 5 year Integrated M.Sc Programmes during 2024-2025 (Castewise):

De pt.	INT M.Sc.						INT M.Sc.						INT M.Sc.						INT M.Sc.					
	I Semester						III Semester						V Semester						VII Semester					
	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O
Ch em	2	1	1	1	7	1	2	3	1	0	4	1	6	3	3	1	5	1	4	3	1	1	5	1
To tal	2	1	1	1	7	1	2	3	1	0	4	1	6	3	3	1	5	1	4	3	1	1	5	1

De pt.	INT M.Sc.					
	IX Semester					
	O P	E W	S C	S T	O B	T O
Ch em	2	2	2	0	4	1



To	2	2	2	0	4	1
tal						0

3.5.8 Enrolment in B. Tech. Programme during 2024-2025 (Castewise)

Dep t.	B.Tech						B.TECH						B.TECH						B.TECH					
	II Semester						IV Semester						VI Semester						VIII Semester					
	O P S	E W C	S C T	S T C	O B C	T O T	O P S	E W C	S C T	S T C	O B C	T O T	O P S	E W C	S C T	S T C	O B C	T O T	O P S	E W C	S C T	S T C	O B C	T O T
BT	17	14	9	6	25	7	2	9	1	4	2	6	1	8	9	5	2	6	1	10	1	5	1	6
Ch	2	10	1	6	24	7	2	11	1	6	1	7	1	10	1	6	2	6	1	9	1	5	2	6
E	2		0			2	6		0		9	2	7		0		6	9	8		0		3	5
CE	2	11	1	6	25	7	2	14	1	6	2	7	2	10	1	6	2	7	2	10	1	6	2	7
	2		2			6	1		2		3	6	4		3		5	8	1		1		5	3
CS	4	38	2	1	58	1	4	39	2	1	5	1	5	36	2	1	5	1	5	34	2	1	5	1
E	9		7	4		8	6		7	5	9	8	1		6	5	5	8	5		2	3	3	7
						6						6						3						7
EC	2	15	1	7	32	9	3	16	1	7	2	1	2	15	1	7	3	9	3	11	1	6	2	9
E	8		3			5	3		6		8	0	7		4		2	5	4		3		7	1
												0												0
EE	2	15	1	7	34	9	3	14	1	7	2		3	13	1	7	3	9	2	17	1	5	2	9
	6		4			6	3		4		7	9	0		4		0	4	7		7		9	5
												5												
MC	1	11	7	3	18	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8					7																		
ME	5	28	2	1	55	1	5	25	2	1	5	1	4	25	2	1	5	1	5	25	2	1	5	1
	9		8	4		8	6		6	3	9	7	9		6	3	8	7	5		8	2	7	7
						5						9						1						7
M	2	12	1	5	20	7	2	10	9	6	2	7	2	10	1	6	2	7	2	10	9	6	1	6
ME	4		2			3	1				4	0	4		1		1	2	4				9	8
Tot	2	15	1	6	29	9	2	13	1	6	2	8	2	12	1	6	2	8	2	12	1	5	2	8
al	6	4	3	8	1	1	5	8	2	4	6	4	3	7	2	5	7	2	5	6	2	8	5	0
	5		2			1	8		4		3	7	8		3		1	4	2		0		0	6

3.5.9 Enrolment in B.Tech & M. Tech Dual Degree Programmes during 2024-2025 (Castewise):

D ep t.	Dual Degree						Dual Degree						Dual Degree						Dual Degree					
	II Semester						IV Semester						VI Semester						VIII Semester					
	O P S	E W C	S C T	S T C	O B C	T O T	O P S	E W C	S C T	S T C	O B C	T O T	O P S	E W C	S C T	S T C	O B C	T O T	O P S	E W C	S C T	S T C	O B C	T O T
B T	1	2	1	1	2	7	0	1	1	1	3	6	2	1	1	1	0	5	0	1	1	1	0	3
C h	3	1	1	0	2	7	2	1	1	1	2	7	1	1	1	0	3	6	0	1	1	1	3	6
E																								
T ot al	4	3	2	1	4	14	2	2	2	2	5	13	3	2	2	1	3	11	1	2	2	2	3	09
D ep t.	Dual Degree																							
	X Semester																							

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Department	Dual Degree						Dual Degree						Dual Degree						Dual Degree					
	II Semester						IV Semester						VI Semester						VIII Semester					
	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O
		S			C	T		S			C	T		S			C	T		S			C	T
B T C h E T otal	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O
	0	1	1	0	1	3																		
	0	2	1	0	2	5																		
	0	3	2	0	3	8																		

3.5.10 Enrolment in 5 year Integrated M.Sc Programmes during 2024-2025 (Castewise):

Dept.	INT M.Sc.						INT M.Sc.						INT M.Sc.						INT M.Sc.					
	II Semester						IV Semester						VI Semester						VIII Semester					
	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O
		S			C	T		S			C	T		S			C	T		S			C	T
Chem	2	0	1	1	7	1	2	3	1		4	1	6	3	2	0	5	1	4	3	1	1	5	1
Total	2	0	1	1	7	1	2	3	1		4	1	6	3	2	0	5	1	4	3	1	1	5	1
						1						0						6						4
Dept.	INT M.Sc.						X Semester																	
	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O	O P	E W	S C	S T	O B	T O
		S			C	T		S			C	T		S			C	T		S			C	T
Chem	2	2	2	0	4	1																		
Total	2	2	2	0	4	1																		
						0																		

3.5.11 Enrolment in M.Tech. Programmes during 2024-2025 (Genderwise)

Semester	B T	C H	CH (ERS)	CE (SE)	CE (GE)	C S	CS (AI & DS)	EE (PS)	EE (PMD)	EE (INST)	EC (NGCN)	EC (VL)	ES (EST)	OR (MA)
M.Tech I & II	10 (3)	0 (0)	0 (0)	22 (5)	12 (2)	46 (5)	16 (1)	15 (4)	19 (4)	9 (2)	16 (6)	24 (3)	8 (2)	12 (5)
M.Tech III & IV	10 (9)	0 (0)	1 (0)	19 (2)	6 (0)	45 (9)	0 (0)	9 (1)	4 (0)	2 (0)	7 (4)	27 (6)	2 (1)	10 (1)



Semester	ME (MD)	ME (FMHT)	ME (TE)	MM	AMS (PHY)	TOTAL
M.Tech I & II	5 (1)	3 (0)	6 (0)	0 (0)	0 (0)	223 (43)
M.Tech III & IV	5 (0)	4 (0)	1 (0)	2 (0)	0 (0)	154 (33)

(Number of female students indicated in parentheses; the total number is inclusive of the number of female students)

3.5.12 Enrolment in M.Sc. Programmes during 2024-2025 (Genderwise)

Semester	M. Sc (CY)	M. Sc (MA)	M. Sc (PH)	M. Sc (Life Science)	M. Sc (Life Science) DBT	M. Sc (Appl Geo & Geoinfo)	TOTAL
M.Sc I & II	23 (12)	23 (11)	21 (10)	0 (0)	10 (7)	20 (7)	97 (47)
M.Sc III & IV	19 (6)	23 (5)	21 (4)	14 (8)	2 (1)	18 (7)	97 (31)

3.5.13 Enrolment in M.Tech Programmes during 2024-2025(Castewise):

Dept. / Year	I & II							III & IV						
	OP	GEN (EW)	SC	ST	OBC	FS	TOTAL	OP	GEN (EW)	SC	ST	OBC	FS	TOTAL
BT	5 (2)	0 (0)	2 (0)	0 (0)	3 (1)	0 (0)	10 (3)	5 (4)	1 (1)	2 (2)	0 (0)	2 (2)	0 (0)	10 (9)
CH	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
CH (ERS)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
CE (SE)	6 (2)	3 (0)	3 (0)	0 (0)	10 (3)	0 (0)	22 (5)	3 (0)	1 (0)	4 (0)	2 (2)	9 (0)	0 (0)	19 (2)
CE (GT)	9 (1)	0 (0)	3 (1)	0 (0)	0 (0)	0 (0)	12 (2)	4 (0)	0 (0)	0 (0)	0 (0)	2 (0)	0 (0)	6 (0)
CS	11 (1)	7 (2)	6 (1)	3 (0)	19 (1)	0 (0)	46 (5)	14 (1)	5 (1)	7 (1)	3 (0)	16 (6)	0 (0)	45 (9)
CS (AI & DS)	6 (0)	2 (0)	2 (0)	1 (0)	4 (1)	1 (0)	16 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
EE (PS)	6 (1)	0 (0)	3 (2)	1 (0)	5 (1)	0 (0)	15 (4)	6 (0)	0 (0)	1 (0)	0 (0)	2 (1)	0 (0)	9 (1)
EE(PMD)	7 (1)	0 (0)	3 (0)	2 (2)	7 (1)	0 (0)	19 (4)	2 (0)	0 (0)	0 (0)	0 (0)	2 (0)	0 (0)	4 (0)
EE (INST)	5 (1)	0 (0)	2 (0)	0 (0)	2 (1)	0 (0)	9 (2)	2 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)
EC (NGCN)	8 (2)	0 (0)	3 (2)	0 (0)	5 (2)	0 (0)	16 (6)	3 (1)	0 (0)	2 (2)	0 (0)	1 (0)	1 (1)	7 (4)
EC (VL)	2 (1)	6 (0)	4 (0)	2 (1)	10 (1)	0 (0)	24 (3)	6 (2)	3 (0)	4 (1)	0 (0)	14 (3)	0 (0)	27 (6)
ES	7 (2)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	8 (2)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	2 (1)

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MA (OR)	6 (3)	1 (0)	1 (0)	0 (0)	4 (2)	0 (0)	12 (5)	7 (1)	1 (0)	2 (0)	0 (0)	0 (0)	0 (0)	10 (1)
ME (MD)	4 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	5 (1)	0 (0)	0 (0)	2 (0)	1 (0)	2 (0)	0 (0)	5 (0)
ME (FMHT)	2 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	3 (0)	3 (0)	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	4 (0)
ME (TE)	4 (0)	0 (0)	2 (0)	0 (0)	0 (0)	0 (0)	6 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
MM (MT)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)
PH (AMS)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	88 (17)	19 (2)	36 (6)	9 (3)	70 (15)	1 (0)	223 (43)	60 (9)	11 (2)	24 (6)	6 (2)	51 (12)	2 (2)	154 (33)

(Number of female students indicated in parentheses; the total number is inclusive of the number of female students)

3.5.14 Enrolment in M.Sc Programmes during 2024-2025 (Castewise)

Dept. / Year	I & II						III & IV						
	OP	OP (EWS)	SC	ST	OBC	TOTA L	OP	OP (EWS)	S C	ST	OBC	F S	TOTA L
M.Sc (CY)	7 (4)	5 (3)	4 (1)	0 (0)	7 (4)	23 (12)	6 (3)	1 (1)	4 (0)	0 (0)	8 (2)	0 (0)	19 (6)
M.Sc (MA)	7 (3)	4 (1)	4 (4)	1 (1)	7 (2)	23 (11)	3 (0)	4 (3)	3 (0)	0 (0)	12 (2)	1 (0)	23 (5)
M.Sc (PH)	7 (1)	4 (2)	4 (4)	1 (1)	5 (2)	21 (10)	10 (3)	4 (1)	3 (1)	0 (0)	4 (0)	0 (0)	21 (5)
M.Sc (BT)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (3)	2 (2)	3 (1)	1 (0)	4 (2)	0 (0)	14 (8)
M.Sc (BT -	4 (3)	1 (1)	1 (1)	1 (1)	3 (1)	10 (7)	2 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (1)
M. Sc (EES)	9 (4)	2 (1)	2 (1)	2 (0)	5 (1)	20 (7)	5 (1)	2 (1)	2 (1)	1 (1)	8 (3)	0 (0)	18 (7)
Total	34 (15)	16 (8)	15 (11)	5 (3)	27 (10)	97 (47)	30 (11)	13 (8)	15 (3)	2 (1)	36 (9)	1 (0)	97 (32)

(Number of female students indicated in parentheses; the total number is inclusive of the number of female students)

3.5.15 Enrolment in MBA programmes during 2024-2025(Gender wise)

Master of Business Administration (MBA)	I & II Semester	III & IV Semester
	39 (18)	30 (15)

(Number of female students indicated in parentheses; the total number is inclusive of the number of female students)

3.5.16 Enrolment in MBA Programme during 2024-2025(Castewise):

MBA	MBA I & II						MBA III & IV					
	OP	OP	SC	ST	OBC	TOTAL	OP	OP	SC	ST	OBC	TOTAL
		(EWS)						(EWS)				
	17 (7)	4 (4)	4 (2)	3 (3)	11 (2)	39 (18)	14 (8)	3 (2)	5 (0)	0 (0)	8 (5)	30 (15)

(Number of female students indicated in parentheses; the total number is inclusive of the number of female students)



3.5.17 Enrolment in MSW Programme during 2024-2025 (Genderwise)

Master of Social Work (MSW)	I & II Semester	III & IV Semester
	10 (6)	12 (7)

(Number of female students indicated in parentheses; the total number is inclusive of the number of female students)

3.5.18 Enrolment in MSW Programme during 2024-2025(Castewise)

MSW	MSW I & II						MSW III & IV					
	OP	OP (EWS)	SC	ST	OBC	TOTAL	OP	OP (EWS)	SC	ST	OBC	TOTAL
	7 (5)	1 (0)	1 (0)	0 (0)	1 (1)	10 (6)	6 (4)	0 (0)	2 (1)	0 (0)	4 (2)	12 (7)

(Number of female students indicated in parentheses; the total number is inclusive of the number of female students)

3.6 Exam and Evaluation:

Performance of a student is assessed throughout the semester and assessment in a course is made based on his/her performance. For each theory paper of any academic semester there is a mid-term and an end-term examination following the regulations.

3.7 Admission Statistics

3.7.1 Admission of Research Scholars for Regular PhD programme during 2024-2025

SL. NO.	Branch of Research Study	Gender		Caste				Total
		Male	Female	OP	SC	ST	OBC	
1	Biotechnology	4	5	5	1	0	3	9
2	Chemical Engineering	3	2	3	1	0	1	5
3	Chemistry	3	3	3	1	0	2	6
4	Civil Engineering	4	4	7	1	0	0	8
5	Computer Science & Engineering	8	6	6	3	1	4	14
6	Earth & Environmental Studies	0	1	0	0	0	1	1
7	Electrical Engineering	7	1	5	1	0	2	8
8	Electronics & Communications Engineering	5	5	8	1	0	1	10
9	Humanities & Social Sciences	2	3	3	1	0	1	5
10	Management Studies	4	1	4	1	0	0	5
11	Mathematics	4	2	2	3	0	1	6
12	Mechanical Engineering	8	0	2	2	0	4	8
13	Metallurgical & Materials Engineering	2	0	1	0	0	1	2

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14	Physics	7	0	3	1	0	3	7
15	Centre for Research on Environment and Water (CREW)	1	0	0	0	0	1	1
16	Centre for Biomedical Engineering & Assistive Technology (BEAT)	0	0	0	0	0	0	0
17	Centre for Advanced Research on Energy (CARE)	1	0	1	0	0	0	1
18	Centre of Excellence on IoT and Intelligent Systems (IoTIS)	1	0	0	1	0	0	1
	Total	64	33	53	18	1	25	97

3.7.2 Admission of Research Scholars for Professional PhD programme

SL. NO.	Branch of Research Study	Gender		Caste				Total
		Male	Female	OP	SC	ST	OB	
1	Biotechnology	0	2	2	0	0	0	2
2	Chemical Engineering	0	0	0	0	0	0	0
3	Chemistry	1	0	1	0	0	0	1
4	Civil Engineering	2	0	2	0	0	0	2
5	Computer Science & Engineering	9	7	15	1	0	0	16
6	Earth & Environmental Studies	1	1	2	0	0	0	2
7	Electrical Engineering	1	0	1	0	0	0	1
8	Electronics & Communications Engineering	2	2	3	1	0	0	4
9	Humanities & Social Sciences	0	1	1	0	0	0	1
10	Management Studies	2	1	3	0	0	0	3
11	Mathematics	1	0	1	0	0	0	1
12	Mechanical Engineering	0	0	0	0	0	0	0
13	Metallurgical & Materials Engineering	2	0	2	0	0	0	2
14	Physics	2	0	2	0	0	0	2
15	Centre for Research on Environment and Water (CREW)	0	0	0	0	0	0	0
16	Centre for Biomedical Engineering & Assistive Technology (BEAT)	0	0	0	0	0	0	0
17	Centre for Advanced Research on Energy (CARE)	0	0	0	0	0	0	0
18	Centre of Excellence on IoT and Intelligent Systems (IoTIS)	0	0	0	0	0	0	0



Total	23	14	35	2	0	0	37

3.7.3 Total strength of Research Scholars for Regular PhD programme in 2024-2025

SL. N O.	Branch of Research Study	Gender		Caste					Total
		Male	Female	OP	EWS	SC	ST	OB C	
1	Biotechnology	28	32	37	4	7	0	12	60
2	Chemical Engineering	16	14	19	0	5	0	6	30
3	Chemistry	10	8	7	4	2	1	4	18
4	Civil Engineering	19	9	18	2	3	1	4	28
5	Computer Science & Engineering	34	24	37	1	7	2	11	58
6	Earth & Environmental Studies	1	3	2	0	0	0	2	4
7	Electrical Engineering	31	7	22	2	5	0	9	38
8	Electronics & Communications Engineering	19	16	24	1	4	1	5	35
9	Humanities & Social Sciences	6	12	13	1	2	0	2	18
10	Management Studies	9	5	9	0	2	0	3	14
11	Mathematics	25	13	17	3	6	2	10	38
12	Mechanical Engineering	33	2	16	1	6	0	12	35
13	Metallurgical & Materials Engineering	24	1	13	0	2	0	10	25
14	Physics	24	9	16	2	6	0	9	33
15	Centre for Research on Environment and Water (CREW)	1	2	1	0	1	0	1	3
16	Centre for Biomedical Engineering & Assistive Technology (BEAT)	1	0	1	0	0	0	0	1
17	Centre for Advanced Research on Energy (CARE)	2	0	1	0	0	0	1	2
18	Centre of Excellence on IoT and Intelligent Systems (IoTIS)	1	0	0	0	1	0	0	1
	Total	284	157	253	21	59	7	101	441

3.7.4 Total strength of Research Scholars for Professional PhD programme (2024-25)

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SL. NO	Branch of Research Study	Gender		Caste					Total
		Male	Female	OP	EW S	SC	ST	OB C	
1	Biotechnology	1	2	3	0	0	0	0	3
2	Chemical Engineering	6	5	8	0	1	0	2	11
3	Chemistry	2	0	2	0	0	0	0	2
4	Civil Engineering	9	1	9	0	1	0	0	10
5	Computer Science & Engineering	22	14	33	0	1	1	1	36
6	Earth & Environmental Studies	1	1	2	0	0	0	0	2
7	Electrical Engineering	14	4	16	0	1	0	1	18
8	Electronics & Communications Engineering	11	8	18	0	1	0	0	19
9	Humanities & Social Sciences	8	4	11	0	0	0	1	12
10	Management Studies	5	5	9	0	0	1	0	10
11	Mathematics	4	3	6	0	0	0	1	7
12	Mechanical Engineering	11	0	9	0	1	0	1	11
13	Metallurgical & Materials Engineering	7	0	6	0	1	0	0	7
14	Physics	5	2	6	0	0	0	1	7
15	Centre for Research on Environment and Water (CREW)	0	0	0	0	0	0	0	0
16	Centre for Biomedical Engineering & Assistive Technology (BEAT)	1	0	1	0	0	0	0	1
17	Centre for Advanced Research on Energy (CARE)	0	0	0	0	0	0	0	0
18	Centre of Excellence on IoT and Intelligent Systems (IoTIS)	0	0	0	0	0	0	0	0
	Total	107	49	139	0	7	2	8	156

3.8 Admission statistics

3.8.1 All India Rank obtained by the first and the last candidates admitted to B.Tech programme during 2024-2025 -1st Year

SL. NO	STATE	OP		GEN-EWS		OB		SC		ST	
		IST	LAST	IST	LAST	IST	LAST	IST	LAST	IST	LAST
1	Andaman &	431	330	203	-	125	444	-	-	-	-



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S L . N O .	STATE	OP		GEN-EWS		OB		SC		ST	
		1S T	LA ST	1ST	LA ST	1ST	LA ST	1ST	LA ST	1ST	LA ST
	Nicobar	25	569	204		062	560				
2	Andhra Pradesh	710 4	499 69	852 5	621 03	933 8	818 71	432 07	221 558	161 065	328 403
3	Arunachal Pradesh	-	-	-	-	-	-	-	-	248 191	-
4	Assam	-	-	-	-	-	-	134 732	-	118 597	296 576
5	Bihar	114 83	630 22	701 9	824 88	998 2	135 060	577 87	142 596	341 504	669 207
6	Chhattisgarh	-	-	164 52	292 13	-	-	-	-	193 548	-
7	Delhi	147 15	-	-	-	-	-	-	-	-	-
8	Gujarat	150 58	279 20	-	-	-	-	521 54	-	-	-
9	Haryana	220 71	389 25	657 2	-	-	-	-	-	-	-
10	Jharkhand	108 34	414 42	229 17	821 80	460 86	678 31	105 29	127 217	184 149	-
11	Karnataka	402 94	535 81	-	-	-	-	-	-	172 763	-
12	Kerala	202 01	302 66	-	-	453 03	-	-	-	-	-
13	Madhya Pradesh	-	-	-	-	-	-	717 72	177 292	-	-
14	Maharashtra	874 8	366 40	616 04	-	-	-	491 72	119 438	-	-
15	Odisha	264 25	757 15	102 98	-	118 89	-	165 020	-	198 704	-
16	Punjab	-	-	-	-	-	-	170 003	-	-	-
17	Rajasthan	876 3	905 9	924 1	-	122 69	934 32	526 40	164 348	838 10	169 038
18	Tamil Nadu	544 25	-	-	-	856 83	-	-	-	-	-
19	Telangana	133 92	606 78	876 5	507 47	128 53	564 89	458 54	217 014	534 90	294 100
20	Tripura	-	-	483 61	-	234 44	-	133 942	-	-	-
21	Uttar Pradesh	184 69	685 01	114 13	853 76	130 14	693 24	521 59	210 727	-	-
22	Uttaranchal	233 82	-	-	-	456 76	-	-	-	-	-
23	West Bengal	600 9	868 52	806 3	217 049	114 07	148 529	241 42	280 098	372 22	673 901

3.8.2 All India Rank obtained by the first and the last candidates admitted to B.Tech & M. Tech Dual Degree programme during during2024-2025-1st Year

SL. NO.	STATE	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	Bihar	-	-	68682	-	-	-	-	-	-	-
2	Jharkhand	55127	-	-	-	-	-	-	-	-	-
3	Kerala	-	-	-	-	64279	-	-	-	-	-
4	Telengana	-	-	-	-	-	-	-	-	213655	-

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SL. NO.	STATE	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
5	Uttar Pradesh	-	-	44986	-	50460	-	-	-	-	-
6	West Bengal	43427	65801	139838	-	80582	103720	143185	217886	-	-

3.8.3 All India Rank obtained by the first and the last candidates admitted to Integrated M. Sc. programme during 2024-2025-1st Year

SL. NO.	STATE	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	Andhra Pradesh	-	-	-	-	74154	97777	-	-	-	-
2	Bihar	-	-	-	-	104633	-	-	-	-	-
3	Rajasthan	-	-	-	-	105258	-	-	-	-	-
4	Telengana	-	-	-	-	-	-	221714	-	278501	-
5	Uttar Pradesh	-	-	-	-	74527	-	-	-	-	-
6	West Bengal	93750	101945	-	-	150463	168039	-	-	-	-

3.8.4 All India Rank obtained by the first and the last candidates admitted to B.Tech programme during 2024-2025-1st Year

SL. NO.	BRANCH	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	BT	25088	86852	50133	217049	56623	135060	141878	259829	190385	654618
2	CE	40327	79828	48361	137034	43972	148529	105291	280098	169038	481527
3	CHE	28000	52986	33768	98692	33696	117938	101647	236414	193548	606397
4	CSE	6009	17424	6572	47568	9338	55720	24142	116875	37222	229882
5	ECE	12625	25741	13344	64163	14666	73449	53097	100892	83810	311213
6	EE	14715	36168	16340	82180	21023	105562	83550	172138	111282	618228
7	MC	12811	34645	11413	65509	15894	89937	51298	146686	135430	334701
8	ME	22071	55746	27953	100344	32764	119105	81822	242212	118537	64932
9	MME	40294	75715	44225	107326	45882	138996	142166	221558	201429	673901



3.8.5 All India Rank obtained by the first and the last candidates admitted to B.Tech & M. Tech Dual Degree programme during 2024-2025-1st Year

SL. NO.	BRANCH	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	BT	65801	-	68682	139838	64279	80582	217886	-	213655	-
2	CHE	43427	59503	44986	-	50460	103720	143185	-	-	-

3.8.6 All India Rank obtained by the first and the last candidates admitted to Integrated M. Sc. programme during 2024-2025-1st Year

SL. NO.	BRANCH	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	CY	93750	101945	-	-	74154	168039	221714	-	278501	-

3.8.7 Students admitted to B.Tech programmes from various annual income groups during 2024-2025- 1st Year

SL NO.	STATE	Below Rupees 1 lakh	Between Rupees 1 lakh to Rupees 5 lakhs	Above Rupees 5 lakhs	TOTAL
1	Andhra Pradesh	167	9	52	128
2	Bihar	31	19	16	66
3	Chattishgarh	0	2	0	2
4	Delhi	0	1	0	1
5	Gujarat	0	0	2	2
6	Haryana	0	3	1	4
7	Jharkhand	1	5	6	12
8	Karnataka	0	0	5	5
9	Kerala	0	1	3	4
10	Maharashtra	2	0	4	6
11	Odisha	0	1	7	8
12	Rajasthan	0	5	3	8
13	Tamil Nadu	0	1	1	2
14	Telengana	16	14	9	39
15	Tripura	1	0	1	2
16	Uttar Pradesh	35	3	25	63
17	Uttaranchal	0	0	2	2

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SL NO.	STATE	Below Rupees 1 lakh	Between Rupees 1 lakh to Rupees 5 lakhs	Above Rupees 5 lakhs	TOTAL
18	West Bengal	103	61	159	323
19	Andaman & Nicobar	0	3	16	19
TOTAL		362	133	321	696

3.8.8 The Number Of Candidates Admitted To B.Tech &M.Tech Dual Degree Programme From Various Annual Income Groups During 2024-2025- 1st Year

SL NO.	STATE	Below Rupees 1 lakh	Between Rupees 1 lakh to Rupees 5 lakhs	Above Rupees 5 lakhs	TOTAL
1	Bihar	1	0	0	1
2	Kerala	1	0	0	1
3	Jharkhand	1	0	0	1
4	Uttar Pradesh	0	0	2	2
5	West Bengal	1	1	4	6
TOTAL		4	1	6	11

3.8.9 The Number Of Candidates Admitted To Integrated M. Sc. Programme From Various Annual Income Groups During 2024-2025- 1st Year

SL NO.	STATE	Below Rupees 1 lakh	Between Rupees 1 lakh to Rupees 5 lakhs	Above Rupees 5 lakhs	TOTAL
1	Andhra Pradesh	0	2	0	2
2	Bihar	1	0	0	1
3	Rajasthan	0	1	0	1
4	Uttar Pradesh	0	0	1	1
5	West Bengal	1	2	2	5
TOTAL		2	4	3	10



3.8.10 The Details of Admission To The PG Programmes During 2024-2025 -1st Year

Department	PG Program	OPEN	EWS	SC	ST	OBC	FS	TOTAL
Biotechnology	Biotechnology	5	0	2	0	3	0	10
Computer Science & Engineering	AI and Data Science	6	2	2	1	4	1	16
Computer Science & Engineering	Computer Science & Engineering	11	7	6	3	19	0	46
Earth and Environmental Studies (Coordinating)	Environmental Science & Technology	7	0	1	0	0	0	8
Mechanical Engineering	Fluid Mechanics and Heat Transfer	2	0	1	0	0	0	3
Civil Engineering	Geotechnical Engineering	9	0	3	0	0	0	12
Mechanical Engineering	Machine Design	4	0	0	0	1	0	5
Electronics and Communication Engineering	Microelectronics & VLSI	2	6	4	2	10	0	24
Mathematics	Operations Research	6	1	1	0	4	0	12
Electrical Engineering	Power Electronics & Machine Drives	7	0	3	2	7	0	19
Electrical Engineering	Power Systems	6	0	3	1	5	0	15
Electrical Engineering	Instrumentation and Control	5	0	2	0	2	0	9
Civil Engineering	Structural Engineering	6	3	3	0	10	0	22
Electronics and Communication Engineering	Next Generation Communication and Networks	8	0	3	0	5	0	16
Mechanical Engineering	Thermal Engineering	4	0	2	0	0	0	6
Total M. Tech.		88	19	36	9	70	1	223
Chemistry	MSc in Chemistry	7	5	4	0	7	0	23
Physics	MSc in Physics	7	4	4	1	5	0	21
Mathematics	MSc in Mathematics	7	4	4	1	7	0	23
EES	MSc in Applied Geology & Geoinformatics	9	2	2	2	5	0	20
Biotechnology	MSc in Life Sciences – (DBT SPON)	4	1	1	1	3	0	10
Management Studies	MBA	17	4	4	3	11	0	39
HSS	MSW	7	1	1	0	1	0	10
Total Admission		146	40	56	17	109	1	369

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3.8.11 The Details Of Admission Of Students Under EWS To The Different Programmes During 2024-2025 -1st Year

Department	PG Program / Specialization	EWS		TOTAL
		Male	Female	
Biotechnology	Biotechnology	0	0	0
Computer Science & Engineering	Computer Science & Engineering	5	2	7
Computer Science & Engineering	AI and Data Science	2	0	2
Earth and Environmental Studies (Coordinating)	Environmental Science & Technology	0	0	0
Mechanical Engineering	Fluid Mechanics and Heat Transfer	0	0	0
Civil Engineering	Geotechnical Engineering	0	0	0
Mechanical Engineering	Machine Design	0	0	0
Electronics and Communication Engineering	Microelectronics & VLSI	6	0	6
Mathematics	Operations Research	1	0	1
Electrical Engineering	Power Electronics & Machine Drives	0	0	0
Electrical Engineering	Power Systems	0	0	0
Electrical Engineering	Instrumentation and Control	0	0	0
Civil Engineering	Structural Engineering	3	0	3
Electronics and Communication Engineering	Next Generation Communication and Networks	0	0	0
Mechanical Engineering	Thermal Engineering	0	0	0
	Total M. Tech.	17	2	19
Chemistry	MSc in Chemistry	2	3	5
Physics	MSc in Physics	2	2	4
Mathematics	MSc in Mathematics	3	1	4
EES	MSc in Applied Geology & Geoinformatics	1	1	2
Biotechnology	MSc in Life Sciences – (DBT Sponsored)	0	1	1
Management Studies	MBA	0	4	4
HSS	MSW	1	0	1
Total Admission		26	14	40

SL. NO.	Branch of Research Study	EWS		Total
		Male	Female	
1	Biotechnology	0	1	1
2	Chemical Engineering	0	0	0
3	Chemistry	1	0	1
4	Civil Engineering	1	0	1



SL. NO.	Branch of Research Study	EWS		Total
5	Computer Science & Engineering	1	0	1
6	Earth & Environmental Studies	0	0	0
7	Electrical Engineering	0	1	1
8	Electronics & Communications Engineering	0	0	0
9	Humanities & Social Sciences	0	0	0
10	Management Studies	0	0	0
11	Mathematics	0	0	0
12	Mechanical Engineering	0	0	0
13	Metallurgical & Materials Engineering	0	0	0
14	Physics	0	1	1
15	Centre for Research on Environment and Water (CREW)	0	0	0
16	Centre for Biomedical Engineering & Assistive Technology (BEAT)	0	0	0
17	Centre for Advanced Research on Energy (CARE)	0	0	0
18	Centre of Excellence on IoT and Intelligent Systems (IoTIS)	0	0	0
Total		3	3	6

Name of the programme	EWS		Total
	Male	Female	
Bachelor of Technology in Biotechnology	10	4	14
Bachelor of Technology in Civil Engineering	8	3	11
Bachelor of Technology in Chemical Engineering	7	3	10
Bachelor of Technology in Computer Science and Engineering	34	7	41
Bachelor of Technology in Electronics & Communication Engineering	12	3	15
Bachelor of Technology in Electrical Engineering	12	3	15
Bachelor of Technology in Mathematics and Computing	8	3	11
Bachelor of Technology in Mechanical Engineering	22	7	29
Bachelor of Technology in Metallurgical & Materials Engineering	9	3	12
B.Tech & M.Tech Dual Degree in Biotechnology	1	1	2
B.Tech & M.Tech Dual Degree in Chemical Engineering	1	0	1
5 year integrated M.Sc in Chemistry	1	0	1
Total	125	37	162

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4. Departments

4.1 Department of Biotechnology

4.1.1 Department at a Glance:

The Department of Biotechnology, NIT Durgapur was established in 2005 with the B. Tech Biotechnology Program. The M.Tech program was subsequently introduced in 2009. In the year 2020, the department introduced a MSc in Life Sciences program. The department consists of 17 faculties with diverse research backgrounds, engaged in teaching and research in applied biological sciences and biomedical engineering. Faculty members are actively involved in projects, publishing high quality research articles, patents and have established collaborations with various national and international laboratories. The department frequently receives grants from various central funding agencies such as DST, DBT, CSIR to support research activities. It is equipped with extensive research facilities and infrastructure to develop cutting-edge technology through interdisciplinary research, training, and technical innovation. From past few years, the department has steadily emerged as a leader in providing excellent education at both the undergraduate and postgraduate levels with strong emphasis on modern biotechnology skills and on extensive laboratory training. The department also hosts international students. The curriculum and syllabi have been framed to meet the challenges of the growing demand of the Biotechnology sector in India. The department aims to provide a holistic education by means of innovative teaching, extracurricular activities and frequently organised seminars and workshops.

4.1.2 Mission & Vision

Mission

- To produce highly qualified, well-rounded and motivated graduates and postgraduates possessing adequate basic and technical knowledge and understanding in Biotechnology, who can provide service and eventually leadership to the nation and to the world.
- To pursue creative research and develop new technologies in the field of Biotechnology, which can contribute to the industry and to academia.

Vision

- To focus on quality teaching and research and foster innovation in the field of Biotechnology to cater to the needs of society and of the country.

4.1.3 Faculty

Name	Designation	Email-id
Sudip Chattopadhyay	HAG Professor	sudip.chattopadhyay@bt.nitdgp.ac.in
Sudit Sekhar Mukhopadhyay	Professor	sudit.mukhopadhyay@bt.nitdgp.ac.in
Surabhi Chaudhuri	Professor	surabhi.chaudhuri@bt.nitdgp.ac.in
Kaustav Aikat	Professor	kaustav.aikat@bt.nitdgp.ac.in
Dalia Dasgupta Mandal	Professor	dalia.dasgupta@bt.nitdgp.ac.in
Debjani Dutta	Associate Professor	debjani.dutta@bt.nitdgp.ac.in
Kazy Sufia Khannam	Associate Professor	sufia.kazy@bt.nitdgp.ac.in
Monidipa Ghosh	Associate Professor	monidipa.ghosh@bt.nitdgp.ac.in
Subhankar Roy Barman	Associate Professor	subhankar.roybarman@bt.nitdgp.ac.in
Ashish Bhattacharjee	Associate Professor	ashish.bhattacharjee@bt.nitdgp.ac.in
Nibedita Mahata	Assistant Professor	nibedita.mahata@bt.nitdgp.ac.in
Oindrilla Mukherjee	Assistant Professor	oindrilla.mukherjee@bt.nitdgp.ac.in
Sougata Saha	Assistant Professor	sougata.saha@bt.nitdgp.ac.in
Debojyoti De	Assistant Professor	debojyoti.de@bt.nitdgp.ac.in
Sudipta Mondal	Assistant Professor	sudipta.mondal@bt.nitdgp.ac.in
Amita Barik	Assistant Professor	amita.barik@bt.nitdgp.ac.in

4.1.4 Equipments (Newly Added)

Sl No	Name of the Equipment	Date of Purchase	Amount
1	pH meter	11.1.2024	49000



2	Ultra-Low Temperature minus 80 degree Celcius Freezer	5.29.2024	796500
3	Large Stackable Refrigerated Shaker incubator	5.30.2024	1037810
4	Electrophoresis running and semi dry blotting apparatus	5.31.2024	241900
5	Milli Q water purification system	18.07.25	999836
6	HPLC	18.01.25	2869899

4.1.5 Labs

Sl. No.	Name of Laboratory	Major equipment
1	UG Lab 1	NA
2	UG Lab 2	NA
3	PG Lab	Spectrophotometer
4	CIF I	Spectrophotometer, Gel documentation system
5	CIF II	Flow cytometer; Flurimeter, Sonicator, -80 freezer
6	Bioinformatics	Computational facility
7	Microscopy Room	Fluorescet Microscopes
8	Cell culture facility	Cell culture facility
9	Molecular Plant Pathogen Interactions (SRB)/Microbial products, Drug delivery systems and Ecotoxicology(DDG)	Spectrophotometer, Refrigerated centrifuge, PCR machine. Incubator shaker, UV-Vis Spectrophotometer, Microscope
10	Microbial Biotechnology (SC/KA)	GC, UV Vis Spectrophotometer
11	Inflammation Biology and Cancer cell Signaling (AB)/Genomic instability and Protein Engineering (SSM)	Real time PCR, Cold centrifuge, Semi confocal microscope etc.
12	Immunobiology Lab (MG)	Biosafety cabinet Level 3, Sonicator, Centrifuge, Free Radical Analyser, Ph meter, Vortex, Gel rocker.
13	Plant Developmental Biology (SCH)	Incubator shaker, PCR machine, Centrifuge machine, gel electrophoresis apparatus
14	Bioprocess Engineering (AD/SM)	UV Vis Spectrophotometer
15	Food and Environmental Biotechnology (SK/DD)	Incubator shaker, UV-Vis Spectrophotometer, PCR machine, GC, -20 freezer, gel electrophoresis
16	Cellular and molecular Immunology (NM)	CO2-Incubator, Biosafety Cabinet-II, ELISA reader
17	Infection Biology laboratory (OM)	Dual gas incubator; Nanopore sequencer system
18	Laboratory of Cellular Differentiation (SS/DDE)	2D gel electrophoresis, Real Time PCR Machine with HRM, -80 Freezer
19	Chemical Biology Laboratory (SM)	Chemical fume hood; Rotary evaporator, Solid Phase Peptide Synthesizer

4.1.6 PhD Degree awarded till 2022-23

Sixty-Three.

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4.1.7 Specialization

- Biocemistry, Food Biotechnology
- Infection Biology
- Immunology
- Biochemistry
- Bionanotechnology
- Cellular and Molecular Biology
- Bioinformatics, Computational Biology
- Biochemical Engineering, Microbial Fermentation
- Cell and Molecular Biology, Protein arginylation
- Immunology, Infection Biology
- molecular biology of cancer, protein engineering •
- Chemical Biology, Nanobiotechnology
- Environmental Microbiology and Biotechnology
- Microbial Biotechnology, Environmental Toxicology, Drug delivery system
- Food Biotechnology
- Environmental Biotechnology
- Biotechnology
- Computational genomics, Stem Cell Biology,
- Immunology and Biosensor
- Plant Biotechnology

4.1.8 Proposed Plan for Research

- Food Biochemistry, Metabolomics, Nutraceuticals
- Bacterial Pathophysiology
- Immunoinformatics
- Bionanotechnology
- Understanding macromolecular interactions in context to IDPs using computational approaches
- Role of protein arginylation in inflammatory response
- Bacterial Host-pathogen interaction
- Microbiome
- Disease detection and antimicrobials
- Microbial production of ethanol and lipid for application as biofuel
- Microbial production of PHA and lactic acid for application as bioplastic
- 1. We are working on Fanconi anemia as model system for understanding the molecular biology of cancer. 2. We are engineering the cellulase proteins
- Development of novel peptide-based self-assembling nanomaterial for diverse applications
- Microbial carbon dioxide capture and conversion to valuable products, Microbial enzymes, Metabolites
- Bioremediation, Drug delivery system, Toxicity analysis
- Nanobiotechnology
- Cell Biology, Cellular Signaling
- Gut Microbes, Metabolic disorders
- 1. Modulating Parasite Virulence via Disruption of Sphingolipid Biosynthesis in *Leishmania donovani*. 2. Use of mRNA Vaccine Technology for Rapid and Broad-Spectrum Immunization Against Multi-Drug Resistant *Staphylococcus*. 3. Broad spectrum biosensing for screening disease biomarkers.
- Molecular Plant Pathogen Interactions

4.1.9 Area of Research Interest

- Food Biochemistry, Nutraceutical Development, Metabolomics
- Immunotherapy
- Immunoinformatics
- Molecular Cell signaling
- Intrinsically disordered proteins, RNA, macromolecular interactions
- Bioenergy, Biopolymers, Environmental Biotechnology
- Inflammatory signaling and anti-inflammatory therapeutics
- Host-pathogen interaction; microbiome; antimicrobials
- Molecular Biology of Cancer and Cellulase engineering
- Peptide self-assembly, Biomaterials
- Deep subsurface microbiome
- Deep ocean microbiome
- Environmental Biotechnology, Ecotoxicity, Drug delivery system, Waste management • Probiotics
- Nanobioremediation
- Inflammation Biology, Cancer Cell Signaling
- Gut Microbes, Metabolic Disorder
- Disease detection and control.



- Molecular Plant Pathogen Interactions

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4.1.10 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
IIT Bombay, IISER Kolkata	Cellulase engineering	collaborative research, facility use and collaborative publication
CMTI Bengaluru	Biosensor development	Joint research goes on.

4.1.11 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Central Mechanical Engineering Research Institute, Durgapur	Research projects on Biopolymer Development and its Applications	Dr. Nripen Chanda	Research
National Institute of Cholera and Enteric Diseases, Kolkata	Research on stability and functional characterization of IpaD	Dr. Hemanta Koley	Research
IIT Patna	polymers	Dr. Subrata Chattopadhyay	research, joint publication
SRM institute of Science and Technology	antibacterial peptides	Dr. Priyadip Das	joint publication, research
BITS Pilani, Goa Campus	computational biology	Dr. Raviprasad Aduri	joint research , publication
IIT Indore	Computational Structural Biology	Dr. Parimal Kar	Joint research and publication
Tel Aviv University	Reserach	Prof. Ehud Gazit	Collaborative experiments and publications
IIT Gwuhati	Reaserch	Prof T.K.Mandal	Reasearch project submission , publication
Bose Institute, Kolkata	Research collaboration on Cellular Signaling and Inflammation mediated Cancer	Prof. Kaushik Biswas	Collaboration with faculty member of Biological Science department of Bose Institute related to in vitro and in vivo experiments using cellular and animal model system
Bose Institute, Kolkata	Cancer Research	Prof, Kaushik Biswas	Joint Research, Joint Guidance of PhD Student
Rajendra Memorial Research Institute of Medical Sciences, ICMR.	Drug development for Kala Azar diseases.	Dr. Avik Sen, Dr. K. Panda	Joint ICMR project is ongoing.
IIT Bombay	Rice blast pathogenesis	Dr. Rajesh Patkar	Research

4.1.12 Innovations and Technology Transfer (Patents filed during)

Title	Inventors	Application Nos	Date of Filling
Prediction of Ki values of the small molecules using neural network	Rahul Naga, Sanjukta Maity and Sougata Saha	Copyright applied	2025-07-31



Title	Inventors	Application Nos	Date of Filling
An expression vector for tag-less recombinant polypeptide production in host cells, and uses thereof	Mukhopadhyay, SS, Hossain. M., Das S., Kapoor BS.	202531065620	2025-07-09

4.1.13 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme

4.1.14 Journal: Published in 2024-2025

Author(s) Name	Paper Name	Journal Name	Others Info
Harshita Tiwari, Subhadip Saha and Monidipa Ghosh	In Silico Hybridization and Molecular Dynamics Simulations for the Identification of Candidate Human MicroRNAs for Inhibition of Virulent Proteins' Expression in <i>Staphylococcus aureus</i>	Journal of cellular Biochemistry	Volume:126 Issue No:1 Page No: Year:2025 Month:
Gaurav Singh, Kunal Das, Dalia Dasgupta Mandal	Valorization of kraft lignin via its conversion into lignin nanoparticles to act both as dds and biostimulator for plant	Waste and Biomass Valorization	Volume:15 Issue No:8 Page No:4823-4838 Year:2024 Month:Aug
Madhu Verma, Krishna Yadav, Rashmi Parihar, Debjani Dutta, Surabhi Chaudhuri and Sri Sivakumar	Active Tumor Targeting by Core-Shell PDMS-HA Nanoparticles with Sequential Delivery of Doxorubicin and Quercetin to overcome P-glycoprotein efflux pump	Nanoscale	Volume:17 Issue No:9 Page No:5033-55 Year:2025 Month:Mar
Chandreyee Datta, Payel Das, Subhajit Dutta, Tuhina Prasad, Abhineet Banerjee, Sameep Gehlot, Arpa Ghosal, Sukhamoy Dhabal, Pritam Biswas, Debojyoti De, Surabhi Chaudhuri, Ashish Bhattacharjee	AMPK activation reduces cancer cell aggressiveness via inhibition of monoamine oxidase A (MAO-A) expression/activity.	Life Sciences	Volume:Volume 352 Issue No:1 September 2024, Page No:122857 Year:2024 Month:Sep
Chandreyee Datta, Pradip Das, Surbhi Swaroop, Ashish Bhattacharjee	Rac1 plays a crucial role in MCP-1 induced monocyte adhesion and migration.	Cellular Immunology	Volume:401–402 Issue No:July–August Page No:104843 Year:2024 Month:Jul
Shrute Kannappan, Yuna Kim, Debojyoti De, Rehna Paula Ginting, Hyeon-Gung Yang, Kyungmin Kim, Varun Bansal, Su Myung Jung, Jee-Yin Ahn, Sung HeeUm, Min-Woo Lee, JungHeon Lee, Kyeong Kyu Kim,	In vivo brown adipogenic reprogramming induced by a small molecule cocktail	Biomaterials	Volume:324 Issue No: Page No: Year:2025 Month:Mar

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Author(s) Name	Paper Name	Journal Name	Others Info
Chandreyee Datta , Payel Das , Subhajit Dutta ,Tuhina Prasad , AbhineetBanerjee , Sameep Gehlot, Arpa Ghosal ,Sukhamoy Dhabal ,Pritam Biswas ,Debojyoti De , SurabhiChaudhuri , AshishBhattacharjee	AMPK activation reduces cancer cell aggressiveness via inhibition of monoamine oxidase A (MAO-A) expression/activity	Life Sciences	Volume:352 Issue No:122857 Page No: Year:2024 Month:Sep
Sanhita Saha and Debjani Dutta	Valorization of metabolites of Kocuria marina DAGII in meat preservation using a sustainable approach	Food Control	Volume:171 Issue No:1 Page No: Year:2024 Month:Aug
L. Susmita Devi , Bhaswati Das, Debjani Dutta, Santosh Kumar	Essential oils as functional agents in biopolymer-based sustainable food packaging system: A review	Sustainable Chemistry and Pharmacy.	Volume:29 Issue No: Page No: Year:2024 Month:Jun
ebasmita Dutta, Bodhisattwa Das Gupta, Debjani Dutta	β -cryptoxanthin encapsulated nanoliposome in milk with an approach to enhance vitamin A through fortification	International Dairy Journal	Volume: Issue No: Page No: Year:2025 Month:Mar
Sudhir Kumar Barik, ·	Integrated biorefinery approach for	Clean Technologies and Environmental	Volume:27 Issue No:2025 Page
Prakash Kumar, · Uma Jyoti Pal, · Kaustav Aikat	sustainable biofuel production from algal biomass	Policy	No:3245–3269 Year:2024 Month:Apr
Subba Reddy Dodda, Musaddique Hossain, Sudipa Mondal, Shalini Das, Sneha Khator (Jain), Kaustav Aikat, Sudit S. Mukhopadhyay	The S–S bridge mutation between the A2 and A4 loops (T416C-I432C) of Cel7A of <i>Aspergillus fumigatus</i> enhances catalytic activity and thermostability	Applied and Environmental Microbiology	Volume:90 Issue No:4 Page No: Year:2024 Month:Apr
Bodhisattwa Das Gupta, Arpita Halder, Thangavel Vijayakanth,Nandita Ghosh,Ranik Konar,Oindrilla Mukherjee,Ehud Gazit*Sudipta Mondal	A broad-spectrum antibacterial hydrogel based on the synergistic action of Fmoc–phenylalanine and Fmoc–lysine in a co-assembled state	Journal of Materials Chemsitry B	Volume:12 Issue No:34 Page No:8444-8453 Year:2024 Month:Jul
Rahul Naga, Sayan Poddar, Arghyadeep Bhattacharjee, Parimal Kar, Avishek Bose, Venkata Satish Kumar Mattaparthi, Oindrilla Mukherjee, Sougata Saha	Structural analysis of human ATE1 isoforms and their interactions with Arg-tRNA ^{Arg}	Journal of Biomolecular Structure and Dynamics	Volume:42 Issue No:12 Page No:7554-7573 Year:2024 Month:Sep
Arpita Halder, Ravikumar Pasupuleti, Subramaniyam Sivagnanam, Priyadip Das, Oindrilla Mukherjee	Boc-Protected Phenylalanine and Tryptophan-Based Dipeptides: A Broad Spectrum Anti-Bacterial Agent	Biopolymers	Volume:116 Issue No:1 Page No:e23649 Year:2024 Month:Dec
Subramaniyam Sivagnanam, Suman Nayak, Arpita Halder, Oindrilla Mukherjee, Abhijit Saha, Priyadip Das	Sticky tubes co-assembled by functionalised diphenylalanine and polydopamine nanoparticles form biocompatible antifouling coating	RSC Advances	Volume:15 Issue No:5 Page No:3672-3685 Year:2025 Month:Jan
Sulbha Kumari, Arpita Halder, Aayush Anand,	Conversion of oligo (ethyleneglycol) s into non-toxic highly selective biocompatible poly (ethyleneglycol)	Polymer Chemistry	Volume:16 Issue No:14 Page No:1584-



Author(s) Name	Paper Name	Journal Name	Others Info
Oindrilla Mukherjee, Subrata Chattopadhyay	s:synthesis, antimicrobial and antibiofilmactivity		1594 Year:2025 Month:Feb
Musaddique Hossain, Subba Reddy Dodda, Shalini Das, Kaustav Aikat, Sudit S. Mukhopadhyay	Catalytic tunnel engineering of thermostable endoglucanase of GH7family (W356C) from Aspergillus fumigatus gains catalytic rate	Enzyme and Microbial Technology	Volume:187 Issue No:110632 Page No: Year:2025 Month:Mar
R. Naga, S. Poddar, A. Jana, S. Maity, P. Kar, D.R. Banerjee & S. Saha	Targeting human arginyltransferase and post-translational protein arginylation: a pharmacophore-based multilayer screening and molecular dynamics approach to discover novel inhibitors with therapeutic promise	SAR and QSAR in Environmental Research	Volume:36 Issue No:1 Page No:1-28 Year:2025 Month:Jan
Borah AK, Singh A, Saha S.	1 α , 25-dihydroxy vitamin D3 containing leaf aqueous extract of Catharanthus roseus (L.) G. Don inhibits pro-inflammatory signaling in adipocytes-macrophage co-culture and improves glucose homeostasis in adipocytes and muscle cells.	South African Journal of Botany	Volume:167 Issue No: Page No:519- 526 Year:2024 Month:Apr
18. B. Das Gupta, A. Halder, T. Vijayakanth, N. Ghosh, R. Konar, O. Mukherjee, E. Gazit, S. Mondal	A broad-spectrum antibacterial hydrogel based on the synergistic action of Fmoc-phenylalanine and Fmoc-lysine in a co-assembled state	J. Mater. Chem. B	Volume:12 Issue No: Page No:8444- 8453 Year:2024 Month:Jul
Siddhartha Pal, Arpita Hait, Sunanda Mandal, Ajoy Roy, Pinaki Sar & Sufia K. Kazy	Crude oil degrading efficiency of formulated consortium of bacterial strains isolated from petroleumcontaminated sludge	3 Biotech	Volume:14 Issue No:10 Page No:220 Year:2024 Month:Sep
Prachi Bhargava, Paramveer Yadav, Amita Barik	Computational insights into intrinsically disordered regions in protein-nucleic acid complexes	International Journal of Biological Macromolecules	Volume:277 Issue No:1 Page No:134021 Year:2024 Month:Jul
Daiji Brahma, Abheerup Sarker, Sagnik Kulvai and Debjani Dutta	Valorization and kinetic modeling of biosurfactant produced by Kocuria marina DAGII using waste cooking oil as a substrate	Biocatalysis and Agricultural Biotechnology	Volume:58 Issue No: Page No: Year:2024 Month:Jun
Daiji Brahma, Debjani Dutta, Priti Das & C. V. Manvi	Can Carotenoid Encapsulated Hydrogel Be a Promising Medium for Repairing Skin Damage	Regenerative Engineering and Translation Medicine	Volume:11 Issue No: Page No:327-350 Year:2024 Month:Oct
Anamika Nayak, Rohini Samadarshi and Debjani Dutta	Exploiting the Combinatorial Potential of Mangiferin and Jujube Seeds in Poultry Meat Preservation: ASustainable Packaging Solution to Improve Food Quality	ACS- food Science and Technology	Volume:4 Issue No:9 Page No:2090- 2105 Year:2024 Month:Aug
Halder S, Jaiswal N, Balajee S, Mahata N.	Efficient production of a novel recombinant fusion protein of EIEC effector IpaD and EGFP: Biophysical characterization and functional studies	Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics	Volume:1873 Issue No: Page No:141066 Year:2025 Month:Mar
Jaiswal N, Mahata N, Chanda N.	Nanogold-Albumin Conjugates: Transformative Approaches for Next-Generation Cancer Therapy and Diagnostics	Nanoscale	Volume:DOI: 10.1039/d4nr05279j Issue No: Page No: Year:2025 Month:Mar
Chowdhury S, Sadhukhan P, Mahata N.	Immunoinformatics investigation on pathogenic Escherichia coli proteome to develop an epitope- based peptidevaccine candidate	Molecular diversity	Volume:https://doi.org/10.100 7/s11030024-11034-0 Issue No: Page No: Year:2024

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Author(s) Name	Paper Name	Journal Name	Others Info
			Month:Nov

4.1.15 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info

4.1.16 Journal: Published in Others in 2024-2025

Author(s) Name	Paper Name	Journal Name	Others Info

4.1.17 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Soumik Dana, Sunanda Mondal, Supriya Pal, Sufia K Kazy	Increase of Strength of Pure Sandy Soil Under Drained Conditions by MICP	Ninth Indian Young Geotechnical Engineers Conference (9IYGEC) 2023	DOI/ISBN: 978-981-976643-7 Volume: Issue No: Page No:33-44 Year:2024 Month:Nov Presenter:CO-AUTHOR

4.1.18 Conference: Published in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Pinkan Sadhukhan, Nibedita Mahata	Comparative analysis of two noble winning protein structure prediction methods to design major Shigella invasins as protective immunogens against bacillary dysentery	7th Regional Science and Technology Congress (Region Three)	DOI/ISBN: NA Volume: Issue No: Page No:106-107 Year:2025 Month:Jan Presenter:CO-AUTHOR
Aishwarya Mallick, Nibedita Mahata	Engineering Egfp-Ipad: structural dynamics and immune insights into bacillary dysentery	1st Symposium on Emerging Frontiers of Biotechnology	DOI/ISBN: NA Volume: Issue No: Page No:38 Year:2025 Month:Jan Presenter:CO-AUTHOR
Aishwarya Mallick, Nibedita Mahata	Molecular insights of Invasion plasmid antigen-D (IpaD) in bacillary dysentery	International Conference on Horizons in Structural and Computational Biology (HSCB-2025)	DOI/ISBN: NA Volume: Issue No: Page No:130 Year:2025 Month:Feb Presenter:CO-AUTHOR
Bidisha Pal, Nibedita Mahata	Designing a chimeric E3 ligase fusion protein for auxiliary protection against bacillary dysentery	1st Symposium on Emerging Frontiers of Biotechnology	DOI/ISBN: Volume: Issue No: Page No:24 Year:2025 Month:Jan Presenter:CO-AUTHOR
Plaban K Saha, Swatilekha Sarkar, Mouli Bhattacharyya, Pinaki Sar & Sufia K Kazy	Physiological and genomic potential of CO2 utilizing extremotolerant chemolithoautotrophic Ralstonia pickettii isolated from deep subsurface igneous rock underneath	International Conference on Innovations in Biotechnology for Sustainability (IBS-2024)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:CO-



Author(s) Name	Paper Name	Conference Name	Others Info
	the Deccan Traps, India		AUTHOR
Gaurav Singh, Dalia Dasgupta Mandal	Suitable conversion of Sugarcane Bagasse derived Lignin into Lignin Nanoparticle: Its Characterization and Application	Energy, Functional Materials/Molecules and Nanotechnology (ICEFN-2025)	DOI/ISBN: NA Volume: Issue No: Page No:237 Year:2025 Month:Mar Presenter:CO-AUTHOR
Gaurav Singh, Abhishek Verma, Dalia Dasgupta Mandal	Strategic fabrication of Lignin biopolymer into Silver-Doped Lignin Nanoparticles and evaluation of Anticancer and Antioxidant Properties	International Conference on India Biodiversity Meet – 2025	DOI/ISBN: NA Volume: Issue No: Page No: Year:2025 Month:Mar Presenter:CO-AUTHOR
Abhishek Verma, Dalia Dasgupta Mandal	Green Synthesis of Cellulose Nanoparticles from Sugarcane Bagasse: Characterisation, Biological evaluation and future perspective	Energy, Functional Materials/Molecules and Nanotechnology (ICEFN-2025)	DOI/ISBN: NA Volume: Issue No: Page No:235 Year:2025 Month:Mar Presenter:CO-AUTHOR
Gaurav Singh, Abhishek Verma, Dalia Dasgupta Mandal	Biomaterials from Bacterial TreatedAgrowaste: A Biorefinery approach forValuable CELLULOSE and LIGNIN	3rd International Conference on RecentTrends in Materials Science & Devices 2025	DOI/ISBN: NA Volume: Issue No: Page No: Year:2025 Month:Mar Presenter:SELF
Abhishek Verma, Gaurav Singh, Dalia Dasgupta Mandal	Sustainable Valorization of Agricultural waste: Key challenges and probable solution	International Conference on India Biodiversity Meet – 2025	DOI/ISBN: NA Volume: Issue No: Page No: Year:2025 Month:Mar Presenter:SELF
Aishani Ray, Jyoti Ranjan, Dalia Dasgupta Mandal	Exploring Experimental and In silico basedDehalogenase Role in Planococcus mediatedChlorophenol Elimination : A Clean Strategy	International Conference on Emerging Trends in Translational Bioinformatics	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR

4.1.19 Conference: Accepted in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Sandip Mahato, Kaustav Aikat	Optimized Production and Characterization of Polyhydroxybutyrate from a Halophilic Bacterial Strain: A Sustainable Approach to Mitigating Plastic Pollution	International conference on innovations in biotechnology for sustainability (ibs-2024)	DOI/ISBN: nil Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:CO-AUTHOR

4.1.20 Book Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details

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Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Debjani Dutta	Anamika Nayak	Biopolymers and Biocomposites: Innovations and Sustainability in Food Packaging	Biodegradability of Biopolymers	Publisher: John Wiley & Sons, Inc Publication Date: 2024-05-10
Debjani Dutta	Sreejita Chowdhury, Anamika Nayak	Technological Advancements in Waste Management: Challenges and Opportunities: Select Proceedings of TAWMCO 2023	From Farm to Functional: How Jujube seeds can revolutionize the Food Industry	Publisher: Springer Publication Date: 2024-1018
Surabhi Chaudhuri	Meheria Hazari, Tarumoy Das	Bioreactor Design Concepts for Viral Vaccine Production	Bioreactor design for vaccine production	Publisher: Elsevier Publication Date: 2024-0709

4.1.21 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
Conference on "Emerging Trends in Translational Bioinformatics (ET2B) 2024"	Birla Institute of Technology, Mesra, Ranchi.	2024-12-05	2024-12-07	India
7th Regional Science and Technology Congress 2024-2025	Department of Science & Technology and Biotechnology	2025-01-10	2025-01-11	India
Horizons in Structural and Computational Biology (HSCB) - 2025	IIT Hyderabad and University of Hyderabad	2025-02-28	2025-03-01	India
International Conference on Innovation and Advances in Chemical Sciences	Cotton University, Guwahati, Assam	2025-01-24	2025-01-25	India
Invited speaker in 8th India Biodiversity Meet 2025 (IBM 2025),	ISI	2025-03-24	2025-03-26	India
3rd International Conference on "Recent Trends in Materials Science and Devices ONLINE Invited speaker 25-3-25 "ICRTMD 2025	J.V.M.G.R.R. College, Charkhi Dadri, Haryana, India, and Research Plateau Publishers	2025-03-24	2025-03-25	India
Invited speaker in STP on "Waste Treatment, management, and Valorization" NIT D from September 19th-23rd, 2024,	Chemical Engineering Department NITD	2024-09-19	2024-09-23	India

4.1.22 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Investigating the role of Beta cryptoxanthin in oxidative stress and its application as nutraceuticals	Daiji Brahma	Dr. Debjani Dutta	DEGREE AWARDED	2025-02-11
Investigation and development to stabilize health benefits of fortified β -cryptoxanthin in milk	Debasmita Dutta	Dr. Debjani Dutta	DEGREE AWARDED	2025-02-07
Study of pomegranate peel extract as an alternative source of therapy for the skin infections caused by drug-resistant microbes	Swamini Saini	Dr. Surabhi Chaudhuri, Dr. Debjani Dutta, Dr. Shamik Ghosh	DEGREE AWARDED	2024-08-24



Topic Name	Scholar	Supervisor	Status	Status Date
Preclinical Studies of Theranostic Agent based on Carbon Nanocapsules and PDMS Nanoparticles and its Drug Loading Efficacy	Madhu Verma	Dr. Suarbhi Chaudhuri, Dr. Debjani Dutta, Dr. SivaKumar	DEGREE AWARDED	2025-01-23
Biotechnological potential of Kocuria marina DAGII: A natural alternative for Food safety, Agriculture and Aquaculture health	Sanhita Saha	Dr. Debjani Dutta	ONGOING	null
Investigating the role of fermented foods and beverages in modulating the gut microbiota	Shreya Mukherjee	Dr. Debjani Dutta and Dr. Oindrilla Mukherjee	ONGOING	2024-12-12
Engineering nanogold-albumin conjugate for targeted delivery of cancer therapeutics	Dr. Namita Jaiswal	Dr. Nibedita Mahata (NITD), Dr. Nripen Chanda (CMERI, Durgapur)	DEGREE AWARDED	2025-01-08
Study of Ingenious Poly (lactic-co-glycolic acid) Nanoparticle-based Carriers in Cancer Therapeutic Applications	Dr. Manosree Chatterjee	Dr. Nibedita Mahata (NITD), Dr. Nripen Chanda (CMERI, Durgapur)	DEGREE AWARDED	2021-10-07
Molecular cloning, expression, characterization and thermostability enhancement of effector protein, IpaD (Invasion Plasmid Antigen D) from Enteroinvasive Escherichia coli (EIEC)	Dr Sudeshna Halder	Dr. Nibedita Mahata (NITD)	DEGREE AWARDED	2024-09-28
The impact of linker residues on the structural stability of an EGFP-fused Novel E3 ubiquitin ligase following Bacillary Dysentery vaccine application	Mr. PINKAN SADHUKHAN	Dr. Nibedita Mahata (NITD)	ONGOING	null
Deciphering the role of IpaD as a novel E3 ubiquitin ligase in pathogenesis of Escherichia coli	Ms. AISHWARYA MALLICK	Dr. Nibedita Mahata (NITD)	ONGOING	null
Technological innovation towards the enhanced synthesis of functionally improved Enteroinvasive Escherichia coli (EIEC) Invasive Plasmid Antigen H 4.5 (IpaH 4.5): a novel immunogenic E3 ligase	Ms. Bidisha Pal	Dr. Nibedita Mahata (NITD)	ONGOING	null
Ultra short peptides and their antibacterial properties	Arpita Halder	Oindrilla Mukherjee	SUBMITTED	2025-03-17
Riboregulation of Helicobacter pylori oncoprotein CagA	Bivash Sinha	Oindrilla Mukherjee	ONGOING	null
Phytochemicals and anti H.pylori	Arghyadeep Bhattacharjee	Oindrilla Mukherjee	ONGOING	null
Food and microbiota	Shreya Mukherjee	Debjani Dutta, Oindrilla Mukherjee	ONGOING	null
Computational study of intrinsically disordered regions in proteins.	Prachi Bhargava	Amita Barik	ONGOING	null
Computational insights into intrinsically disordered regions in macromolecular complexes.	Kirtiman Mahata	Amita Barik	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Computational investigation on disordered proteins and ligand interactions.	Moumita Roy	Amita Barik	ONGOING	null
Mitochondrial Genomics in oral cancer diagnosis	ABHISHEK BANERJEE	Sudit S Mukhopadhyay & Amita Barik	ONGOING	null
A Study on Molecular Structure and its Functional Implications of Human Arginyltransferase 1 (hATE1)	Rahul Naga	Sougata Saha	ONGOING	null
Regulation of inflammatory signaling in macrophages	Sohini Saha	Sougata Saha	ONGOING	null
Role of Fanconi Anemia Complement Group D2 (FANCD2) in Mitochondria	Bishwajit Singh Kapoor	Sudit Sekhar Mukhopadhyay	SUBMITTED	2025-08-16
Biochemical Characterization of Lytic Polysaccharide Monooxygenases and its role in lignocellulosic Biomass saccharification enhancement	Musaddique Hossain	Sudit Sekhar Mukhopadhyay	ONGOING	null
Deciphering the Repair mechanism of Inter-Crosslinking (ICL) damage in Mitochondrial– DNA	Sharad Ghosh	Sudit S. Mukhopadhyay	ONGOING	null
Study of mammalian replication fork upon ICL damage and its association with MCM3	Samiran Hazra	Sudit S. Mukhopadhyay	ONGOING	null
Elucidation of enzyme mechanism and engineering of GH1 Family Betaglucosidases from <i>Aspergillus niger</i>	Shalini Das	Sudit S. Mukhopadhyay	ONGOING	null
Mitochondrial DNA mutations profiling in Oral squamous cell carcinoma (OSCC).	Dr. Abhisek Banerjee	Sudit S. Mukhopadhyay	ONGOING	null
Production of biofuel and other value-added products from oleaginous microorganisms in a biorefinery approach	Sudhir Kumar Barik	Prof. Kaustav Aikat	ONGOING	null
Production, Characterization and Application (as Bioplastic) of Polyhydroxyalkanoates (PHA) produced by Halophilic Microorganism, isolated from Bay of Bengal	Sandip Mahato	Prof. Kaustav Aikat	ONGOING	null
Microbial production of lactic acid using whey and rice straw as substrates	Reshmi Verma	Prof. Kaustav Aikat	ONGOING	null
Sustainable Biofuel Production from Waste Biomass using Co-Culture of Microorganisms	Kirti Jyoti	Prof. Kaustav Aikat	ONGOING	null
Fabrication of multifunctional biopolymeric hydrogel/nanofiber matrix for biomedical application	Sultana Khatun	Prof. Kaustav Aikat & Dr. Sriparna De (Brainware University)	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Site saturation and free energy based protein engineering approach to increase glucose tolerance level and thermostability simultaneously on GH1 family beta-glucosidase from <i>Aspergillus niger</i> and its functional expression in <i>Pichia pastoris</i> system	Shalini Das	Prof. Sudit S. Mukhopadhyay & Prof. Kaustav Aikat	ONGOING	null
Exploration of Peptide-Based Antibiotics and Adjuvants and Their Mechanisms of Action	Rahul Kuiri	NA	ONGOING	null
Rational Design and Synthesis of Short Self-Assembling Peptides for Multifunctional Applications	RANIK KONAR	NA	ONGOING	null
NA	Samiran Hazra	Prof. Sudit Sekhar Mukhopadhyay	ONGOING	null
Exploring the diversity and metabolic potential of cultivable chemolithoautotrophic microorganisms from deep continental crust beneath the Deccan Traps, India	Plaban Kumar Saha	Sufia K Kazy	ONGOING	null
Phylogeny, physiology and genomic potential of chemolithotrophic bacteria from subsurface igneous rock underneath the Deccan Traps	Mouli Bhattacharyya	Sufia K Kazy	ONGOING	null
Physiological and genomic characterization of extremotolerant/extremophilic bacteria from subsurface igneous rock beneath the Deccan Traps	Abhisek Sahu	Sufia K Kazy	ONGOING	null
Diversity and metabolic potential of the marine microbiome from the Seawaters of the South Andaman, India	Gajendra Joshi	Sufia K Kazy	ONGOING	null
Metagenomic and functional characterization of thermophilic bacteria from deep subsurface igneous rocks underneath the Deccan Traps, India	Subhasri Pramanik	Sufia K Kazy	ONGOING	null
Exploration of mechanistic understanding of amyloid aggregation and study of interactions of amyloid fibrils with biological systems.	Bodhisattwa Das Gupta	NA	ONGOING	null
Development of Functional Short Self-Assembling Helical Peptide Building Blocks	Nandita Ghosh	NA	ONGOING	null
Bioremediation of lindane by consortia of bacteria and ecotoxicity assessment	Banishree Sahoo	Surabhi Chaudhuri	DEGREE AWARDED	2021-12-08
Study of pomegranate peel extract as an alternative source of therapy for the skin infections caused by drug-resistant microbes	Swamini Saini	Surabhi Chaudhuri, Debjani Dutta, Shamik Ghosh	DEGREE AWARDED	2024-08-05

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Topic Name	Scholar	Supervisor	Status	Status Date
Characterization and application of Pumilacidin, a lipopeptide biosurfactant from <i>Bacillus pumilus</i> NITDID1	Arpan Dasgupta	Surabhi Chaudhuri, Debojyoti De	DEGREE AWARDED	2024-07-30
Green Synthesis of Bimetallic Nanoparticles and their Application in the Development of Antibiofouling Architectural Coatings	Parna Ganguli	Surabhi Chaudhuri	ONGOING	null
Potential role of AMPK activators in reducing cancer cell aggressiveness by modulating a Monoamine Oxidase-A (MAO-A)-mediated pathway	Sameep Gehlot	Surabhi Chaudhuri, Ashish Bhattacharjee	DEGREE AWARDED	2025-04-02
Study of Bacteriocin from Probiotic Bacteria Isolated from Indigenous Fermented Foods of North-East India	Sourav Saha	Surabhi Chaudhuri	ONGOING	null
Characterization and Application of Isolated Probiotic bacteria of Kheer Dahi from Different Regions of West Bengal.	Maithili Adhikary	Surabhi Chaudhuri	ONGOING	null
Neuromuscular retraining of autistic patients	Aheli Guha	Surabhi Chaudhuri	ONGOING	null
Preclinical Studies of Theranostic Agent based on Carbon Nanocapsules and PDMS Nanoparticles and its Drug Loading Efficacy	Madhu Verma	Surabhi Chaudhuri, Debjani Dutta, Sri Sivakumar	DEGREE AWARDED	2025-01-23
Bioremediation of recalcitrant pollutants	Niharika Kumari	Surabhi Chaudhuri	ONGOING	null
Production and application of nanopesticides	Sriparna Das	Surabhi Chaudhuri	ONGOING	null
Gut Microbes and Obesity	Deep Chanda	Debojyoti De	DEGREE AWARDED	2025-01-23
GENOMIC INSIGHTS INTO THE THERAPEUTIC LANDSCAPE OF POLYCYSTIC OVARY SYNDROME	Sindhuja Rajvelli	Debojyoti De	ONGOING	null
A genetic based approach towards understanding Autism Spectrum Disorders in the light of its therapeutic landscape and shared pleiotropism with other neuropsychiatric disorders.	Nikhil Vasimalla	Debojyoti De and Asish Bhattacharjee	ONGOING	null
Gut microbial shift during obese to Type 2 Diabetes Transition	Jayeeta Chatterjee	Debojyoti De	ONGOING	null
Gut microbial dynamics during aging	Shayak Kundu	Debojyoti De	ONGOING	null
Effect of frying, freezing and sun drying on the biochemical components of fish and its nutritional impact on human health	Ms. Indrani Banerjee Roll No-18CY1104	Dr. Jitanyu Chakraborty, Dr. Ashish Bhattacharjee	DEGREE AWARDED	2024-07-25
Role of (AMP)-activated protein kinase [AMPK] in controlling the expression and function of Monoamine Oxidase A (MAOA) in response to IL-13	Mr. SAMEEP GEHLOT 15/BT/1102	Surabhi Chaudhuri, Dr. Ashish Kumar Bhattacharjee	DEGREE AWARDED	2024-10-01



Topic Name	Scholar	Supervisor	Status	Status Date
Regulation of 15-lipoxygenase gene expression and function in monocytes and A549 lung cancer cells.	MS. Surbhi Swaroop, 17BT1105	Dr. Ashish Kumar Bhattacharjee	SUBMITTED	2025-04-28
Monoamine Oxidase-A (MAO-A), a biomarker of cancer progression	Ms. Suchandra Pal (18/BT/1107)	Dr. Ashish Kumar Bhattacharjee, Dr. Debojyoti De	ONGOING	null
INVESTIGATION OF SOME POTENTIAL CHEMOPREVENTIVE AGENTS AND THEIR EFFICACY IN CANCER CELLS.	Mr. Sourav Paul 21BT1105	Dr. Ashish Kumar Bhattacharjee	ONGOING	null
ELUCIDATING THE ROLE AND DECIPHERING THE MOLECULAR MECHANISM ASSOCIATED WITH FATTY ACID-MEDIATED CANCER PROGRESSION	Ms. ARPITA MUKHERJEE (23BT1102)	Dr. Ashish Kumar Bhattacharjee	ONGOING	null
A genetic based approach towards understanding autism spectrum disorders in the light of its therapeutic landscape and shared pleiotropism with other neuropsychiatry disorders.	Vasimalla Nikhil Raj (23BT1110)	Dr. Ashish Kumar Bhattacharjee, Dr. Debojyoti De	ONGOING	null
Role of histone deacetylases and methylases in inflammatory gene expression	Avigyan Dutta (24BT1104)	Dr. Ashish Kumar Bhattacharjee	ONGOING	null
CONTRIBUTION OF PHOSPHOLIPASE D (PLD) IN MEDIATING THE iPLA2 AND RELATED LPA REGULATION OF MCP-1-INDUCED CHEMOTAXIS.	Ms. Barnana Karmakar (24BT1110)	Dr. Ashish Kumar Bhattacharjee	ONGOING	null
Effect of lanthanum nanoparticle on cancer cells	Ms. Aishwarya Saha, 25BT1503	Dr. Ashish Kumar Bhattacharjee, Dr. Sriparna De (Brainware University)	ONGOING	null
Role of constitutively expressed MAO-A in cancer progression	Ms. Parna Chakraborty, 25BT1108	Dr. Ashish Kumar Bhattacharjee, Dr. Surabhi Choudhuri	ONGOING	null
Studies on Bacterial biotransformation of Lignocellulosic Biomass into valuables	Gaurav Singh	Prof. Dalia Dasgupta Mandal	SUBMITTED	2025-07-28
Bacterial Delignification of LCB: Its valorization and mechanistic insight	Abhishek Verma	Prof. Dalia Dasgupta Mandal	ONGOING	null
Mechanistic insight for Bacterial Treatment of industrial effluent	Aishani Ray	Prof. Dalia Dasgupta Mandal	ONGOING	null
To develop a Green and Sustainable process for Bacterial assisted Bio-conversion of lignin into value-added products: A biorefinery approach	Subhasree Choubey	Prof. Dalia Dasgupta Mandal	ONGOING	null
Dependence of MoWISH on cAMPdependent signalling pathway	Mousumi Biswas	Dr. Subhankar Roy-Barman	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Involvement of MoLAEA in penicillin biosynthesis	Chandrima Roy	Dr. Subhankar Roy-Barman	ONGOING	null
Functional interconnection between WISH and cell wall biosynthesis / remodeling pathway in rice blast fungus	Debarpita Dutta	Dr. Subhankar Roy-Barman	ONGOING	null
Functional genomics of GPCRs in Magnaporthe oryzae	Nazmiara Sabnam	Dr. Subhankar Roy-Barman	DEGREE AWARDED	2017-09-15
LaeA - Its role in molecular pathogenesis of Magnaporthe oryzae	Pallabi Saha	Dr. Subhankar Roy-Barman	DEGREE AWARDED	2019-10-09
RNAi-based resistance to rice blast fungus	Atrayee Sarkar	Dr. Subhankar Roy-Barman	DEGREE AWARDED	2021-11-16
Devising strategies to overcome multi-drug resistance in Staphylococcus aureus	Subhadip Saha	Dr. Monidipa Ghosh	ONGOING	null
Exploring the mechanistic roles and therapeutic applications of human non coding RNAs in combatting bacterial infections	Harshita Tiwari	Dr. Monidipa Ghosh	ONGOING	null
Identification of anti-leishmania molecules, acting as novel inhibitors against intracellular lipid signaling machinery in Leishmania donovani	Mousumi Paul	Dr. Monidipa Ghosh	ONGOING	null

4.1.23 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount (in Rs.)	Starting Year
Investigating the role of therapeutic compounds in fermented foods and ethnic beverages used by the Tribal population of West Bengal as a novel therapy for Helicobacter pylori and H. pylori mediated gastric ulcer	Dr. Oindrilla Mukherjee, Dr. Debjani Dutta	DST SERB	3000000.0	2023
To develop a Green and Sustainable process for Bacterial Assisted Bio-conversion of lignin into value-added products: A biorefinery approach.	Dalia Dasgupta Mondal, Debjani Dutta, Nibedita Mahata, Tamal Mandal	CSIR	2300000.0	2023
Technological development and economic analysis for enhancing amylase productivity by marine bacteria in bioreactor	Nibedita Mahata	The Ministry of Earth Sciences (MoES)	2400000.0	2024
Cloning, expression, purification, and characterization of the auxiliary enzymes Lytic Polysaccharide Monooxygenases (LPMOs) and xylanases from the genome of the thermophilic fungus Aspergillus fumigatus NITDGPKA3	Prof. Sudit S. Mukhopadhyay & Prof. Kaustav Aikat	DBT-Govt. of India	4761600.0	2022
Investigating the role of therapeutic compounds in fermented foods and ethnic beverages used by the Tribal population of West Bengal as a novel therapy for Helicobacter pylori and H.pylori mediatedgastric ulcer	Oindrilla Mukherjee; Debjani Dutta	DST-SERB	2900000.0	2022



Title of the Project	Investigator	Sponsor Authority	Amount (in Rs.)	Starting Year
Role of protein arginylation in the regulation of IL-1 β expression and inflammatory response in macrophages and airway epithelial cells	Sougata Saha	ANRF	5504165.0	2022
Role of FANCD2 in mitochondria and its association with mtDNA repair mechanism:	Sudit S. Mukhopadhyay	DBT, Govt. of India	6470000.0	2022
Cloning, Expression, Purification, and characterization of the Auxiliary enzyme Lytic Polysaccharide Monooxygenases (LPMO) and Xylanases from the genome of the thermophilic fungus <i>A. fumigatus</i> NITDGPKA3: DBT, Govt. of India	Sudit S. Mukhopadhyay	DBT, Govt. of India	4900000.0	2023
Understanding the mechanism of ICL (Inter crosslink) mediated replication collapse: involvement of Fanconi anemia proteins: SERB,DST, Govt. of India	Sudit S. Mukhopadhyay	SERB-DST, Govt. of India	5060000.0	2023
Introducing protein folding paradigm in misfolding diseases: An attempt to redefine the structural understanding of amyloid aggregation following nucleated conformational conversion pathway	Dr. Sudipta Mondal	SERB-DST	46.42	2021
Chemical sensors cum inhibitors of Histone PTM	Dr. Deb Ranjan Banerjee, Dr. Sudipta Mondal	SERB-DST	36.5	2022
To develop a Green & Sustainable process for Bacterial assisted Bio Conversion of Lignin into a value-added product: A biorefinery approach	Prof. Dalia Dasgupta Mandal, Prof. Tamal Mandal, Dr. Debjani Dutta, Dr. Nivedita Mahato	CSIR-HRDG GOI	230000.0	2023
Technological Advancements for Sustainable Treatment of Coal Bed Methane Produced Water via Integrated Desalination Device.	Dr. Jaya Sikdar, Prof. Dalia Dasgupta Mandal, Prof. Gopinath Halder	DST	7964981.0	2023
Developing a machine learning-based platform for defining and mechanistic understanding of chemo-drug response/resistance biomarkers for lung cancer and subsequent validation with patient data from TCGA database	Asish Bhattacharjee and Debojyoti De	ICMR	2200000.0	2023
Developing a machine learning based platform for defining and mechanistic understanding of chemo-drug response/resistance biomarkers for lung cancer and subsequent validation with patient data from TCGA database	Dr. Ashish Kumar Bhattacharjee	Indian Council of Medical Research (ICMR), Govt. of India	2239932.0	2023
Role of FANCD2 in mitochondria and its association with the mtDNA repair mechanism.	Dr. Sudit Sekhar Mukhopadhyay, Dr. Ashish Kumar Bhattacharjee	Dept. of Biotechnology, Govt. of India	6400000.0	2022
Studies on the effect on Annamox group of bacteria for the treatment of wastewater containing nitrogenous contaminants	Prof. Apurba Dey, Prof. Tamal Mandal, Prof. Dalia Dasgupta Mandal	DST-CRG	3372978.0	2021
Identification of anti-leishmania molecules acting as novel inhibitors against intracellular lipid signaling machinery in <i>Leishmania donovani</i>	Principal Investigator - Dr. Monidipa Ghosh	ICMR	531800.0	2023

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4.1.24 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
Microbial production of Lactic Acid using wastes (dairy waste & rice straw) as substrates, for the production of bioplastic	Prof. Kaustav Aikat & Dr. Utpal Adhikari (Chemistry)	Department of Science & Technology and Biotechnology, Govt. of West Bengal	2024
Deciphering the metabolic and microbial diversity signature in the fecal microbiota of obese patients to find their correlation with brown versus white adipogenesis pathway	Oindrilla Mukherjee; Debojyoti De	ICMR	2024
Structural and functional analysis of disordered regions in unbound and bound protein-protein and protein-nucleic acid complexes	Amita Barik	DST SRG	2023
Carbon and energy metabolism in deep life within the granitic basement of Koyna seismogenic zone	Pinaki Sar, Sufia K Kazy	Ministry of Earth Sciences, Government of India	2025
Design of modular peptide nanotubes platforms by the self- assembly of shortest helical building blocks for application as ion channel mimic	Dr. Sudipta Mondal	SERB-DST	2022
Isolation and identification of novel bacteriocin producing probiotic microbial species from Northeast region, exploration of probiotic traits and application of purified bacteriocin in food preservation	Surabhi Chaudhuri, Sucharita Sen Maiti	DBT	2022
Role of adenosine monophosphate activated protein kinase (AMPK) activators in reducing cancer cell aggressiveness	Dr. Ashish Kumar Bhattacharjee, Dr. Surabhi Chaudhuri, Dr. Suparna Chatterjee (IPGMER)	Department of higher education, Science & Technology and Biotechnology, Govt. of West Bengal.	2024
Functional genomics of G-protein coupled receptors (GPCRs) in <i>Magnaporthe oryzae</i>	Dr. Subhankar Roy-Barman	DST-SERB	2014
RNAi-based resistance to rice blast fungus	Dr. Subhankar Roy-Barman	DBT	2017
Pathogenesis of rice blast fungus	Dr. Subhankar Roy-Barman	DBT	2016
Functional interconnection between WISH and cell wall biosynthesis / remodeling pathway in rice blast fungus	Dr. Subhankar Roy-Barman	DST-SERB	2025
Isolation and characterization of <i>Magnaporthe oryzae</i> mutants to study early events of pathogenesis	Prof. Bharat B. Chattoo & Dr. Subhankar RoyBarman	DBT	2014
Investigation of functional connection between cAMPdependent signaling pathway and MoWISH, a gene encoding a novel GPCR in rice blast fungus	Dr. Subhankar Roy-Barman	DST-SERB	2025

4.1.25 Testing & Consultancy Services Rendered

Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
NA	NA	NA	NA



4.1.26 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Debjani Dutta	Critical Reviews in Food Science and Nutrition	Taylor & Francis group	2024-04-03
Debjani Dutta	Plant Nano Biology	Elsevier	2024-08-16
Debjani Dutta	British Journal of Nutrition	Cambridge university press	2024-08-22
Debjani Dutta	International Journal of Biological Macromolecules	Elsevier	2024-10-16
Debjani Dutta	European Journal of Integrative Medicine	Elsevier	2024-06-08
Debjani Dutta	Current Microbiology	Springer	2024-09-16
Debjani Dutta	Zeitschrift für Naturforschung C	De Gruyter Brill	2024-08-24
Debjani Dutta	Journal of the Science of Food and Agriculture	Wiley	2025-01-25
Debjani Dutta	Trends in Food Science & Technology	Elsevier	2024-07-01
Debjani Dutta	Sustainable Chemistry and Pharmacy	Elsevier	2024-04-01
Nibedita Mahata	Applied and Environmental Microbiology	American Society for Microbiology	2025-02-10
Amita Barik	IEEE International Conference on Bioinformatics and Biomedicine (BIBM)	IEEE	2024-10-30
Sudipta Mondal	ACS Applied Nano Materials	American Chemical Society	2024-07-18
Ashish Kumar Bhattacharjee	International Journal of Molecular Medicine	Spandidos publication	2024-11-18
Ashish Kumar Bhattacharjee	Molecular Medicine Reports	Spandidos publication	2024-11-25
Ashish Kumar Bhattacharjee	Inflammation	Springer	2024-10-08
Ashish Kumar Bhattacharjee	ISCIENCE	Cell Press	2024-10-23
Dalia Dasgupta (mandal)	Environmental Science and Pollution Research	Springer	2024-10-24
Dalia Dasgupta (mandal)	Marine Pollution Bulletin	Elsevier	2024-03-19

4.1.27 Participation in National Committees/Visits

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Sudit Sekher Mukhopadhyay	AICTE Expert Visiting Committee	On-line	2025-03-24	2025-03-25
Dalia Dasgupta (mandal)	Selection committee for faculty recruitment	NIT Jamshedpur	2024-09-04	2024-09-07
Monidipa Ghosh	Acted as a member of Sparc Healthcare and Medtech Thematic Review Committee	NA	2024-04-01	2025-03-31

4.1.28 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Debjani Dutta	VIT Engineering Entrance Examination	VIT	2024-10-10	2024-11-10

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Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Kaustav Aikat	Viva-Voce Examination of M.Tech in Agricultural Biotechnology	IIT Kharagpur	2024-04-30	2024-04-30
Sudit Sekher Mukhopadhyay	MSc. Zoology	University of Burdwan	2025-07-02	2025-07-02
Sudit Sekher Mukhopadhyay	Molecular Biology and Human Genetics	University of Burdwan	2025-08-21	2025-08-21
Amita Barik	Doctoral thesis evaluation	Centurion University of Technology and Management, Odisha	2024-11-08	2024-11-08
Kazy Sufia Khannam	Member of Post Graduate board of studies in Microbiology	The University of Burdwan	2024-12-05	2025-09-12
Sudipta Mondal	Thesis Examiner	Indrashil University	2025-02-23	2025-02-23
Surabhi Choudhuri	PG BOS on syllabus revision	Oriental Institute of Science and Technology	2024-11-21	2024-11-21
Surabhi Choudhuri	PhD	Pondicherry University	2024-10-03	2024-10-03
Ashish Kumar Bhattacharjee	Appointed as an examiner in M.Sc Biochemistry Practical examination	Oriental Institute of Science and Technology (Affiliated to Vidyasagar University, Midnapore, West Bengal)	2024-07-11	2024-07-11
Ashish Kumar Bhattacharjee	Invited to attend the meeting of the PG board of studies in Biotechnology	Oriental Institute of Science and Technology (Affiliated to Vidyasagar University, Midnapore, West Bengal)	2024-11-21	2024-11-21

4.1.29 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date

4.1.30 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Debjani Dutta	An environment friendly sustainable food packaging solution by leveraging the potential of plant based bioactive materials	Advances in Energy & Environment for sustainable development	Bhubaneswar	2025-03-28	2025-08-29
Debjani Dutta	Food Safety & Sustainable Food Preservation Approach	International Conference on Ecotoxicology and Environmental Sciences	Ranchi	2024-10-21	2024-10-22
Sudit Sekher Mukhopadhyay	Cracking the Code : Securing National Funding for Research Successes	22nd National IAOMPPG Convention 2025, Kolkata	Kolkata	2025-06-13	2025-06-15
Amita Barik	Computer-aided Drug Designing	Faculty Development Programme (FDP) on Alternatives to Animal Use in Research and Educational Institutions	Dr. B.C. Roy College of Pharmacy and Allied Health Sciences, Bidhannagar, Durgapur-713206, West Bengal	2024-08-05	2024-08-09



Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Amita Barik	Computational insights into intrinsically disordered regions in protein-nucleic acid complexes	Emerging Trends in Translational Bioinformatics	BIT MESRA	2024-12-05	2024-12-07
Amita Barik	Basic Bioinformatics and Functional Genomics	3 Days Hands-on Workshop	School of Sciences, PPSavani University, Surat, India	2024-08-22	2024-08-24
Ashish Kumar Bhattacharjee	Cancer Cell Signaling	Faculty development program sponsored by CCSEA.	B.C.Roy College of Pharmacy and Allied Health Sciences, Durgapur	2024-08-07	2024-08-07
Dalia Dasgupta (mandal)	Bacterial delignification: mechanistic insight to manage agro waste	Short Term Programme	NIT Durgapur	2024-09-19	2024-09-23

4.1.31 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Kaustav Aikat	32nd West Bengal State Science and Technology Congress 2025	Kolkata	Session Judge for discipline Biotechnology	2025-03-01	2025-03-01
Sudipta Mondal	Beyond boundaries: Pioneering the Next Wave of Therapeutic Solutions	Dr. B. C. Roy College of Pharmacy & Allied Health Sciences	Scientific session	2025-04-25	2025-04-26
Dalia Dasgupta (mandal)	7 th Regional Science & Technology Congress, Burdwan Division	Department of Science & Technology and Biotechnology, Rampurhat College	Technical Session 12	2025-01-10	2025-01-11

4.2 Department of Civil Engineering

4.2.1 Dept at a glance

The Department of Civil Engineering is one of the oldest Departments of this institute. Presently, the department offers B.Tech., M.Tech. and PhD. programs. The Department is actively engaged in research activities in all branches of Civil Engineering and other contemporary fields of interdisciplinary research. In addition to handling R&D projects funded by the institute as well as external funding agencies, the department also offers testing and consultancy services to various government departments and organizations from the public and private sectors. Besides, the Department conducts seminars, short term training programmes and conferences etc. from time to time for the benefit of personnel from academia, research institutions and industries.

4.2.2 Mission and Vision

Mission:

- To provide quality education with ethical values in commensuration with balanced curriculum.
- To provide advanced skills and knowledge in design, construction, consultancy and develop the state-of-the-art research facilities.
- To serve as a knowledge base and create professional expertise for the community
- To promote innovative and original thinking in the minds of civil engineering graduates

Vision:

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- To impart knowledge, advanced skills, excellence in scientific and technical education and research with global perspectives in infrastructural developments with modern trends.
- To encourage students to imbibe the engineering ethics to serve India and World.
- To serve as a valuable resource for societal needs and economic growth of the country.

4.2.3 Information related to faculty members (Professor, Associate Professor, Assistant Professor in order)

Name	Designation	Email-id
Dr. Amiya Kumar Samanta	Professor	aksamanta.ce@nitdgp.ac.in
Dr. Amlan Das	Professor	adas.ce@nitdgp.ac.in
Dr. Atul Krishna Banik	Professor	akbanik.ce@nitdgp.ac.in akbanik@gmail.com
Dr. Dilip Kumar Singha Roy	Professor	dsingharoy.ce@nitdgp.ac.in dsr_rec_dgp@yahoo.com dilip.sroy@gmail.com
Dr. Kamal Bhattacharya	Professor	kbhattacharya.ce@nitdgp.ac.in
Dr. Purnendu Ray	Professor	pray.ce@nitdgp.ac.in
Dr. Showmen Saha	Professor	ssaha.ce@nitdgp.ac.in
Dr. Soumya Bhattacharyya	Professor	sbhattacharyya.ce@nitdgp.ac.in
Dr. Vijay Kumar Dwivedi	Professor	vkdwivedi.ce@nitdgp.ac.in vkdwivedi10725@yahoo.co.in
Dr. Aloke Kumar Datta	Associate Professor	akdatta.ce@nitdgp.ac.in
Dr. Diptesh Das	Associate Professor	ddas.ce@nitdgp.ac.in d_diptesh@yahoo.com
Dr. Pijush Topdar	Associate Professor	ptopdar.ce@nitdgp.ac.in topdar72@yahoo.co.uk
Dr. Radhikesh Prasad Nanda	Associate Professor	rpnanda.ce@nitdgp.ac.in rpnanda@gmail.com
Dr. Supriya Pal	Associate Professor	spal.ce@nitdgp.ac.in supriya070478@gmail.com
Dr. Bandhan Bandhu Majumdar	Assistant Professor	bbmajumdar.ce@nitdgp.ac.in
Dr. Gilbert Hinge	Assistant Professor	ghinge.ce@nitdgp.ac.in
Dr. Pronab Roy	Assistant Professor	proy.ce@nitdgp.ac.in pronabroy07@gmail.com
Dr. Sabyasachi Biswas	Assistant Professor	sbiswas.ce@nitdgp.ac.in
Dr. Sanku Konai	Assistant Professor	skonai.ce@nitdgp.ac.in
Dr. Somnath Karmakar	Assistant Professor	Skarmakar.ce@nitdgp.ac.in structure.som07@gmail.com
Dr. Suman Saha	Assistant Professor	sumansaha.ce@nitdgp.ac.in
Dr. Sushovan Dutta	Assistant Professor	s Dutta.ce@nitdgp.ac.in

4.2.4 Laboratories Available

Sl. No.	Name of Laboratory	Major equipment
1.	Strength of Materials Laboratory	• 20& 100 Ton UTM • Torsion Testing Equipment • Hardness testing Equipment • Charpy Impact Tester Equipment
2.	Soil Mechanics and Foundation Engineering Laboratory	• Soil Tri-axial test apparatus • Rock Tri-axial Test Apparatus



Sl. No.	Name of Laboratory	Major equipment
		• Direct Shear Test Apparatus • Large Scale Direct Shear Test Apparatus • CBR test Apparatus • Automatic Compaction Test Apparatus • Point load test Apparatus • Brazilian Tensile Test Apparatus • Slake Durability Apparatus • DCPT, SCPT, Relative Density Test Apparatus
3	Computer Laboratory	• Computers and its allied accessories with centralized software like ANSYS, ABAQUS etc.
4	Concrete Structure Laboratory (UG)	• Digital balance Capacity • Le-Chatelier Mould • Vicat Needle apparatus with accessories • 200 Tonne Compression Testing Machine • Flexural Testing Apparatus • Humidity Cabinet • Accelerated Curing tank • Constant Temperature Water Bath • Compacting factor apparatus • Hardness test machine for concrete & stones • Workability Test apparatus • Bar Bending Machine
5	PG Structural Engineering Laboratory	• UTM 200, CTM 300T, • LOADING FRAME 100T, • Mortar Pan Mixture, Incubator, • Hot Water Bath, • Flexure Test Machine, • Ultrasonic Pulse Velocity Tester, • Rebar Locator, • Digital Schmidt Hammer • Corrosion Testing Machine, • Resistivity Meter, Multimeter, • Core Cutter, Surface Grinder, • Metal Cutter
6	Survey Engineering Laboratory	• Plane table with stand • Total Station • Prismatic Compass • Levelling Instrument (Dumpy) • Theodolite • Linen Tape • Surveyor's compass with stand • Land measuring Chain • Levelling Staff • AI based moving object capturing device with 60 fps with different level mounting capacity
7	Environmental Engineering Laboratory	• pH meter • Conductivity meter • Turbidity meter • COD digester • Autoclave • BOD incubator • Muffle furnace • Incubator (ambient) • Hot Air Oven • Conductivity meter • Spectrophotometer

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Sl. No.	Name of Laboratory	Major equipment
		• Bench Top Turbidity meter • Manual pH meter • Water quality meter • Jar Test Apparatus
8	Transportation Engineering Laboratory	• Flakiness gauge • Elongation gauge • Aggregate Impact Testing Machine • Aggregate Crushing test setup including Compression testing machine • Los Angeles abrasion testing machine. • Bitumen softening point test apparatus (Ring ball Apparatus) • Bitumen Penetration value test apparatus (penetrometer) • Bitumen Ductility value testing apparatus • Centrifuge for Bitumen Extraction Test. • Marshall test apparatus • Mechanical Soil compactor for Proctor and CBR • CBR (Lab and Field) test apparatus. • Benkelman Beam • 200 T Compression Testing Machine • Automatic Speed Radar Gun • Motorized Bitumen Extractor • Thin Film Oven • Particle Charge Apparatus • Storage Stability Tester • Digital Thermometer • MAKITA Electric Drill (800Watt)
9	Structural Health Monitoring Laboratory	• Impact Hammer • UPVM • Acoustic Emission System • Rebar Locator •
10	Water Resource Engineering Laboratory	• Acoustic doppler velocimeter • Electronic flow meter • Mobile Bed flume • Escape Channel • Two motors with pump of 7.5 HP each • Hosting Gauge • Trolley on Mobile bed
11	Earthquake Laboratory	• Vibration Excitor with Analyzer and Accelerometer • Electro dynamic shaker with Shake Table-400mm
12	Actuator Laboratory	• 100 kN Hydraulic Actuator setup

4.2.5 PhD degree awarded till 2024-25

Twenty-nine.

4.2.6 Specialization

- Earthquake Engineering/ Structural Dynamics, Structural Health Monitoring
- Environmental Engineering
- Structural Engineering
- Water Resource Engineering
- Geotechnical Engineering



- Geotechnical Engineering
- Structural Engineering, Structural Reliability
- Geotechnical Engineering
- Structural Engineering • Structural Engineering
- Structural Engineering
- STRUCTURAL ENGINEERING
- Civil Engineering
- Water Resources Engineering
- Structure and Earthquake Engineering
- Transportation Engineering

4.2.7 Proposed Plan for Research

- AI and NDT based SHM in Railway and Building Infrastructures
- This research focuses on earth retaining systems, stone columns for ground improvement, and sustainable soil stabilization. It aims to enhance design efficiency, assess alternative materials, and explore eco-friendly stabilization methods. The goal is to develop cost-effective, practical solutions for safer, more resilient, and sustainable geotechnical infrastructure.
- Laboratory studies of the mine overburden waste in the field of Civil Engineering, such as Geotechnical Engineering, Pavement Engineering, Hydraulic and Environmental Engineering, Analytical and numerical modelling to design and develop proposed sustainable geotechnical infrastructure, Development of innovative soil stabilization and ground improvement techniques, Sustainable, environment friendly and cost-effective bulk utilization of industrial and agro-wastes in Geotechnical Engineering, Development of innovative geosynthetics and its applications in the field of Geotechnical Engineering
- Analysis and Design of Underground Bunkers
- Slope Stability Analysis of Jute Reinforced Soil
- Ground Improvement, Geoenvironmental Engineering, open-cast & underground Mining, Pavement construction • Vulnerability assessment of structures
- Establishment of Structural Dynamics and Control Laboratory
- Sponsored research projects
- Research collaborations with premier Academic Institutions within and outside India
- Organizing short term courses, workshops and international conferences
- Blast impact and prevention
- CONCRETE TECHNOLOGY, WIND ENGINEERING
- Real time estimation of yield from basin of a river
- Aerated geopolymer block and plastic aggregate manufacturing with development of earthquake buildings vulnerability assessment

4.2.8 Area of Research Interest

- AI applications in SHM of Structure/Infrastructure, Fault detection in Railway, Earthquake Engineering and Structural Dynamics, Strengthening and Rehabilitation of Structures, FE modelling of Structures, Structural Health Monitoring (SHM), Smart Infrastructure Management System, System Identification.
- Applications of Remote Sensing & GIS in environmental studies
- Composite Structures, FE modelling, Structural Health Monitoring (SHM), Non-Destructive Testing (NDT) • Alternative Construction Materials, Concrete technology, Construction Management
- Earth Retaining Systems
- Ground Improvement using Stone Columns
- Soil Stabilization Techniques for the Future
- Geotechnical Engineering, Geosynthetics, Ground Improvement, Soil Mechanics & Foundation Engineering, Soil Dynamics, Landfills & Waste Management, Geo-Environmental Science, Numerical & Analytical Modelling, Soil-Structure Interaction
- Machine Learning Based Structural Reliability
- Analysis of Hydrogen Storage Tanks
- Ground Improvement, Geoenvironmental Engineering, open-cast & underground Mining, Pavement construction
- Hydrological Modelling
- Remote sensing of Precipitation
- Hydro climatology
- Nonlinear Dynamics, Vibration control, Compliant offshore structures, FOWT

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- Structural Dynamics, Earthquake Engineering, Vibration Control, Non-linear Analysis of Structures, Soil-Structure Interaction, Artificial Intelligence and Soft Computing, Offshore Structural Engineering, Bridge Engineering, Masonry Structures, Eco-friendly construction materials •Blast impact on bridge
- CONCRETE TECHNOLOGY, WIND ENGINEERING
- Hydrology, Water Resources Engineering and Management, Hydro-meteorological Information System, Public Health Engineering, Design of pavement for Rural Roads under PMGSY, Analysis and Design of Pavements
- Sustainable materials and earthquake vulnerability assessment
- Traffic safety and pavement engineering

4.2.9 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
NBCC (India) Ltd	Development of Eco-Friendly Construction Materials	Sponsored Research Project
Various Industry (Govt. and private)	Infrastructure	Consultancy & research
Rahee Infrastructures Limited 107, Lakhinarayan Talla Road Howrah – 711103, West Bengal, India.	Concrete Mix Design	Concrete Mix Design of M25, M30, M35 & M40 Grade concrete for “Construction of Rail Bridge between Barakar & Kumardhubi” of Eastern Railway
Minority Affairs and Madarsa Education Department, Govt. of West Bengal	Pradhan mantri Jal Vikas Karyakram (PMJVK)	Third Party Quality Assurance for the Projects sanctioned under PMJVK
PMGSY, MoRTH	Rural road construction	DPR and Road quality checking
Min of Jal Shakti	River Conservation	DPR Appraisal

4.2.10 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
University of Alabama	Flood Modelling	Gilbert Hinge	Research and Joint paper Publication
United Arab Emirates University	Leak Detection in Pipe Network	Gilbert Hinge	Research and Joint paper Publication
New York University	Flood & Inundation Relationship	Gilbert Hinge	Research and Joint paper Publication
Central Mechanical Engineering Research Institute, Durgapur	Structural Engineering, Structural Dynamics, Earthquake Engineering, Wind Engineering,	Diptesh Das and Pijush Topdar	PhD guidance and Research
IIT Kharagpur	FEM-SPH coupling under blast	Prof. Amit Shaw	Research
National Institute of Technology Patna	Academic	Prof. Vivekanand Singh	Evaluation of Ph.D. Thesis and Conducting Ph.D. Viva-Voce Examination
Central Public Health and Environmental Engineering Organisation of Ministry of Housing and Urban Affairs, Govt. of India	Public Health Engineering (PHE) Sector Development	Prof. Vijay Kumar Dwivedi - Nodal Person, Dr. R.P. Nanda, Associate Prof., Dr. S. Pal, Associate Prof., Dr. P. Roy, Assistant Prof., Dr. Sandeep Mondal, Assistant Prof., Dr. Gilbert Hinge, Assistant	Organizing Short Term and Refresher Course, Undertaking R & D Projects in PHE Sector



Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
		Prof., Dr. Suman Saha, Assistant Prof.	
Tripura Public Service Commission, Govt. of Tripura, India	Expert-Adviser for the Interview/ personality test for recruitment to the post of Junior Engineer, TES, Diploma Holders, Group – C, (Non-Gazetted)	Prof. Vijay Kumar Dwivedi	Acting as an Expert during the interview
			Question Paper on “Civil Engineering” and Key to the Answers for Civil Engineering (Degree Level) for Preliminary Examinations for recruitment to the post of TES, Gr.-V(A) through Competitive Examination, under Rural Development Department,
Tripura Public Service Commission, Govt. of Tripura, India	Setting of Question paper	Prof. Vijay Kumar Dwivedi	
Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
			Govt. of Tripura
Bihar public Service commission	Paper Setter for Civil Engineering Paper	Prof. Vijay Kumar Dwivedi	Framing of Objective Multiple Choice Questions for the Examination of the Bihar Public Service Commission
Bihar public Service commission	paper Setter in General Engineering Science paper	Prof. Vijay Kumar Dwivedi	Framing of Multiple Choice Objective Questions for the Examination of the Bihar Public Service Commission
Bihar public Service commission	paper Setter in General Engineering Science paper	Prof. Vijay Kumar Dwivedi	Framing of Another Set of Multiple Choice Objective Questions for the Examination of the Bihar Public Service Commission
JIS College of Engineering, Kalyani	Sustainable materials	Debargha Banerjee	Manufacturing Plastic Aggregate

4.2.11 Innovations and Technology Transfer (Patents filed during)

Title	Inventors	Application Nos	Date of Filing
JUTE GEOTEXTILE FOR OVERBURDEN DUMP HEIGHT INCREMENT WITH STABILITY AT OPEN-CAST MINES AND METHOD THEREOF	Tapabrata Chakraborty, Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Hirok Chaudhuri	202431064290	2024-08-26

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A HEAT-RESISTANT CONCRETE COMPOSITION AND A PREPARATION METHOD THEREOF	AMIYA KUMAR SAMANTA, SUDIPTA GHOSH	202431087221	2024-11-12

4.2.12 Workshop/ Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Coordinator	International Conference on Sustainable and Resilient Infrastructure (ICSRI2024)	2024-12-05
Expert from INS DAG, NIT Durgapur	One day seminar on “Modern Trends in Steel Design and Construction”	2025-02-11
Professor P Seshu, Professor of the Department of Mechanical Engineering, IIT BOMBAY	Expert lecture on “AI-ML-Data Science in Engineering: Opportunities and Challenges”	2025-03-20
Dr. P. P. Dey	Safe and Sustainable Road Construction and Current Trends	2024-04-01

4.2.13 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Pijus Rajak and Pronab Roy	Efficient computing technique for reliability analysis of high-dimensional and low-failure probability problems using active learning method	Probabilistic Engineering Mechanics	Volume:77 Issue No: Page No: Year:2024 Month: Jul
Somnath Karmakar, Goutam Kutti and Amit Shaw	Efficiency of the Dynamic Relaxation Method in the stabilisation process of Bridge and Building Frame	Advances in Engineering Software	Volume:200 Issue No: Page No:103828 Year:2025 Month: Nov
Taniya Saha and Somnath Karmakar	The state-of-the-art review of spectral analysis of Wind Spectrum Models	Wind and Structures, An International Journal	Volume:39 Issue No:5 Page No:329-349 Year:2024 Month: Nov
Puja Haldar and Somnath Karmakar	Induced vibration and flutter analysis at large attack angle for the twin-deck bridges	Wind and Structures, An International Journal	Volume:39 Issue No:6 Page No:395-409 Year:2024 Month: Dec
Bittu Ghosh and Somnath Karmakar	Development and Application of a Digitalised Construction Quality Document Management System for Advanced Construction using Building Information Modeling	Journal of Construction Engineering and Management	Volume:151 Issue No:6 Page No:04025053 Year:2025 Month: Mar
Somnath Karmakar, Shuvra Saha and Amit Shaw	Engineering analysis of a critical RC straight girder bridge under contact blast in reducing dynamic impact and failure using the FEM-SPH coupling and non-Explosive Reactive Armour	Engineering Failure Analysis	Volume:173 Issue No: Page No:109422 Year:2025 Month: Feb
Goutam Sarkar and Pronab Roy	Analytical Study of Free Span Offshore Pipelines on Layered Cohesionless Seabed Soil	Ships and Offshore Structures	Volume: Issue No: Page No: Year:2024 Month: Sep



Author(s) Name	Paper Name	Journal Name	Others Info
Shuvra Saha and Somnath Karmakar	Assessments and preventions of the damages and their modes in the second and third spans of the RC highway straight girder bridge under surface blast using the FEM-SPH coupling	Engineering Analysis with Boundary Elements	Volume:175 Issue No: Page No:106201 Year:2025 Month: Mar
Suchhanda Mondal, Avishek Adhikary, Supriya Pal, Sudipta Ghosh, Syed Samsun Nabi	Sustainable Removal of Erythromycin from Wastewater using LECA and Vetiver in Constructed Wetland Systems: A Novel Approach to Antibiotic Pollution Remediation	Journal of Environmental Engineering, ASCE	Volume: Issue No: Page No: Year:2025 Month:
Sudipta Ghosh, Subhrajit Sinha, Amiya K. Samanta	Performance of Recycled Refractory Brick Fine Aggregate on Diverse Properties of Portland Slag Cement based Heat Resistant Concrete https://doi.org/10.1016/j.jobbe.2024	Journal of Building Engineering Elsevier .109458	Volume:109458 Issue No: Page No: Year:2024 Month: May
Sudipta Ghosh, Amiya K. Samanta	Effect of Elevated Temperature on sustainable concrete with recycled refractory brick fine aggregate and polypropylene fibre https://doi.org/10.1061/JMCEE7.1822	Journal of Materials in Civil Engineering (ASCE) MTENG-	Volume:36 Issue No:10 Page No: Year:2024 Month: Jul
Sahinur Rahaman Mondal; Tapabrata Chakraborty; Rajib Ghosh Chaudhuri; Mrinal Kanti Mandal; Hirok Chaudhuri; Supriya Pal	Nanocomposite Modified Jute Geotextile as a Sustainable Solution for Subgrade Strength in Low-Traffic Roadways: A Performance Analysis	Journal of Materials in Civil Engineering (ASCE)	Volume: Issue No: Page No: Year:2024 Month:
Arindam Karmakar, Supriya Pal, Kamal Bhattacharya, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri & Hirok Chaudhuri	Performance evaluation of cement-stabilized coalmine overburden-furnace slag-fly ash mixes as economical and sustainable base course material for flexible pavement	Clean Technologies and Environmental Policy	Volume: Issue No: Page No: Year:2024 Month:
Amgoth Rajender, Amiya K. Samanta	Prediction of corrosion initiation time in sustainable concrete blended with micro silica and Portland slag cement under extreme chloride conditions, https://doi.org/10.1007/s13369025-10069-1	Arabian Journal for Science and Engineering	Volume:10069-1 Issue No: Page No: Year:2025 Month: Feb
Apurba Pal and Alope Kumar Datta	Development of Smart Real-time Fault Detection Approach in Railway Track Deploying a Single Acoustic Emission Sensor Data	Journal of Vibration Engineering & Technologies	Volume:12 Issue No: Page No:8529-8550 Year:202 Month: Apr

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Author(s) Name	Paper Name	Journal Name	Others Info
Swati Sirsant, Gilbert Hinge, Harsh Singh, Mohamed A Hamouda	A hybrid convolutional neural network model coupled with AdaBoost regressor for flood mapping using geotagged flood photographs	Natural Hazards	Volume:121 Issue No: Page No: Year:2024 Month: Nov
Chithrika Alawathugoda, Gilbert Hinge, Mohamed Elkollaly, Mohamed A Hamouda	Impact of utilizing high resolution Planet Scope imagery on the accuracy of LULC mapping and hydrological modeling in an arid region	Water	Volume:16 Issue No:16 Page No: Year:2024 Month: Aug
Apurba Pal and Alope Kumar Datta	Temperature-adaptive artificial neural network model for enhanced fault detection in railway tracks using acoustic emission sensor data	Non-destructive Testing and Evaluation	Volume: Issue No: Page No: Year:2025 Month: Feb
Arnob Bormudoi, Masahiko Nagai, Gilbert Hinge, Vaibhav Katiyar, Dorj Ichikawa, Tsuyoshi Eguchi, Mohamed A Hamouda	Remote sensing-based site suitability assessment and selection of Rabi crop cultivation areas following flood events	Geocarto International	Volume:39 Issue No:1 Page No: Year:2024 Month: May
R K Mitra, Saikat Suvra Mondal and A K Banik	Dynamic stability and control of vortex induced oscillations of tension leg platform tethers	Journal of Sound and Vibration	Volume:585 Issue No:118442 Page No: Year:2024 Month: Sep
Tathagata Banerjee, Diptarka Ghosh, Diptesh Das	A state-of-the-art review and future challenges on application of devices for vibration control of bridges	Mechanics of Advanced Materials and Structures	Volume: Issue No: Page No:1-27 Year:2025 Month: Feb
Puja Haldar and Somnath Karmakar	Experimental and Numerical Performance analysis of Alccofine-based crumb rubber concrete under Quasi-Static cyclic Load	Canadian Journal of Civil Engineering	Volume:51 Issue No:8 Page No:841-857 Year:2024 Month: Aug
Shuvra Saha and Somnath karmakar	Failure mode and response of a typical RC straight and skew highway girder bridge under the blast, wrapped with and without a non-Explosive Reactive Armour using FEM-SPH coupling	Engineering Failure Analysis	Volume:161 Issue No: Page No:108330 Year:2024 Month: Apr
Puja Haldar and Somnath Karmakar	Aerodynamic and Aeroelastic Response of Wind Barrier over Trapezoidal Box Girder Bridge under Turbulence Wind	Indian Journal of Engineering and Materials Sciences	Volume:31 Issue No:2 Page No:245-257 Year:2025 Month: Apr
Puja Haldar and Somnath Karmakar	Aerodynamic and Flutter Performance of the Bridge Deck with various countermeasures using Computational Fluid Dynamics	Structure and Infrastructure Engineering	Volume: https://doi.10.1080/15732479.2024.2408444 Issue No: Page No: Year:2024 Month: Sep
Tamal Kundu, Apurba Pal, Alope Kumar Datta and Pijush Topdar	Study and Development of a Novel IoT-Based ANN Model for real-time Damage Detection in Rail Section	International Journal of Structural Integrity	Volume: Issue No: Page No: Year:2025 Month:



Author(s) Name	Paper Name	Journal Name	Others Info
Tamal Kundu, Apurba Pal, Alope Kumar Datta and Pijush Topdar	Study and development of a novel IoT-based ANN model for Realtime damage detection in rail section Available to Purchase	International Journal of Structural Integrity	Volume:16 Issue No:4 Page No:748-764 Year:2025 Month: Mar
D Banerjee, RP Nanda	Waste materials as concrete aggregate-A systematic review	IOP Conference Series: Earth and Environmental Science	Volume:1326 Issue No: Page No:012149 Year:2024 Month: Jun
Soumyadip Das, Alope Kumar Datta, Pijush Topdar & Apurba Pal	Innovative approaches to concrete health monitoring: wavelet transform and artificial intelligence models	Asian Journal of Civil Engineering	Volume:24 Issue No: Page No:107-120 Year:2024 Month: Sep
Bikash Behera, Alope Kumar Datta, Apurba Pal	Earthquake Resistant Design of Framed Reinforced Concrete Building Using Artificial Intelligence Model	Asian Journal of Civil Engineering	Volume:25 Issue No: Page No:4329-4342 Year:2024 Month: Apr
Taduku Ekambaram, Alope Kumar Datta, Apurba Pal	Seismic Structural Health Monitoring of RC Framed Building using Artificial Neural Network Model: A Study	Asian Journal of Civil Engineering	Volume:25 Issue No: Page No:4225-4240 Year:2024 Month: Apr
Soumyadip Das, Alope Kumar Datta, Pijush Topdar, Sanjay Sengupta	ADVANCED DAMAGE DETECTION IN REINFORCED CONCRETE APPLYING ACOUSTIC EMISSION, WAVELET TRANSFORM AND SHANNON ENTROPY	Suranaree Journal of Science and Technology	Volume: Issue No: Page No: Year:2024 Month:
Arindam Karmakar, Supriya Pal & Kamal Bhattacharya	Utilization of coalmine overburden-furnace slag and fly ash mixed cement-treated subbase/base course material for sustainable flexible pavements: mechanical performance and environmental impact	Environmental Science and Pollution Research	Volume: Issue No: Page No: Year:2024 Month:
Suktuprajna Rath, Gilbert Hinge	Groundwater sustainability mapping for managed aquifer recharge in Dwarkeswar River basin: Integration of watershed modeling, multi-criteria decision analysis, and constraint mapping	Groundwater for Sustainable Development	Volume:26 Issue No: Page No: Year:2024 Month: Aug
Somnath Karmakar	Third-Party Quality Control Concept, Methodology, and Implementation in the Building and Housing Construction Industry in India	International Journal of Construction Management	Volume: https://doi.org/10.1080/15623599.2024.2397227 Issue No: Page No: Year:2024 Month: Sep
Bittu Ghosh & Somnath Karmakar	Digitalised Document Management System for Construction Claims and Disputes to Enhance the Smoothness of Advanced Construction Projects using the Building Information Modeling Integrated Framework	Journal of Legal Affairs and Dispute Resolution in Engineering and Construction	Volume:17 Issue No:1 Page No:04524038 Year:2025 Month: Dec
Goutam Kuti, Shuvra Saha and Somnath Karmakar	Improvements of the damage responses and failure modes of an RC Vehicle Over Pass bridge under contact explosion using FEM-SPH coupled computational frameworks	International Journal of Protective Structures	Volume: https://doi.org/10.1177/20414196241304036 Issue No: Page No: Year:2024 Month: Nov
	Damage impacts and failure		

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Author(s) Name	Paper Name	Journal Name	Others Info
Shuvra Saha and Somnath Karmakar	modes on a second and third span of an RC skew highway girder bridge under surface explosion using FEM-SPH coupling and non-Explosive Reactive Armour	International Journal of Protective Structures	Volume: https://doi.10.1177/20414196251326186 Issue No: Page No: Year:2025 Month: Mar
Mondal, P., Samanta, A. K., Roy, D. K. Singharoy	Characteristic strength and behavior of steel plate reinforced concrete beam with and without crank bar	The Indian Concrete Journal, Vol. 98, No. 4, pp. 6-16 Apr 2024. SCOPUS	Volume:98 Issue No:4 Page No:6-16 Year:2024 Month: Apr
Kapildeo P. Yadav, Sudipta Ghosh, Sujata Rajak and Amiya K. Samanta	Performance Evaluation of Alccofine on Mechanical Behaviour of Recycled Refractory Brick Fine Aggregate Blended Sustainable Concrete Mix: https://doi.org/10.1108/WJE-042024-0174	World Journal of Engg Emerald	Volume:0174 Issue No: Page No: Year:2024 Month: Aug
Amgoth Rajender, Amiya K. Samanta and Animesh Paral	Comparative Study of Corrosion Based Service Life Prediction of Reinforced Concrete Structures Using Traditional and Machine Learning Approach. DOI :10.1108/IJSI-02-2024-0018	International Journal of Structural Integrity Emerald	Volume:16 Issue No:3 Page No:591-621 Year:2024 Month: Sep
Nanda RP and Priya N	Geopolymer as sustainable materials in pavement constructions: a review, Cleaner Waste System	Cleaner Waste Systems	Volume:7 Issue No: Page No:100134 Year:2024 Month: Oct
Kumar A and Nanda RP	Effect of Anchor Angle on the Stability of Slope Reinforced by Pile-anchor Structure Under Seismic Load	Indian Geotechnical journal	Volume:54 Issue No:2 Page No: Year:2024 Month: Apr
Kavya LR, A Kumar, RP Nanda	Effect of soil nails inclination on stability of soil slopes	Journal of Geo Engineering	Volume:19 Issue No:3 Page No:102-111 Year:2024 Month: Sep
Soumyadip Das, Alope Kumar Datta, Pijush Topdar, Sanjay Sengupta	ADVANCED DAMAGE DETECTION IN REINFORCED CONCRETE APPLYING ACOUSTIC EMISSION, WAVELET TRANSFORM AND SHANNON ENTROPY	Suranaree Journal of Science and Technology	Volume:31 Issue No:5 Page No:1-11 Year:2024 Month: Oct

4.2.14 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
RP Nanda, N Priya, A Kumar	Enhancement of strength of soft soil utilizing construction and demolition wastes reinforced with Recron-3s fibres	J of Cleaner Production	Volume: Issue No: Page No: Year:2025 Month: Feb

4.2.15 Journal: Published in Others in 2024-2025

4.2.16 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info



Author(s) Name	Paper Name	Conference Name	Others Info
Arnob Bormudoi, Gilbert Hinge	A Time Series Satellite-Based Assessment of Vegetation Health and Urban Heat Island Effect in Assam for Sustainable Land and Water Management	Innovations for Sustainable and Resilient Infrastructure	DOI/ISBN: https://doi.org/10.1007/9783-031-91976-3_40 Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
Sukamal Kanta Ghosh, Diptesh Das	Effect of Near-Field Earthquakes on the Responses of Base-Isolated Buildings Considering Soil-Structure Interaction	8th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics (8ICRAGEE)	DOI/ISBN: https://doi.org/10.1007/978981-96-2096-8_22 Volume: Issue No: Page No:277–290 Year:2024 Month: Dec Presenter: CO-AUTHOR
Sukamal Kanta Ghosh, Hridikalpa Das, Diptesh Das	Influence of Isolator Parameters on the Seismic Responses of Base- Isolated Buildings	8th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics(8ICRAGEE)	DOI/ISBN: https://doi.org/10.1007/978981-96-2096-8_6 Volume: Issue No: Page No:63–74 Year:2024 Month: Dec Presenter: CO-AUTHOR
Indrajeet KashyapSukamal Kanta Ghosh, Diptesh Das	Seismic Response of Base- Isolated Buildings: A Study on the Role of Building Height and Ground Motion Characteristics	International Conference on Sustainable and Resilient Infrastructure (ICSRI2024)	DOI/ISBN: https://doi.org/10.1007/9783-031-91976-3_38 Volume: Issue No: Page No:395–405 Year:2024 Month: Dec Presenter: CO-AUTHOR
Amgoth Rajender, Pappala U M Rao and Amiya K. Samanta	Evaluation of strength and durability characteristics of alccofine-based Concrete under extreme environmental conditions”	International Conference on Sustainable and Resilient Infrastructure 2024 (ICSRI2024) by NIT Durgapur	DOI/ISBN: https://doi.org/10.1007/9783-031-91976-3_1 Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
Chatterjee, Amartyo Kumar; Chowdhury, Aditya Roy; Chauhan, Brijesh; Ghosh,	Behaviour of refractory bricks and polypropylene fibre incorporated reinforced concrete beam.”	International Conference on Sustainable and Resilient Infrastructure 2024 (ICSRI2024) by NIT Durgapur Dec. 3-5’ 2024	DOI/ISBN: https://doi.org/10.1007/9783-031-91976-3_7 Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
Chauhan, Brijesh; Ghosh, Sudipta; Samanta, Amiya Kumar	Efficacy of recycled refractory brick based sustainable concrete on flexural behaviour of beam.”	International Conference on Sustainable and Resilient Infrastructure 2024 (ICSRI2024) by NIT Durgapur Dec. 3-5’ 2024	DOI/ISBN: https://doi.org/10.1007/9783-031-91976-3_5 Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
NijN Priya, S Sarkhel, A Kumar & RPNanda	C&D Waste-Based Geopolymer as Construction Material: Critical Review	National Conference on Technological Advancements in Waste Management: Challenges and Opportunities	DOI/ISBN: doi.org/10.1007/978-98197-6024-4_10 Volume: Issue No: Page No:141-154 Year:2023 Month: Dec Presenter: CO-AUTHOR

4.2.17 Conference: Accepted in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Vijay Kumar Dwivedi	Geo-spatial model for the real time forecast of extreme flood in the basin of River Mahanadi in the State of Odisha, India	XII Scientific Assembly of the International Association of Hydrological Sciences (IAHS 2025), Roorkee, India, 5-10 Oct. 2025	DOI/ISBN: To be published Volume: Issue No: Page No: Year:2025 Month: Oct Presenter:

4.2.18 Conference: Published in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Abhishek Kumar and Alope	A study on the selection of appropriate	International Conference on Advances in	DOI/ISBN: na Volume:
Kumar Datta	ground motion for the development of best performing ai model for earthquake resistant design of RC building in hilly region	Structural and Geotechnical Engineering. Department of Civil and Environmental Engineering, IIT PATNA	Issue No: Page No: Year:2025 Month: Feb Presenter: CO-AUTHOR
Rohit Patel and Alope Kumar Datta	Selection of Suitable Earthquake Ground Motions for the Development of Best Performing AI Model for Seismic Structural Health Monitoring of Shear Wall Buildings	International Conference on Advances in Structural and Geotechnical Engineering. Department of Civil and Environmental Engineering, IIT PATNA	DOI/ISBN: na Volume: Issue No: Page No: Year:2025 Month:Feb Presenter: CO-AUTHOR
Suman Dey and Alope Kumar Datta.	Current trend in research on the application of AI in smart structural health monitoring in railway infrastructure.	International Conference on Advances in Structural and Geotechnical Engineering. Department of Civil and Environmental Engineering, IIT PATNA	DOI/ISBN: na Volume: Issue No: Page No: Year:2025 Month: Feb Presenter: CO-AUTHOR
Anchal Parihar, Neetika Saha, Pijush Topdar	Detection and Localisation of surface cracks in beams using dynamic characteristics: A Study	SIIOC 2024, 30th April to 1st May 2024, NITK Surathkal, India	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month: May Presenter: CO-AUTHOR
Pijus Rajak and Pronab Roy	Quantifying the Influence of Random Variables on Structural Failure Probabilities: Global Sensitivity Analysis Using KrigingBased Active Learning Approach	All India Seminar on Machine Learning Machine Learning and Soft Computing Applications in Engineering and Science (MLSC-ES, 2024), IEI Durgapur. India	DOI/ISBN: - Volume: Issue No: Page No: Year:2024 Month: Apr Presenter: CO-AUTHOR
Rimjhim Ghosh and Pronab Roy	Influence of Dilatancy Angle on The Factor of Safety of Three-Dimensional Soil Slope Reinforced with Jute Geotextile.	International Conference on Sustainable, Materials, Environment and Technologies under Climate Change Scenario, SMET 2024, NIT Kurukshetra	DOI/ISBN: - Volume: Issue No: Page No: Year:2024 Month: Jul Presenter: CO-AUTHOR
Konai, S., Ansari, S., Dutta, S. and Kumar, V.	Eco-Friendly Soil Stabilization Using Rice Husk Ash and Coconut Coir	Indian Geotechnical conference 2024	DOI/ISBN: Others Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
Tapabrata Chakraborty, Sahinur Rahaman Mondal, Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Hirok Chaudhuri	Stability Analysis of Open-Cast Coal Mine Overburden Dump Slopes Reinforced With Nano-Composite Coated Jute Geotextile Through Numerical Modelling	ICSRI 2024	DOI/ISBN: https://doi.org/10.1007/9783-031-91976-3 Volume: Issue No: Page No: Year:2024 Month: Presenter: CO-AUTHOR



Author(s) Name	Paper Name	Conference Name	Others Info
Mukherjee, S., Dutta, S., Konai, S.	Review on Predicting Ground Settlement Induced by Tunnelling Using Machine Learning Approach	International Conference on Sustainable and Resilient Infrastructure (ICSRI 2024)	DOI/ISBN: Others (Accepted for Book Chapter by Springer) Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
Ray, S., Dutta, S., Rangari, S.	Pullout Capacity of Ground Anchors - A Critical Review	International Conference on Sustainable and Resilient Infrastructure (ICSRI 2024)	DOI/ISBN: Others (Accepted for Book Chapter by Springer) Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
Konai, S., Srivastava, B.P., Dutta, S., Majee, A.	Numerical Study of End-Bearing Stone Column in Layered Soil Deposit	International Conference on Sustainable and Resilient Infrastructure (ICSRI 2024)	DOI/ISBN: Accepted for Book Chapter by Springer Volume: Issue No: Page No: Year:2024 Month: Dec Presenter: CO-AUTHOR
Roy Pranoy and Samanta A. K.	Post peak behaviour of confined and unconfined stub column under axial compression.	International. Conference. on Sustainable Infrastructure, Innovation, Opportunities and Challenges-2024 (SIIOC-2024), NIT Surathkal,	DOI/ISBN: 0 Volume: Issue No: Page No: Year:2024 Month: Apr Presenter: CO-AUTHOR

4.2.19 Conference: Accepted in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Vikas Kumar Prasad,	Automated Crack Detection, Classification	International Conference on Advances in	DOI/ISBN: NA Volume:
Author(s) Name	Paper Name	Conference Name	Others Info
Neetika Saha, Dr. Pijush Topdar	and Measurement in Concrete Structures using a Hybrid Approach.	Structural and Geotechnical Engineering (ASAGE 2025), IIT Patna, India	Issue No: Page No: Year:2025 Month: Presenter: CO-AUTHOR
Neetika Saha and Dr. Pijush Topdar	Damage studies in laminated composite plates using AE Technique	ICCMS 2025, IIT Tirupati	DOI/ISBN: NA Volume: Issue No: Page No: Year:2025 Month: Presenter: CO-AUTHOR
Anjunur Rahman, Neetika Saha, Pijush Topdar	OPTIMAL LOCATION OF ACOUSTIC EMISSION SENSORS FOR DETECTING A DAMAGED MEMBER IN A TRUSS: A STUDY.	SIIOC 2024, 30th April to 1st May 2024, NITK Surathkal, India	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month: May Presenter: CO-AUTHOR
Nilanjan Chakraborty and Pronab Roy	Optimizing position of opening in toroidal composite overwrapped pressure vessel for hydrogen storage	International Conference on Smart Resilient and Sustainable Infrastructure (SRISTI) 24-25 January, 2025. IIT(ISM) Dhanbad, India	DOI/ISBN: - Volume: Issue No: Page No: Year:2025 Month: Jan Presenter: CO-AUTHOR
Avinash Prasad and Pronab Roy	Pipeline leak detection and severity assessment using machine learning	International Conference on Smart Resilient and Sustainable Infrastructure (SRISTI) 24-25 January, 2025. IIT(ISM) Dhanbad, India	DOI/ISBN: - Volume: Issue No: Page No: Year:2025 Month: Jan Presenter: CO-AUTHOR

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Author(s) Name	Paper Name	Conference Name	Others Info
Chakraborty, T., Dutta, S., Konai, S. and Hinge, G.	Machine Learning Approaches for Predicting Soil Liquefaction Potential in Non-Plastic Soil	All India Seminar on Machine Learning and Soft Computing Applications in Engineering and Science (MLSC-ES'24)	DOI/ISBN: Others Volume: Issue No: Page No: Year:2024 Month: Apr Presenter: CO-AUTHOR
Kar, S., Dutta, S. and Konai, S.	Numerical Modelling of a High Railway Embankment in Hilly Region	Proceedings of the 10th Indian Young Geotechnical Engineers' Conference (IYGEC 2025)	DOI/ISBN: Others Volume: Issue No: Page No: Year:2025 Month: Mar Presenter: CO-AUTHOR
Indrajeet KashyapSukamal Kanta Ghosh, Diptesh Das	Effect of Superstructure Flexibility on the Seismic Performance of Base-Isolated Buildings Equipped with Elastomeric Bearings	International Conference on Advances on Structural and Geotechnical Engineering (ASAGE25)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2025 Month: Feb Presenter: CO-AUTHOR
Kenhize Tamin, Tathagata Banerjee, Diptesh Das	Performance of Magnetorheological Dampers with Fuzzy Logic Control in Bridges for Impact Mitigation during earthquake	International Conference on Advances on Structural and Geotechnical Engineering (ASAGE25)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2025 Month: Feb Presenter: CO-AUTHOR

4.2.20 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Kumar G	Raj, A., Konai, S., Dutta, S	Technological Advancements in Waste Management: Challenges and Opportunities. TAWMCO 2023. Lecture Notes in Civil Engineering	Utilization of Waste Material as a Filler Material in Stone Column: A Review	Publisher: Springer, Singapore Publication Date: 2024-11-19
Islam, M	Dutta, S., Konai, S.	Technological Advancements in Waste Management: Challenges and Opportunities. TAWMCO 2023. Lecture Notes in Civil Engineering	Strength Enhancement of Soft Soil Using Alkali Activated Fly Ash	Publisher: Springer, Singapore Publication Date: 2024-11-19
Sushovan Dutta	Islam, M., Konai, S.	Lecture Notes in Civil Engineering	Strength Enhancement of Soft Soil Using Alkali Activated Fly Ash	Publisher: Springer Publication Date: 2024-1119
Gilbert Hinge	Mohamed A Hamouda, Luwang Clinton Nongmaithem	Pervious Concrete Pavements	A framework for effective hydrologic investigation of pervious concrete pavements	Publisher: Woodhead Publishing Publication Date: 2025-01-01
Gilbert Hinge	Arnob Bormudoi, Arpan	Pervious Concrete	Modeling the hydrological	Publisher: Woodhead
Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
	Dawn	Pavements	implications of pervious concrete pavements	Publishing Publication Date: 2025-01-01



Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Sushovan Dutta	Kumar, G., Raj, A., Konai, S.	Lecture Notes in Civil Engineering	Utilization of Waste Material as a Filler Material in Stone Column: A Review	Publisher: Springer Publication Date: 2024-1119
N Priya	S Sarkhel, A Kumar & RP. Nanda	Technological Advancements in Waste Management: Challenges and Opportunities	C&D Waste-Based Geopolymer as Construction Material: Critical Review	Publisher: Springer nature Publication Date: 2024-1119

4.2.21 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
Safe and Sustainable Road Construction and Current Trends	NIT Durgapur	2024-04-01	2024-04-06	India
3rd Vietnam Symposium on Advances on Offshore Engineering: Interdisciplinary and Integrated Solutions for Sustainable Offshore Infrastructure (VSOE 2024)	Hanoi University of Civil Engineering (HUCE), Hanoi, Vietnam	2024-12-12	2024-12-14	Vietnam
International Conference on Sustainable and Resilient Infrastructure (ICSRI 2024)	Department of Civil Engineering, National Institute of Technology Durgapur	2024-12-05	2024-12-06	India
International Conference on Ships and Offshore Structures (ICSOS 2024)	IIT Madras	2024-09-08	2024-09-12	India
International Conference on Sustainable and Resilient Infrastructure	NIT Durgapur	2024-12-05	2024-12-06	India

4.2.22 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Detection and Monitoring of Damage in Rail Sections Using Acoustic Emission Technique	Dr. Tamal Kundu	Dr. Alope Kumar Datta	DEGREE AWARDED	2024-09-28
Investigation on NDT and AI Assisted Condition Assessment of Important Structure	Mr. Suman Dey Full Time Research Scholar	Dr. Alope Kumar Datta	ONGOING	null
Health Monitoring of Bridges using Fuzzy-Logic	Dr. Sudha Das	Dr. Alope Kumar Datta	DEGREE AWARDED	2024-09-28
Study and Modelling of Highway Pavement Under Dynamic Loading	Dr. Arijit Banerji	Dr. Alope Kumar Datta	DEGREE AWARDED	2024-09-28
Studies on Different Aspects of Acoustic Emission Technique for Damage Localisation in Structures	Dr. Parikshit Roy	Dr. Alope Kumar Datta	DEGREE AWARDED	2024-09-28

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Topic Name	Scholar	Supervisor	Status	Status Date
A Study on Damage Localisation in Framed Structure using Acoustic Emission Technique	Mr. Anupam Kumar Biswas	Dr. Aloke Kumar Datta	SUBMITTED	2024-12-25
Studies and Development of AI Models for Fault Detection in Railway Track	Mr. Apurba Pal	Dr. Aloke Kumar Datta	SUBMITTED	2025-03-25
Investigation of Damage in Composite Structures using AE Technique aided by AIML Approach: A Study	Ms. Neetika Saha	Dr. P. Topdar	ONGOING	null
Characterization of Pavements Using Acoustic Emission Technique	Soumyadip Das	Dr. A.K. Datta and Dr. P. Topdar	SUBMITTED	2025-09-04
A Study on Structural Defects in Frame Type Buildings using Acoustic Emission Technique	Mr. Anupam Kumar Biswas	A.K. Datta and Dr. P. Topdar	SUBMITTED	2025-09-04
Advances in Concrete Technology	Sharwar Ahmed Chowdhury	Dr. Suman Saha	ONGOING	null
Broad Area: Earth retaining System	Priya Hazra	Dr. Sanku Konai	ONGOING	null
Laboratory and analytical studies on stability of unsaturated slopes (Broad topic)	Autri Mukherjee	Dr. Sushovan Dutta	ONGOING	null
Design of ground anchors under static, pseudo- static, and seismic conditions (Broad topic)	Siddhartha Ray	Dr. Sushovan Dutta	ONGOING	null
Soil stabilization using industrial wastes and geopolymers (Broad topic)	Barnali Pandit	Dr. Sushovan Dutta, Dr. Sanku Konai	ONGOING	null
Rutting Analysis of Low Volume Roads Constructed from Construction and Demolished Waste.	Arpan Ray	Dr. R P Nanda and Dr. Pronab Roy	DEGREE AWARDED	2024-05-20
A study of stability design of the different types of Floating Offshore Wind Turbine (FOWT) system by integrated-coupled analysis under environmental loadings	Swarnadip Dey	Prof. A K Banik and Dr. Pronab Roy	DEGREE AWARDED	2024-09-03
Development of Efficient Computational Methods for Structural Reliability and Sensitivity Analysis Using Machine Learning Approach	Pijus Rajak	Dr. Pronab Roy	DEGREE AWARDED	2025-03-12
Development of Guidelines to Adopt the Process of Height Increment of Overburden Dumps at Open-Cast Coal Mines in India using Jute Geotextile as Reinforcing Material.	Tapabrata Chakraborty	Dr. Supriya Pal & Dr. Mrinal Kanti Mandal	ONGOING	null
Subsidence Modelling due to Underground Mining, Estimation of Pillar and Roof Strength in Underground Mining through Analytical and Numerical Modelling.	Nisheeth Shekhar	Dr. Supriya Pal	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Integrated approach to tackle pertinent water challenges in Dwakeshwar River basin, West Bengal	Suktiprajna Rath	Gilbert Hinge	ONGOING	null
Development of AI Tool for Flood Mapping	Souvik Pal	Dr. Vijay Kumar Dwivedi, Dr. Gilbert Hinge	ONGOING	null
A comprehensive study of stability design for different types FOWT system by integrated-coupled analysis under the action of dynamic environmental loads	Swarnadip Dey	AK Banik and P Roy	DEGREE AWARDED	2024-09-12
Active passive control and dynamic stability of nonlinear flexible systems	Saikat Suvra Mondal	A K Banik and R K Mitra	SUBMITTED	2025-01-27
Performance Study of Asymmetric Structures under Static and Dynamic Loads	Debi Prasad Das	Dr. Diptesh Das	DEGREE AWARDED	2025-09-09
Vibration Control of Structures under Multi hazard Scenario	Arunabha Sen	Dr. Diptesh Das	ONGOING	null
Vibration Control of Offshore Structures subjected to Environmental Loads	Ankita Som	Dr. Diptesh Das	ONGOING	null
Vibration Control of Offshore Structures	Shreyashee Sulakshana Sanjay	Dr. Diptesh Das	ONGOING	null
Effects of Wind Induced Vibrations on highway bridge deck and their mitigations	Puja Halder	Dr. Somnath Karmakar	DEGREE AWARDED	2025-01-10
Computer simulation of bridges in reducing the dynamic impacts and failure modes under contact explosion using FEM-SPH Coupling and non-Explosive Reactive Armour	Shuvra Saha	Dr. Somnath Karmakar	SUBMITTED	2024-12-23
Exploration of the construction practices in the transportation sector to enhance productivity and profitability using Building Information Modeling	Bittu Ghosh	Dr. Somnath Karmakar	SUBMITTED	2025-04-23
Effect of skew angle in damage analysis of highway bridges under contact blasts using FEM-SPH Coupled Computational Framework	Goutam Kuti	Dr. Somnath karmakar	ONGOING	null
Numerical and statistical investigation of vertical slender structures through wind spectrum	Taniya Saha	Dr. Somnath Karmakar	ONGOING	null
Response of soil in protecting structures under contact blast using FEM-SPH Coupled Computational Frame Works	Pawan Kumar Das	Dr. Somnath Karmakar	ONGOING	null
Residual capacity of seismically resistive blast damaged low-rise multistoried RC buildings	Krishnendu Chowdhury	Dr. Somnath Karmakar	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Residual capacity of the multi-span RC bridge under blasts using ALE-FEM-SPH	Priyanka Kumari Chauhan	Dr. Somnath Karmakar	ONGOING	null
Experimental Investigation on the Strength and Behaviour of Plate Reinforced Concrete Beam.	PRAKASH MONDAL	AK SAMANTA & DK SINGHA ROY	DEGREE AWARDED	2024-08-27
Effect of Elevated Temperature on Diverse Properties of Concrete Containing Refractory Waste Materials	SUDIPTA GHOSH	AK SAMANTA	DEGREE AWARDED	2024-11-06
Characterization of Sustainable Heat Resistant Concrete with Recycled Refractory Brick and Alccofine	KAPILDEO P YADAV	AK SAMANTA	ONGOING	null
Condition Assessment and Service Life Prediction of Corrosion-Distressed Reinforced Concrete Structures.	AMGOTH RAJENDER	AK SAMANTA	ONGOING	null
Performance evaluation of Concrete-filled Cold-formed Steel Built-up Composite Structures	PRANOY ROY	AK SAMANTA	ONGOING	null
AI-Based Real Time Electrocardiogram (ECG) Signal Analysis for Cardiac Arrhythmia Detection, and Classification	PINAKI RANJAN DAS	TUSHAR K BERA, AK SAMANTA	ONGOING	null
CONCRETE TECHNOLOGY	SOUMIKA BISWAS	AK SAMANTA	ONGOING	null
Vibration Mitigation in Building Structures subjected to Dynamic Loads using Isolation Techniques	Sukamal Kanta Ghosh	Dr. Diptesh Das	ONGOING	null
Simulation and Control of Bridge Vibration under Environmental Loads	Tathagata Banerjee	Dr. Diptesh Das	ONGOING	null
Development of AI Tool for Flood Plain Mapping in Subarnarekha River Basin	Sri Souvik Pal	Prof. Vijay Kumar Dwivedi and Dr. Gilbert Hinge, Assistant Professor	ONGOING	null
RUTTING ANALYSIS BY USING CONSTRUCTION AND DEMOLISHED WASTE FOR LOW VOLUME ROADS	A Ray	RP Nanda and P Roy	DEGREE AWARDED	2024-09-28
Waste Plastic aggregate as sustainable materials for construction	D Banerjee	RP Nanda	ONGOING	null
Aerated non autoclaved geopolymer concrete block	S Sarkhel	RP Nanda	ONGOING	null
Vulnerability analysis of hill slope buildings	Mohamad Al Kafi	RP Nanda and P Roy	ONGOING	null

4.2.23 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount (in Rs.)	Starting Year



Title of the Project	Investigator	Sponsor Authority	Amount (in Rs.)	Starting Year
Sustainable Ground Improvement Through Granular Column Filled with Coal Mine Overburden Aggregates	Dr. Sanku Konai and Dr. Sushovan Dutta	WBDSTBT	1630000.0	2025
Improving the performance of satellite precipitation products across different climatological and topographical zones of India	Gilbert Hinge	DST-SERB	1324000.0	2023
Water leakage detection in water distribution systems and evaluating the state of urban water bodies: Remote Sensing Based Approach	Gilbert Hinge	DST-SERB	3023900.0	2024
Prospects and study of floating offshore wind turbine (FOWT) platforms for wind energy harnessing	A K Banik	Higher Education, Science & Technology Biotechnology (Sci & Tech.)	850000.0	2018
Sustainable Ground Improvement Through Granular Column Filled with Coal Mine Overburden Aggregates	Dr. Sanku Konai, Dr. Sushovan Dutta	WBDSTBT: West Bengal Department of Science and Technology and Biotechnology	1630000.0	2025
A Novel Approach for Vegetation Based Clogging Removal of Pervious Paver Block Containing Waste Reclaimed Materials	Dr. Suman Saha (PI) and Dr. Sabyasachi Biswas (Co-PI)	Department of Science & Technology and Biotechnology, Go WB	1600000.0	2024
Development of Eco- friendly Heat Reflective Bricks and manufacturing of Ecofriendly Shuttering Material from various Agro Wastes	Dr. Diptesh Das, Dr. S. Pal, Prof. A.K. Samanta	NBCC (INDIA) Ltd	16386603	2025
Development of eco-friendly Heat Reflective Bricks and manufacturing of ecofriendly shuttering material from various Agro-wastes	D DAS, S PAL, AK SAMANTA	NBCC	13886952	2024

4.2.24 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
1. Design and setting up Mobile Bed Flume with related equipment	Prof. Vijay Kumar Dwivedi	DST FIST and NIT Durgapur	2014

4.2.25 Testing & Consultancy Services Rendered

Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
West Bengal Government (WBSETCL)	Mix Design & Testing of M25 & M20 Grade Concrete	94400.0	Completed

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Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
Govt and Private	Proof checking and design with drawing	4753218.0	Completed
Vensar Construction, Hyderabad	Proof checking /approval of design & drg for two RCC tunnels@Shyamsundarpur, ECL	450000.0	COMPLETED, CO-PI D DAS & S PAL
SBI LHO DURGAPUR	health-checkup along with remedial measures for Durgapur, Asansol and Burnpur branches of SBI	1225000.0	COMPLETED, CO-PI S PAL & P ROY
BAPL DURGAPUR	Study for assessment of structural stability of KNI Airport structures	500000.0	COMPLETED, CO-PI S PAL
ESIC, KOLKATA	Safely & stability Test for structural soundness of existing ESI Hospitals/ESIC Buildings in Sealdah, Kolkata	350000.0	COMPLETED, CO-PI-P ROY
Executive Engineer (Civil) PCD-I, Kolkata	Consultancy regarding the determination of safe load carrying capacity of Piles for foundation design at Sech bhawan, Kolkata	85000.0	COMPLETED, CO-PI S PAL
CPWD Kolkata	TPQA Service for Construction of 1000 capacity G+10 Boys' Hostel with G+3 Dinning Block & other ancillary Units at IEST Shibpur, Howrah.	3120000.0	ONGOING, CO-PI D DAS & S PAL
Auro Infra P Ltd.	Concrete Mix design for AIPL, Zetwerk Asansol	730000.0	ONGOING CO-PI SUMAN SAHA
GAJA Engg. P Ltd.	Structural design drawing vetting of Intake Jetty and ancillary structures at Asansol	2020000.0	COMPLETED, CO-PI S PAL, D DAS & G HINGE
CPWD KOLKATA	TPQA Services for Construction of G+5 Bldg. for SE Lab, GT Lab, TE Lab, and classroom under Civil Engg. Department at IEST Campus, Shibpur, Howrah	842000.0	ONGOING, CO-PI S PAL & D DAS
M/s CPWD	TPQA service for construction of Boy's Hostel with Dinning Block at IEST Shibpur, Howrah.	3682000.0	ONGOING
M/s National Highway Authority of India	Geotechnical investigation and structural consultancy for equal value infrastructure (EVI) / 3m high boundary wall on defence land of Panagarh Military Station	4425000.0	ONGOING
M/s Gaja Engineering (P) Ltd.	Vetting of design & drawing of structural design and drawing of intake jetty and ancillary structure at Asansol	2979500.0	COMPLETED
M/s Vensar	Consultancy/ proof-checking/vetting/approval of 'Design (Civil & Structural /Arching work) of two RCC tunnels/ inclines' at Shyamsundarpur, West Bengal	531000.0	COMPLETED



Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
Rahee Infratech Limited, 107, Lakhinarayan Talla Road Howrah – 711103, West Bengal, India.	Concrete Mix Design of M25, M30, M35 & M40 Grade concrete for “Construction of Rail Bridge between Barakar & Kumardhubi” of Eastern Railway.	637200.0	Completed Successfully
PMGSY	Vetting of Roads	700000.0	Continuous
Min of Jal Shakti	DPR Appraisal	295000.0	Continuous

4.2.26 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier BV	2024-04-12
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-04-12
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-05-27
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-06-12
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-07-16
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-07-16
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-08-07
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-08-07
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2024-10-17
Aloke Kumar Datta	Engineering Application of Artificial Intelligence	Elsevier	2025-02-13
Pijush Topdar	Measurement	Elsevier	2024-12-27
Sushovan Dutta	Journal of Hazardous, Toxic, and Radioactive Waste	American Society of Civil Engineers (ASCE)	2024-11-09
Sushovan Dutta	Arabian journal of geosciences	Springer Nature	2025-01-13
Sushovan Dutta	Indian geotechnical journal	Springer Nature	2024-10-05
Amiya Kumar Samanta	The Institution of Engineers (India): Series A	SPRINGER	2024-11-03
Amiya Kumar Samanta	The Institution of Engineers (India): Series A	SPRINGER	2024-11-24
Amiya Kumar Samanta	Case Studies in Chemical and Environmental Engineering	ELSEVIER	2025-01-02
Amiya Kumar Samanta	International Journal of Civil Engineering	SPRINGER NATURE	2025-03-17
Amiya Kumar Samanta	ICE journal - Construction Materials	EMERALD	2025-03-18

4.2.27 Participation in National Committees/Visits

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date

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Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Suman Saha	Doctoral Advisory Committee	VIT	2024-05-03	2027-05-07
Suman Saha	Technical Committee for ICEST 2025	Maldives	2025-10-01	2025-10-02

4.2.28 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Pijush Topdar	External Academic Auditor for Dept. of Civil Engineering	Dr. B.C. Roy Engineering College, Durgapur	2024-11-22	2024-11-22
Pijush Topdar	PhD Thesis of Nidhi Devi (Registration No. 2016RAM01)	MNNIT Allahabad	2024-06-05	2024-08-02
Atul Krishna Banik	M Tech Viva voce	NIT Silchar	2024-05-14	2024-05-14
Atul Krishna Banik	M Tech Viva voce	NIT Jamshedpur	2024-06-09	2024-06-09
Atul Krishna Banik	PhD viva-voce	NIT Silchar	2024-08-30	2024-08-30
Atul Krishna Banik	PhD viva voce	IIT Bombay	2025-02-05	2025-02-05
Amiya Kumar Samanta	TES Gr.-V(B)	TPSC	2025-03-13	2025-03-13
Vijay Kumar Dwivedi	Ph.D. Viva -Voce Examination of Kowkuatla Rama Krlshna Reddy (Roll No. 18CEOO6), Ph. D (DD), Research scholar in the Department of Civil Engineering, NIT Patna.	Natioanl Institute of technology Patna	2024-10-26	2024-10-26
Vijay Kumar Dwivedi	Civil Engineering Paper- Framing of Objective Multiple Choice Questions for the Examination of the Bihar Public Service Commission	Bihar Public Service Commission	2024-08 17	2024-08-17
Vijay Kumar Dwivedi	General Engineering Science paper-Framing of Multiple Choice Objective Questions for the Examination of the Bihar Public Service Commission	Bihar Public Service Commission	2024-08-17	2024-08-17
Vijay Kumar Dwivedi	General Engineering Science paper-Framing of Another Set of Multiple-Choice Objective Questions for the Examination of the Bihar Public Service Commission	Bihar Public Service Commission	2024-10-09	2024-10-09
Vijay Kumar Dwivedi	Civil Engineering (Degree Level) for Preliminary Examinations for recruitment to the post of TES, Gr.-V(A) through Competitive Examination, under Rural Development Department, Govt. of Tripura	Tripura Public Service Commission	2024-06-14	2024-06-14

4.2.29 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Amiya Kumar Samanta	JRF CIVIL ENGINEERING	JADAVPUR UNIVERSITY	2024-05-27	2024-05-27
Amiya Kumar Samanta	Head Examiner for Civil Engg Paper-I	TPSC	2024-12-25	2024-12-30
Amiya Kumar Samanta	ASSTT PROF CIVIL ENGG	UPSC	2025-01-10	2025-01-10
Amiya Kumar	ENGR, CIVIL ENGG	TPSC	2025-03-03	2025-03-07



Samanta

Vijay Kumar Dwivedi	Civil Engineering	Tripura Public Service Commission	2025-02-24	2025-03-01
Vijay Kumar Dwivedi	Civil Engineering	Tripura Public Service Commission	2024-11-25	2024-11-29

4.2.30 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Sushovan Dutta	Design of Sanitary Landfill for Solid Waste Management	One-week ISTE-ISSE approved short term training program on "Geotechnical Engineering Aspects of Infrastructure Projects"	Department of Civil Engineering, Vidyavardhini's College of Engineering & Technology, Mumbai	2025-01-02	2025-01-07
Amiya Kumar Samanta	Growth of Refractory Cluster in Paschim Bardhaman vs Construction Industry	Sustainable and Resilient Infrastructure Development using Advanced Materials and Technologies (SRIDAMT)	SETGOI DURGAPUR	2024-12-17	2024-09-17
Amiya Kumar Samanta	Deformation and bending effect on elevated RC cylindrical empty silo under wind induced flow field	RECENT developments IN structural ENGINEERING & skill upliftment	HIT HALDIA	2024-12-27	2024-09-27

4.2.31 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Pijush Topdar	International Conference on Sustainable and Resilient Infrastructure	NIT Durgapur	Forenoon	2024-12-05	2024-12-06
Name of the Faculty	Programme	Place	Session	From Date	To Date
Atul Krishna Banik	International Conference on Ships and Offshore Structures (ICSOS 2024)	IIIT Madras	TS03	2024-09-08	2024-09-12
Suman Saha	International Conference on Sustainable and Resilient Infrastructure (ICSRI2024)	Department of Civil Engineering, NIT Durgapur	Coordinator/Organizing Secretary	2024-12-05	2024-12-06

4.3 Department of Chemistry

4.3.1 Department at a Glance

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Since inception of the institute (1960), the Department is sincerely engaged in teaching the students of different engineering courses in both UG and PG levels. The Department began its supreme journey with M. Tech. Program in Corrosion Science & Technology in 1987. Later on, M.Sc. in Chemistry has been introduced (2009). From 2017, the Department has started 5 years integrated M. Sc. Program in Chemistry. The department is gifted with a galaxy of enthusiastic and dedicated faculty members.

Besides the quality teaching, the faculty members have also contributed a lot to elevate the prestige of the institute through their research activities of international standard. Over these years, the department has observed a steady momentum of growth due to the cumulative efforts of the faculty members, motivated students and the supporting staffs.

The Department regularly organizes Summer/Winter Schools, Workshops, Seminars and Conferences which bring together nationally renowned scientists, persons engaged in academics and industry. Total 14 faculty members of this department are devoted to the research activities in various fields of chemistry. At present, several Govt. and Private sponsored research projects are going on where a number of research scholars are pursuing their Ph.D. work. Many externally funded projects have been completed successfully in the recent past. The faculty members are publishing research papers in reputed international journals with impact factors at a regular basis.

4.3.2 Mission & Vision

Mission

To produce highly qualified, well- rounded, motivated and technologically sound students possessing fundamental understanding and knowledge in chemical science and technology, who will deliver service and leadership to the nation and the world and can fulfil the technological and socio-economic need of industry, government and society.

Vision

To be a globally recognized department in scientific and technical education through value-added teaching, research and innovation and producing quality human resources who can meet the challenges of the ever-changing, technology-based society.

4.3.3 Faculty

Name	Designation	Email-id
Prof. Sankar Chandra Moi	Professor & HOD	scmoi.ch@nitdgp.ac.in
Prof. Apurba Kumar Patra	Professor	akpatra.ch@nitdgp.ac.in
Prof. Dipankar Sukul	Professor	dsukul.ch@nitdgp.ac.in
Prof. Milan Maji	Professor	mmaji.ch@nitdgp.ac.in
Prof. Rajnarayan Saha	Professor	rnsaha.ch@nitdgp.ac.in
Dr. Sujit Sankat Panja	Associate Professor	sspanja.ch@nitdgp.ac.in
Dr. Jitamanyu Chakaravarty	Associate Professor	jchakravarti.ch@nitdgp.ac.in
Dr. Utpal Adhikari	Associate Professor	Uadhukari.ch@nitdgp.ac.in
Dr. Paresh Nath Chatterjee	Associate Professor	pnchatterjee.ch@nitdgp.ac.in
Dr. Subhas Ghosal	Associate Professor	sghosal.ch@nitdgp.ac.in
Dr. Tanmoy Kumar Saha	Assistant Professor	tksaaha.ch@nitdgp.ac.in
Dr. Deb Ranjan Banerjee	Assistant Professor	drbanerjee.ch@nitdgp.ac.in
Dr. Sourav Laha	Assistant Professor	slaha.ch@nitdgp.ac.in
Dr. Krishnendu Pal	Assistant Professor	kpal.ch@nitdgp.ac.in

4.3.4 Labs

Sl. No.	Name of Laboratory	Major equipment
1	Electrochemical Laboratory	
2	PG (M.Sc.) Laboratory	Melting Point apparatus, Chromatography set up
3	UG (B.Tech.) Laboratory	Spectrophotometer, pH Meter, Conductometer, Deionized water purifier
4	Synthesis & Analytical Laboratory	Rotary eval
5	Inorganic Synthesis and Environmental Laboratory	FT-IR, AAS, Cyclic Voltameter, UV Spectrophotometer, Ultrapure water System, Electronic



		Balance
6	Bio-molecular Modelling Laboratory	Computational facility, BIOVIA Discovery Studio academic suite
7	Instrumentation Laboratory -1	
8	Instrumentation Laboratory -2	GC-MS, UV-Vis, Fluorescence, CNS analyzer, multi-mode plate reader
9	Computer Laboratory cum Library	05 desktop computer, computer server purchased from DST FIST

4.3.5 PhD Degree awarded till 2024-25

Seventy Five

4.3.6 Specialization

- Nonlinear Dynamics
- Theoretical Physical Chemistry
- Solid State Chemistry, Materials Chemistry
- Physical Chemistry
- Electrochemistry
- Inorganic Chemistry
- Pt(II) and Pd(II) based Anticancer drug Design and drug Development
- Organic Chemistry • Organic Chemistry
- Organic Chemistry
- Bio-inorganic Chemistry
- Organic chemistry
- Inorganic Chemistry
- Computational and Theoretical Chemistry
- physical chemistry

4.3.7 Proposed Plan for Research

- Design of new catalyst for green reactions
- Two dimensional nanomaterials for energy and environmental applications
- Exploring the Role of Higher-Order Interactions in Energy-Efficient Information Processing in Neuronal Networks under Stochastic Constraints • Electrochemistry, Ultrafast processes
- Application of Fenton's, Lime & Biological Treatment & their Comparative Assessment for the Degradation of Selected wastewater, Synthesis and application of nanomaterials for the reduction of environmental contaminants,, Treatment of Textile and Dye Wastewater
- Clinical trial of few anticancer drug candidates.
- The overall goal of my research lab is to develop and apply novel technologies to address the issues at the interface of chemistry and biology, and to break the wall between these two. By combining research expertise in organic synthesis, Computer-aided Drug Design (CADD), and biophysical/biochemical techniques, my research lab use chemical biology approach to discover inhibitor targeting cancer and Alzheimer's Disease. Additionally, we design and synthesize sensors for biologically relevant metals and biomolecules.
- organic synthesis, Metal Organic frameworks
- Catalysis in homogeneous and heterogeneous media and also under light
- synthesis and characterisation of inorganic material

4.3.8 Area of Research Interest

- Fluorescence spectroscopy
- Transition metal Catalysts for organic transformation; Synthesis of Chemosensors and their applications
- Energy Materials
- Higher Order Interactions in Network
- Landscape Flux Theory
- Critical Transitions

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- Energy Efficient Information Processing in Neuronal Network
- Corrosion inhibitor
- Environmental Chemistry, Water and Wastewater Treatment, Ground Water Remediation, Green Chemistry, Nano Material Synthesis and its Environmental Applications.
- Pt(II) based anticancer drug design and drug development
- Bioinorganic Chemistry
- Medicinal Chemistry, Epigenetic Drug discovery and sensors
- Astrochemistry, Corrosion Science, software development
- Organic Chemistry
- Catalysis in homogeneous and heterogeneous media

4.3.9 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
NISER Bhubsneswar	SCXRD	Structure determination
IIT(ISM) Dhnabad	NMR	Characterization
IIT Madras	Mass Spectroscopy	HR-MS of compounds
TCG Lifesciences Pvt. Ltd. Kolkata	Green protocols in organic synthesis	Joint PhD supervision

4.3.10 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Visva Bharati University	Photochemistry	Dr. Sudip Kumar Mandal	Jointly guiding research scholar and publishing paper
Presidency University Kolkata	Energy storage and conversion devices	Dr. Anjan Banerjee	Electrochemical measurements and energy storage devices
Indian Institute of Petroleum and Energy Visakhapatnam	Electrochemical Water Splitting	Dr. Somnath Ghosh	Advanced characterizations, theoretical calculations and electrochemical measurements
Jadavpur University Kolkata	Metal Organic Frameworks	Dr. Partha Mahata	Structure determinations and advanced characterizations
Vellore Institute of Technology Chennai	Electrochemical Water Splitting with LDH based materials	Dr. Sujoy Sarkar	Advanced characterizations and electrochemical measurements
National Institute of Technology Kurukshetra	Oxide based optical materials	Dr. Avijit Kumar Paul	Synthesis and characterizations of perovskite based optical materials
Max Planck Institute for Solid State Research, Stuttgart, Germany	Layered materials	Prof. Dr. Bettina V. Lotsch	Exfoliation of layered materials and advanced characterizations
National Institute of Technology Durgapur	Synthesis of materials	Dr. Utpal Adhikari	Synthesis and electrochemical characterization of materials



Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Department of Mathematics, NIT Durgapur	Higher Order Interaction in Neuronal Network	None. Working with a Research Scholar.	We have calculated the Mutual Information Transfer in Higher Order Interaction Neuronal Network. We have also calculated Energetic cost and Response of the network in presence of Stochastic Constraints. A few more analysis and investigations to be done which are ongoing.
IIT-ISM (Dhanbad)	Characterization of corrosion inhibitors and surface morphology	Prof. Soumit Chatterjee	Joint publication
Civil Engineering Department North Dakota State University, USA.	Water and Wastewater Treatment	Bezbaruah A. N. Saha R.N.	Research on “Synthesis of Advanced Nano-materials and their Application for the Reduction of Environmental Contaminants”
Dept. Of Environmental Science, The University of Burdwan, West Bengal	Water and Wastewater Treatment	Gupta S. and Saha R. N.	Joint Research in the areas on Environmental monitoring and wastewater treatment
Calcutta University, Kolkata, West Bengal, India	Cell death mechanism and cell cycle arrest	Prof. Urmi Chatterji	Few research articles, we have published
F. G. M. Government College, Adampur, Hisar	X-ray structure solvation	Prof. Kuldeep Mahiya	X-ray structure solvation
IISER Mohali	Theoretical Calculation	Prof. Suman K. Barman	Theoretical Calculation
Kalyani University	Cell culture and cytotoxic activity	Dr. Arumina Biswas	Few research articles has been published in reputed International Journals
University of Barcelona, Spain	Research	Dr. Christian Grinan-Ferre	Joint publications, Research
Miranda House affiliated to the University of Delhi	characterization of the materials synthesized	Yogesh Kumar, Department of Chemistry	Characterization of the samples are going on
NIT Meghalaya	Catalysis in homogeneous and heterogeneous media	Prof. Gitish K. Dutta and Dr. Naba Kamal Nath	Acting as co-supervisor for three PhD scholars
Amity University Noida	Photocatalysis	Dr. Milan Bera, Ramanujan Fellow	acting as co-supervisor of one PhD scholar

4.3.11 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Prof. Samar Das	One day Seminar	2024-05-13
Prof. Ayyaappan, IIT Kharagpur	“A hands-on workshop on Molecular structure prediction through global optimization and machine learning techniques”	2024-03-05

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4.3.12 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Prakash Majee, Arpita Bid, Debal Kanti Singha, Chhatan Das, Partha Mahata, Sujit Sankar Panja, Sudip Kumar Mondal	Terbium doped heterometallic metal–organic compound with carboxylate and imidazole-containing ligands for naked-eye detection of nitro containing antibiotics	New Journal of Chemistry	Volume:49 Issue No:19 Page No:7852-7860 Year:2025 Month:Apr
Partha Sarathi Bera, Jharna Mahato, Rima Das, Pallav Mondal, Utpal Adhikari, Tanmoy Kumar Saha	Bio Inspired CdO Nanoparticles: A Robust and Recyclable Catalyst Towards the Synthesis of Dihydropyrimidone Derivatives via One Pot Three-Component Coupling Reaction	ChemistrySelect	Volume:9 Issue No:19 Page No:e202303875 Year:2024 Month:May
P. S. Bera, J. Mahato and T. K. Saha	1. Bio-synthesized Fe(0)/Fe ₂ O ₃ composite nanoparticles as a catalyst towards the preparation of dihydropyridine derivatives under solvent-free condition at room temperature	Tetrahedron	Volume:169 Issue No: Page No:134365 Year:2025 Month:Jan
J. Mahato, R. Das and T. K. Saha	4. 3d transition metal complexes as homogeneous catalysts in N-alkylation reactions using alcohols: A recent update	Tetrahedron	Volume:165 Issue No: Page No:134192 Year:2024 Month:Sep
Pallav Mondal, Bhaskar K. Brahma, Joydeep Ray, Jyothirlatha V. N. Kasu, Avishek Gangopadhyay, Subarna Samanta, Sourav Laha*, Utpal Adhikari*	Calcium Based Metal-Organic Framework: Detection and Idiosyncratic Removal of Copper by Nano-particles Deposition	Chemistry: A European Journal	Volume:30 Issue No:35 Page No:e202400587 Year:2024 Month:Jun
Pappu Naskar, Biplab Biswas, Sourav Laha*, Anjan Banerjee*	Prussian Blue Analogues with Na ₂ NixCoyMnzFe(CN) ₆ -Multimetallic Structures as Positive and Hydrogen Vanadate as Negative Electrodes in Aqueous Na-Ion Batteries for Solar Energy Storage Applications	Energy Advances	Volume:3 Issue No: Page No:1401-1413 Year:2024 Month:May
Lorenz J. Falling, Woosun Jang, Sourav Laha, Thomas Götsch, Maxwell W. Terban, Sebastian Bette, Rik Mom, Juan-Jesus Velasco-Vélez, Frank Girgsdies, Detre Teschner, Andrey Tarasov,	Atomic Insights into the Competitive Edge of Nanosheets Splitting Water	Journal of the American Chemical Society	Volume:146 Issue No:40 Page No:27886–27902 Year:2024 Month:Sep



Author(s) Name	Paper Name	Journal Name	Others Info
ChengHao Chuang, Thomas Lunkenbein, Axel Knop-Gericke, Daniel Weber, Robert Dinnebier, Bettina V. Lotsch, Robert Schlögl, Travis E. Jones			
Pulak Pradhan, Deboshree Mukherjee, Sourav Laha*, Jitamanyu Chakrabarty*	CeO ₂ -Mn ₃ O ₄ Solid-Solutions with Enhanced Photocatalytic Activity towards Degradation of Phenolic Compounds	ChemistrySelect	Volume:9 Issue No:48 Page No:e202404369 Year:2024 Month:Dec
Pappu Naskar, Pallav Mondal, Biplab Biswas, Sourav Laha*, Anjan Banerjee*	Investigating the Impact of Copper and Zinc Doping n High- Entropy Prussian Blue Analogues for Na-Ion Batteries: From Material Analysis to Device Fabrication	Energy Technology	Volume:13 Issue No:5 Page No:2401733 Year:2024 Month:Dec
Shibaditya Kumar,# Saikat Mishra,# Aniruddha Das, Kuldeep Mahiya, Sourav Laha, Milan Maji, Apurba K. Patra (#these authors contributed equally)	Analogous Copper Nanoclusters (Cu ₁₆ /17) with Two Electron Superatomic and Mixed Valence Copper(II)/Copper(I) and Copper(I)/Copper(0) Characters	Nanoscale	Volume:17 Issue No: Page No:982-991 Year:2025 Month:
Pallav Mondal, Bhaskar K. Brahma, Joydeep Ray, Jyothiratha V. N. Kasu, Avishek Gangopadhyay, Subarna Samanta, Sourav Laha*, Utpal Adhikari*	Calcium Based Metal-Organic Framework: Detection and Idiosyncratic Removal of Copper by Nano-particles Deposition	Chem. Eur. J.	Volume:30 Issue No: Page No:e202400587 Year:2024 Month:Apr
Rishika Chakraborty, Avinash Sharma, Pradip K. Maji, Siddheswar Rudra, Arpan Kumar Nayak, Paresh Nath Chatterjee, Yadagiri Naik Banothu, Mukul Pradhan*	Nitrogen and oxygen self-doped hierarchical porous carbon nanosheets derived from turmeric leaves for highperformance supercapacitor	Inorganica Chimica Acta	Volume:567 Issue No: Page No:122056 Year:2024 Month:Jul

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Author(s) Name	Paper Name	Journal Name	Others Info
Nazir Uddin, Sudipta Roy, Sayantan Roy, Dipankar Paul, Geetanjali Basumatary, Gitish K. Dutta,* Paresh Nath Chatterjee*	Formation of Bis-indolylmethanes from Symmetrical Triarylmethanes via Brønsted Acid Catalyzed C–C Bond Breaking Reaction	ChemistrySelect	Volume:9 Issue No:30 Page No:e202400574 Year:2024 Month:Aug
Tapashree Mondal, Sourav Biswas, Manoj V Mane, Sujit S Panja	Shedding Novel Photophysical Insights Toward Discriminative Detection of Three Toxic Heavy Metal Ions and a hazard class 1 nitro-explosive By Using a Simple AIEE Active Luminogen	Journal of Fluorescence	Volume:34 Issue No:3 Page No:1401-1425 Year:2024 Month:May
Aditya Suhasaria, Rakhi Senapati, Pradeep Kumar Rout, Sirsendu Sengupta, Subhas Ghosal, Priyabrata Banerjee, Deboshree Mukherjee, Sukalpa Dey, Dipankar Sukul	Electrochemical behavior of mild steel coated with long alkyl-chain benzothiazole derivatives in acid solution: Effect of aliphatic chain length	Colloids and Surfaces A: Physicochemical and Engineering Aspects	Volume:703 Issue No: Page No:135264 Year:2024 Month:Nov
Priyanka Khan , Rajnarayan Saha , Gopinath Halder	Towards sorptive eradication of pharmaceutical micro-pollutant ciprofloxacin from aquatic environment: A comprehensive review	Science of the Total Environment	Volume: Issue No:919 Page No:170723 Year:2024 Month:Apr
A. Tarai, S. Kr. Tarai, D. Sutradhar, S. Bhowmick, S. C. Moi,* and Bhaskar Nath*	Exploring Polymorphism in Quinoline-4-Carbaldoxime: Experimental Validation and Computational Insights into Hydrogen Bonding and Structural Variations	ChemistrySelect	Volume:9 Issue No:37 Page No: doi.org/10.1002/slct.202403906 Year:2024 Month:Oct
S. Mandal, S. Chatterjee I, S. Kr. Tarai, A. Pan , R. Bhaduri, C. Das , S. C. Moi*	Synthesis and structural characterization of picolinamide and thiol chelated Pt(II) complexes: Their kinetics & mechanism and theoretical approach	Inorganica Chimica Acta	Volume: Issue No:569 Page No:122119 Year:2024 Month:Jun
R. Bhaduri and S. C. Moi*	Bio-physical and theoretical investigations on Pt(II)-pyridine based complexes with relevant bio-molecules for the development of potent anticancer drug candidates	J. Molecular Structure	Volume:1309 Issue No: Page No:138261 Year:2024 Month:May
Shibaditya Kumar,†a Saikat Mishra,†a Aniruddha Das,a Kuldeep Mahiya,b Sourav Laha,a Milan Maji,a	Analogues Copper Nanoclusters (Cu ₁₆ /17) with Two Electron Superatomic and Mixed Valence Copper(II)/Copper(I) and Copper(I)/Copper(0) Characters	Nanoscale	Volume:17 Issue No:2 Page No:982-991 Year:2024 Month:Nov



Author(s) Name	Paper Name	Journal Name	Others Info
and Apurba K. Patra			
Abhisek Jana, Subhabrata Mabhai, Soumyadip Raja, Richik Bose, Sudipa Das, Pradip Patar, and Deb Ranjan Banerjee	Uncovering new hits against Lysine Demethylase (LSD1) using dual 3D pharmacophores and multi-tier rational screening	Journal of Computational Biophysics and Chemistry	Volume:24 Issue No:09 Page No:1245-1263 Year:2025 Month:Feb
Naga, S Poddar, A Jana, S Maity, P Kar, DR Banerjee, S Saha	Targeting human arginyltransferase and post-translational protein arginylation: a pharmacophore-based multilayer screening and molecular dynamics approach to discover novel inhibitors with therapeutic promise	SAR and QSAR in Environmental Research	Volume:36 Issue No:1 Page No:1-28 Year:2025 Month:Jan
Pallav Mondal, Shipra Mukhopadhyay, Subarna Samanta, Sutapa Adhikari, Mazumder, Dipankar Sukul, Utpal Adhikari	A Novel Approach for Tailoring of a Corrosion Inhibitor for Mild Steel in 1 M Hydrochloric Acid Medium: Combined Computational and Experimental Studies for Developing a Novel Quinoline Based Corrosion Inhibitor	Journal of Bio- and Tribo- Corrosion	Volume:10 Issue No: Page No:65 Year:2024 Month:Jun
Aditya Suhasaria , Rakhi Senapati , Pradeep Kumar Rout, Sirsendu Sengupta, Subhas Ghosal, Priyabrata Banerjee, Deboshree Mukherjee , Sukalpa Dey , Dipankar Sukul	Electrochemical behavior of mild steel coated with long alkyl-chain benzothiazole derivatives in acid solution: Effect of aliphatic chain length	Colloids and Surfaces A: Physicochemical and Engineering Aspects	Volume:703 Issue No: Page No:135264 Year:2024 Month:Nov
Pradeep Kumar Rout, Tarun Roy, Deb Ranjan Banerjee, Utpal Adhikari, Dipankar Sukul, Subhas Ghosal	Theoretical investigation on the adsorption of phospho-tyrosine derivatives over Fe (1 1 0) surface in 1 M HCl medium	Transactions of the Indian Institute of Metals	Volume:77 Issue No:5 Page No:1257-1263 Year:2024 Month:May

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Author(s) Name	Paper Name	Journal Name	Others Info
Aina Bellver-Sanchis, Marta Ribalta-Vilella, Alba Irisarri, Pinky Gehlot, Bhanwar Singh Choudhary, bhisek Jana, Vivek Kumar Vyas, Deb Ranjan Banerjee, Mercè Pallàs, Ana Guerrero, Christian Griñán-Ferré	G9a an Epigenetic Therapeutic Strategy for Neurodegenerative Conditions: From Target Discovery to Clinical Trials	Medicinal Research Reviews	Volume:45 Issue No:3 Page No:985-1015 Year:2025 Month:Jan

4.3.13 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Priyanka Khan, Pritam Dey, Rajnarayan Saha, Soumya Banerjee, Gopinath Halder	Insight into linear and non-linear biosorptive uptake of ciprofloxacin by surfacefunctionalized cost-competent sorbent	Microchemical Journal	Volume: Issue No:211 Page No:113043 Year:2025 Month:Feb

4.3.14 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Sujit Sankar Panja		Fundamentals of Symmetry and Group Theory with Applications in Chemistry		Publisher: PHI Publication Date: 2025-08-01
Paresh Nath Chatterjee	Gitumoni Kalita, Yafia Kousin Mirza, Milan Bera	Emerging Trends in Photoredox Synthetic Transformation	Photoredox Strategies in Green and Sustainable Organic Synthesis	Publisher: Springer Publication Date: 2025-0101

4.3.15 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
51st National Seminar on Crystallography	Indian Crystallographic Association (ICA) and Visvesvaraya National Institute of Technology Nagpur	2024-11-27	2024-11-29	India
Advances in Functional Materials and Applications	Birla Institute of Technology and Science Pilani, K K Birla Goa Campus	2024-02-20	2024-02-22	India
Partial Differential Equations and Their Applications to Image Processing	IIT Mandi	2025-06-03	2025-06-15	India



Meeting of Society of Physical Chemistry 2024-Kolkata Chapter	IISER Kolkata	2024-12-03	2024-12-03	India
Govt. of West Bengal sponsored one day Seminar	Krishnagar Govt. College, Krishnagar, Nadia, WB	2025-03-26	2025-03-26	India
'Meet the Icon' West Bengal Govt. sponsored programme in School Level	Bhiringi T. N. School, Durgapur, Benachiti, Govt. of West Bengal	2025-01-07	2025-01-07	India
International Conference on Sustainable Technologies (ICST-2024)	National Institute of Technology, Durgapur and Associates	2024-12-13	2024-12-14	India
National Conference on Green Technology and Sustainable Development (GTSD-2024)	NIT Patna and Bihar Council on Science & Technology	2024-05-30	2024-05-31	India
Physics and Chemistry of Atomic, Molecular and Condensed Matter Systems (PCAMC - 2024)	IISER Kolkata	2024-12-11	2024-12-14	India
2nd International Conference on Corrosion and Coatings (i3C)	IIM Jamshedpur Chapter in association with CSIR-NML, Tata Steel Limited and NIT Jamshedpur	2025-02-06	2025-02-07	India
National Conference on Materials Chemistry & Catalysis (MCC-2025)	Tezpur University	2025-03-07	2025-03-08	India
30th ISCB International Conference (ISCBC-2025)	Indian Society of Chemists and Biologists (ISCB)	2025-01-27	2025-01-29	India

4.3.16 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Sustainable Synthesis of Small Organic molecules from Alcohols using Homogeneous Transition Metal Catalysts	Ms. Jharna Mahato	Dr. Tanmoy Kumar Saha	ONGOING	null
Synthesis of Pharmacologically Active Heterocyclic Compounds via One Pot Three-Component Coupling Reactions Catalyzed by Bio-Inspired Nanoparticles	Mr. Partha Sarathi Bera	Dr. Tanmoy Kumar Saha	DEGREE AWARDED	2025-08-31
Nanomaterials for energy and environmental applications	Pulak Pradhan	Dr. Jitanyu Chakrabarty and Dr. Sourav Laha	ONGOING	null
ZIF based materials for electrochemical urea oxidation and water splitting	Dudekula Khasim Vali	Dr. Sourav Laha and Dr. Utpal Adhikari	ONGOING	null
MOF based materials for energy and environmental applications	Pallav Mondal	Dr. Utpal adhikari and Dr. Sourav Laha	ONGOING	null
Alkaline earth based MOFs for optical applications	Bhaskar Kumar Brahma	Dr. Utpal Adhikari and Dr. Sourav Laha	ONGOING	null
Bimetallic MOFs for supercapacitive energy storage	Prakash Kumar Mondal	Prof. Milan Maji and Dr. Sourav Laha	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Organic corrosion inhibitor for mild steel in acidic medium	Rakhi Senapati	Dipankar Sukul	ONGOING	null
Structure-reactivity correlation for organic corrosion inhibitors	Srikaran S	Dipankar Sukul	ONGOING	null
Elucidation of Sorptive and Photocatalytic Eradication of Pharmaceutical Micropollutant Ciprofloxacin from Aquatic Environment	Priyanka Khan	Prof. Rajnarayan Saha and Prof. Gopinath Halder	ONGOING	null
Investigation of Radon Profile and its relation with Geochemistry with the help of experimental technique and statistical approaches	Swarupananda Paramanik	Dr. Hirok Chaudhuri and Prof. Rajnarayan Saha	ONGOING	null
A Novel fabrication of the Composite of Agricultural Waste-based activated carbon uses for the photocatalytic degradation of various dye	Satyabhama Sahu	Prof. Rajnarayan Saha	ONGOING	null
Synthesis and characterization of Pt(II) and Pd(II) complexes chelated with unsymmetrical diamines	Miss. Sharmistha Chatterjee	Prof. Sankar Chandra Moi	ONGOING	null
Pt(II) and Pd(II) based anticancer drug design and drug development	Miss. Chandrika Das	Prof. Sankar Chandra Moi	ONGOING	null
Pd(II) based anticancer drug design and their bio-physical interaction with Bio-receptors	Santanu Mandal	Prof. Sankar Chandra Moi	ONGOING	null
Aniruddha Das	Institute Scholar	Apurba K. Patra	ONGOING	null
Shibaditya Kumar	Institute Scholar	Milan Maji and Apurba K. Patra	ONGOING	null
Growth Mechanism of Polycyclic Aromatic Hydrocarbons in the Interstellar Medium	Mr. Tarun Roy	Subhas Ghosal	DEGREE AWARDED	2024-10-04
Understanding the corrosion inhibition properties of heterocyclic organic molecules using density functional theory & molecular dynamics stimulations	Pradeep K Rout	Subhas Ghosal	ONGOING	null
Structure elucidation of astrochemically important complex organic molecules using DFT and post-HF methods	Sayon Satpati	Subhas Ghosal	ONGOING	null
Organic and Medicinal Chemistry	Mr. Koushik Barman	Deb Ranjan Banerjee	ONGOING	null
Organic and Medicinal Chemistry	SUBHRAJIT CHOWDHURY	Deb Ranjan Banerjee	ONGOING	null
Theoretical Exploration of Dynamic Aromaticity, Optical, and Adsorption Properties of Polycyclic Conjugated Hydrocarbons	Brajeswari Panigrahi	Subhas Ghosal	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
AI/ML Driven Crystal Engineering of Drug-Polymer Formulations using DFT and MD simulations	Pronam Mandal	Subhas Ghosal	ONGOING	null
Computational Investigation on Lysine Methyltransferase G9a and Identification of Potential Epigenetic Inhibitors	Abhisek Jana	Deb Ranjan Banerjee	DEGREE AWARDED	2024-12-11
Rational Design and Synthesis of Functionalized Metal-Organic Frameworks for Targeted Remediation of Toxins and Its Utility in Electrocatalysis	Pallav Mondal	Utpal Adhikari and Sourav Laha	ONGOING	null
Insights into Metal Formate Frameworks: synthesis, structure, properties and prospective	Bhaskar Kumar Brahma	Utpal Adhikari and Sourav Laha	ONGOING	null
Catalysis in homogeneous and heterogeneous media	Upasana Ghosh	Dr. Paresh Nath Chatterjee	ONGOING	null
Environmental Chemistry	Maniklal Ghosh (registered at NIT Meghalaya)	Dr. Paresh Nath Chatterjee & Dr. Malay Kumar Pradhan	ONGOING	null
Synthesis of biologically relevant heterocycles using calcium lactate as catalyst	Sudipta Roy (registered at NIT Meghalaya)	Dr. Naba Kamal Nath, NIT Meghalaya (supervisor) and Dr. Paresh Nath Chatterjee (co-supervisor)	ONGOING	null
C-C bond activation for generating electrophiles	Nazir Uddin (registered at NIT Meghalaya)	Prof. Gitish K. Dutta, NIT Meghalaya (supervisor) and Dr. Paresh Nath Chatterjee (co-supervisor)	ONGOING	null
Catalysis in heterogeneous media	Sayantan Roy (registered at NIT Meghalaya)	Prof. Gitish K. Dutta, NIT Meghalaya (supervisor) and Dr. Paresh Nath Chatterjee (co-supervisor)	ONGOING	null
1D and 2D nanostructures: Design, synthesis, properties and supercapacitor application	Rishika Chakraborty (registered at NIT Meghalaya)	Dr. Paresh Nath Chatterjee (supervisor) and Dr. Mukul Pradhan, NIT Warangal (cosupervisor)	DEGREE AWARDED	2024-04-05
Synthesis and reactivity studies of copper complexes relevant to biological sites	Shibaditya kumar	Apurba K Patra	ONGOING	null
inorganic material	Prakash Mandal	S.Laha	ONGOING	null

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4.3.17 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Transition metal oxide nanosheets for efficient and cost-effective green hydrogen production	Dr. Sourav Laha	Science and Engineering Research Board, DST, India	3300000.00	2023
Chemical sensors cum inhibitors of Histone PTM	Dr. Deb Ranjan Banerjee (PI), and Dr. Sudipta Mondal (Co-PI)	SERB (now ANRF), GoI	3651494.0	2022
Synthesis and characterization of colloidal quantum dots and investigating their suitability as photo-catalyst in organic synthesis	Dr. Amit Kumar Mandal, Bankura University (PI) and Dr. Paresh Nath Chatterjee (Mentor)	SERB TARE	1830000.0	2024
Exploring the synergy in Ru-Sn heterobimetallic complexes for their catalytic applications in organic syntheses	Dr. Paresh Nath Chatterjee (PI) and Dr. Debjit Das, TDB College (CoPI)	WBDSTBT	1740000.0	2024

4.3.18 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
New Multi-Metal Oxide Nanosheets for Electrochemical Water Splitting and CO ₂ Reduction	Dr. Sourav Laha	Science and Engineering Research Board (SERB), DST, India	2022
Design and Development of Two Stage Efficient Laboratory Wastewater Treatment (Advanced Oxidation and Activated Sludge Process) Plant for Producing Environmentally Safe and Clean Water for further uses	Prof. Rajnarayan Saha and Dr. Jitanyu Chakraborty	Science & Technology and Biotechnology Department, Govt. of West Bengal	2024
NMR studies of Lys/Arg side chain interactions in epigenetics and membrane-induced dimerization	Dr. Deb Ranjan Banerjee (Sole-PI)	SERB (now ANRF), GoI	2025

4.3.19 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Sourav Laha	Langmuir	The American Chemical Society	2024-04-23
Sourav Laha	RSC Advances	The Royal Society of Chemistry	2024-07-02
Sourav Laha	RSC Advances	The Royal Society of Chemistry	2024-09-06
Sourav Laha	Advanced Functional Materials	Wiley-VCH	2024-11-12
Sourav Laha	Journal of Materials Chemistry C	The Royal Society of Chemistry	2024-11-15
Sourav Laha	Journal of Electroanalytical Chemistry	Elsevier	2025-02-



Reviewer	Name of the Journal	Publisher	Date of Final Review
			04
Sankar Chandra Moi	Applied organometallic chemistry	John Wiley & Sons	2024-10-21
Sankar Chandra Moi	ChemistrySelect	John Wiley & Sons	2024-10-14
Sankar Chandra Moi	Heliyon Journal	Cell press	2024-06-07
Sankar Chandra Moi	Journal of Molecular Liquids	Elsevier	2024-08-09
Sankar Chandra Moi	Journal of Molecular Structure	Elsevier	2024-09-17
Sankar Chandra Moi	J. of Molecular structure	Elsevier	2024-08-09
Sankar Chandra Moi	J. of Molecular Liquids	Elsevier	2024-10-17
Sankar Chandra Moi	Journal of King Saud University - Science	Journal of King Saud University - Science	2024-08-26
Sankar Chandra Moi	New Journal of Chemistry	Royal Society of Chemistry	2024-09-27
Sankar Chandra Moi	Inorganica Chimica Acta	Elsevier	2025-03-13
Sankar Chandra Moi	Journal of Molecular Structure	Elsevier	2025-03-14
Sankar Chandra Moi	Bioorganic chemistry	Elsevier	2024-11-11
Apurba Kumar Patra	Inorganic Chemistry	American Chemical Society	2025-04-27
Apurba Kumar Patra	Inorganic Chemistry	American Chemical Society	2025-07-10
Apurba Kumar Patra	Inorganic Chemistry	American Chemical Society	2025-07-15
Apurba Kumar Patra	Inorganic Chemistry	American Chemical Society	2025-08-29
Apurba Kumar Patra	Nanoscale	Royal Society of Chemistry	2025-08-31
Apurba Kumar Patra	Inorganic Chemistry Communication	Elsevier	2025-09-04
Deb Ranjan Banerjee	3Biotech (BITC)	Springer	2024-10-29
Deb Ranjan Banerjee	3Biotech (BITC)	Springer	2025-02-01
Deb Ranjan Banerjee	Computers in Biology and Medicine	Elsevier	2024-10-29
Dipankar Sukul	Colloids and Surfaces A: Physicochemical and Engineering Aspects	Elsevier	2024-08-30
Dipankar Sukul	Applied Surface Science	Elsevier	2025-01-29
Dipankar Sukul	Journal of Molecular Structure	Elsevier	2024-12-19
Dipankar Sukul	Results in Surfaces and Interfaces	Elsevier	2024-12-26
Dipankar Sukul	Progress in Organic Coatings	Elsevier	2024-11-25

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Reviewer	Name of the Journal	Publisher	Date of Final Review
Dipankar Sukul	Sustainable Materials and Technologies	Elsevier	2024-09-20
Dipankar Sukul	Materials Today Communications	Elsevier	2024-07-18
Dipankar Sukul	Journal of Molecular Structure	Elsevier	2024-06-10
Dipankar Sukul	Journal of Molecular Structure	Elsevier	2024-05-08
Dipankar Sukul	Polyhedron	Elsevier	2024-05-06
Dipankar Sukul	Materials Chemistry and Physics	Elsevier	2024-09-12
Dipankar Sukul	Journal of Molecular Liquids	Elsevier	2024-11-01
Dipankar Sukul	Colloids and Surfaces A: Physicochemical and Engineering Aspects	Elsevier	2024-08-30
Dipankar Sukul	Journal of Molecular Structure	Elsevier	2024-09-02
Paresh Nath Chatterjee	Monatshefte für Chemie - Chemical Monthly	Springer	2024-04-12
Paresh Nath Chatterjee	Results in Chemistry	Science Direct	2024-06-10
Paresh Nath Chatterjee	European Journal of Organic Chemistry	Wiley	2024-07-02
Paresh Nath Chatterjee	Results in Chemistry	Science Direct	2024-09-23
Paresh Nath Chatterjee	Inorganic Chemistry	American Chemical Society	2024-10-22
Paresh Nath Chatterjee	Results in Chemistry	Science Direct	2024-11-03
Paresh Nath Chatterjee	Chemistry An Asian Journal	Wiley	2024-11-03

4.3.20 Participation in National Committees/Visits

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Sankar Chandra Moi	Board Member of Syllabus committee of NIT Mizoram	NIT Mizoram	2024-08-19	2024-08-20
Sankar Chandra Moi	Board Member of research study of chemistry Department Burdwan University	Burdwan University	2023-10-01	2025-09-08

4.3.21 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Sujit Sankar Panja	M.Sc in Chemistry 4th Semester Practical Examination, 2024 in Paper- MSCH 405-P (Physical Major-II)	Burdwan University	2024-08-09	2024-08-09
Sujit Sankar Panja	M.Sc in Chemistry 2nd Semester Practical Examination, 2024 in Paper- MSCH 206	Burdwan University	2024-09-25	2024-09-25



National Institute of Technology Durgapur

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
(Physical Practical)				
Sourav Laha	Doctoral Committee Meeting	VIT Chennai	2025-02-14	2025-02-14
Sourav Laha	Chemistry Practical	Bankura University	2024-08-01	2024-08-01
Rajnarayan Saha	Board of Research Studies in CONSERVATION BIOLOGY	Kazi Nazrul University, Asansol	2021-06-04	2025-06-03
Rajnarayan Saha	Post Graduate Board of Studies (PGBOS)	Kazi Nazrul University, Asansol	2021-03-03	2025-03-02
Rajnarayan Saha	MSc in Conservation Biology practical examination, Paper MSCCONBC106	Kazi Nazrul University, Asansol	2025-03-26	2025-03-26
Rajnarayan Saha	External Examiner for the Paper MSCCONBC206 (General Practical-Chemistry in Biosphere II) at Department of Conservation Biology, Durgapur Government College.	Kazi Nazrul University, Asansol	2024-09-06	2024-09-06
Rajnarayan Saha	External Expert to evaluate the Thesis Papers relating to enhancement of Junior Research Fellow to Senior Research Fellow of Ms. Mousumi layek	Burdwan University	2024-09-02	2024-09-02
Sankar Chandra Moi	Board Member of research study of chemistry Department Burdwan University	Burdwan University	2024-09-01	2025-09-08
Rajnarayan Saha	External Expert for PhD Thesis evaluation of of Mr. Amit Kumar Chakraborty	Visva-Bharati University	2024-11-21	2024-11-21
Rajnarayan Saha	External Expert for PhD Thesis evaluation of of Mr. Binoy Kumar Show	Visva-Bharati University	2024-09-24	2024-09-24
Rajnarayan Saha	Act as a ROVING OBSERVER for the West Bengal joint Entrance Examination (WBfEE-2024) on 28th April, 2024 (Sunday)	MSI BINGAI, IOINT INTRANCI EXAMINATIONS BOARD	2024-04-28	2024-04-28
Utpal Adhikari	of Chemistry in relation to the Postgraduate	Bankura University	2024-11-14	2024-11-14
Paresh Nath Chatterjee	External expert of Board of Studies meeting	Amity University Kolkata	2024-12-16	2025-03-31
Paresh Nath Chatterjee	External expert of Board of Studies (UG) in Chemistry	Kazu Nazrul University, Asansol	2024-05-24	2025-03-31
Paresh Nath Chatterjee	UG Moderation in Chemistry (5th Sem)	Kazi Nazrul University,	2024-11-21	2024-11-21
Paresh Nath Chatterjee	UG Moderation in Chemistry (2nd Sem)	Kazi Nazrul University, Asansol	2024-08-06	2024-08-06
Paresh Nath Chatterjee	UG Moderation in Chemistry (4th Sem)	Kazi Nazrul University, Asansol	2024-07-04	2024-07-04
Paresh Nath Chatterjee	External Expert for project evaluation on “Bioactivity through Computation”	Durgapur Government College	2024-04-22	2024-04-30

4.3.22 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date

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Name of the Faculty	Discipline	University/Institute	From Date	To Date
Sourav Laha	Recruitment of Teaching Staff, Chemistry	DAV Model School Durgapur	2025-03-02	2025-03-02
Sourav Laha	Project Assistant	Indian Institute of Petroleum and Energy Visakhapatnam	2025-02-14	2025-02-14
Sankar Chandra Moi	SC/ST nominee in HSSM Faculty selection committee in NIT Jamshedpur	NIT Jamshedpur	2024-09-02	2024-09-04
Sankar Chandra Moi	SC/ST nominee in Mathematics Faculty selection committee in NIT Jamshedpur	NIT Jamshedpur	2024-09-09	2024-09-09
Sankar Chandra Moi	Faculty selection under CAS in Burdwan University	Burdwan University	2025-03-27	2025-03-27
Sankar Chandra Moi	Board Member of Faculty Selection Board in IIIT Bhubaneswar Odissa	IIIT Bhubaneswar, Odissa	2025-01-04	2025-01-04
Sankar Chandra Moi	Faculty selection under CAS in Burdwan University	Burdwan University	2024-02-19	2024-02-19
Sankar Chandra Moi	Faculty selection under CAS in Burdwan University	Burdwan University	2024-06-20	2024-06-20
Rajnarayan Saha	Faculty Recruitment 2024 in Chemistry	NIT Meghalaya	2024-07-11	2024-07-11
Deb Ranjan Banerjee	Invited Board Member for the interview JBNSTS-JTST-2024 fellowship	Jagadis Bose National Science Talent Search	2024-11-30	2024-12-01
Paresh Nath Chatterjee	Chemistry	DAV Model School, Durgapur	2024-04-21	2024-04-21

4.3.23 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Sourav Laha	Coordination polymers: Materials for cost-effective environment and energy applications	51st National Seminar on Crystallography	Visvesvaraya National Institute of Technology Nagpur	2024-11-27	2024-11-29
Sourav Laha	1. In quest of synergy: Understanding the entropy effect in disordered materials for enhanced energy applications	Advances in Functional Materials and Applications	Birla Institute of Technology and Science, Pilani, K K Birla Goa Campus	2025-02-20	2025-02-22
Sankar Chandra Moi	A Road Map on Pt(II) Based Anticancer Drug Design and drug development	International Conference on Global Disease Biology: Perspective Biotechnology (ICGDB-2024)	Burdwan University	2024-03-15	2024-03-17
Sankar Chandra Moi	Pt(II) based anticancer drug design and drug development"	6th Regional DST-BT Science Congress, organized by Government of West Bengal	Durgapur Government College, Durgapur	2024-01-09	2024-01-10



Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Sankar Chandra Moi	An Avenue On The Development Of Pt(II) Based Less Toxic And More Effective Anticancer Drug	8th International conference in World cancer congress	AIIMS and JNU New Delhi	2024-03-18	2024-03-20
Deb Ranjan Banerjee	Towards epigenetic therapeutics of Alzheimer's disease: Discovery of Methyltransferase inhibitor via QSAR screening, in vitro and in vivo analyses	30th ISCB International Conference (ISCBC-2025)	Lucknow University	2025-01-27	2025-01-29
Dipankar Sukul	Structure-property correlation for organic corrosion inhibitors	Meeting of Society of Physical Chemistry 2024-Kolkata Chapter	IISER Kolkata	2024-12-03	2024-12-03
Paresh Nath Chatterjee	Exploration of N-Acylum ion chemistry in Lewis acidic media via C-C bond breaking strategy	MPACS 2024, organized by Ramakrishna Mission Vidyamandira	Belur Math, West bengal	2024-07-22	2024-07-23

4.3.24 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Sankar Chandra Moi	National Conference on Green Technology and Sustainable Development (GTSD-2024)	NIT Patna	Session chair post Lunch session	2024-05-30	2024-05-31
Rajnarayan Saha	Session Chair in The First International Conference on Sustainable Technologies (ICST 2024) at NIT Durgapur	NIT Durgapur	2024-2025	2024-12-13	2024-12-13

4.4 Department of Computer Science & Engineering

4.4.1 Department at a Glance

The Department started imparting instructions with the most modern curricula and syllabus to the students for undergraduate course since 1991 and post graduate course since July, 2004. Apart from B.Tech. in CSE, the department also started one undergraduate course named 'B.Tech. in Mathematics and Computing' with an intake of 60 and one post-graduate course name 'M.Tech. in Artificial Intelligence & Data Science' with an intake of 20 from the A.Y. 2024-25. The Department maintains an excellent teaching/learning and research environment with dedicated, qualified and dynamic faculties and well-equipped laboratories.

The Department of Computer Science and Engineering (CSE) embodies the Institute's tradition of excellence in engineering education. CSE is in a period of exciting growth and opportunity. CSE Graduates capture leading academic appointments as well as opportunities in renowned computer industries.

Apart from UG & PG S/W and H/W Laboratories, the Department has designed few specialized research Laboratories which includes highly sophisticated VLSI and Embedded Systems laboratory, Bio-medical Engineering laboratory, Systems laboratories, Data Science laboratory, Software Engineering Laboratory, etc. It also focuses research in areas like Bioinformatics, algorithms, security, natural language processing which the researchers have made a foray into in recent years. The newly built

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augmented space in the Department (1st floor of the Chemistry Building) department also has Software Laboratories for Undergraduate and Post Graduate Programmes, and a dedicated server room.

4.4.2 Mission & Vision

Mission:

M1. Imparting quality education through the well-designed curriculum in tune with the challenging needs of the industry and society.

M2. Providing state-of-art research facilities to generate knowledge and develop technologies in the thrust areas of Computer Science and Engineering.

M3. Developing linkages with world-class organizations to strengthen industry-academia relationships for mutual benefit.

M4. To produce quality engineers, researchers, and successful professionals who will become responsible citizens by contributing to the progress of the nation.

Vision:

Attaining global recognition in the area of Computer Science & Engineering through creating, applying, and imparting scientific and technical education, research, and training to meet the growing needs of the industry and society.

4.4.3 Faculty

Name	Designation	Email-id
Debashis Nandi	Professor	dnandi.cse@nitdgp.ac.in
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Suchismita Roy	Professor	sroy.cse@nitdgp.ac.in
Tandra Pal	Professor	tpal.cse@nitdgp.ac.in
Tanmay De	Professor	tde.cse@nitdgp.ac.in
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Abhijit Sharma	Assistant Professor	asharma.cse@nitdgp.ac.in
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Jaydeep Howlader	Assistant Professor	jhowlader.cse@nitdgp.ac.in
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Parag K Guha Thakurta	Assistant Professor	pkguhathakurta.cse@nitdgp.ac.in
Rajib Kumar Chatterjee	Assistant Professor	rkchatterjee.cse@nitdgp.ac.in
Sandip Karmakar	Assistant Professor	skarmakar.cse@nitdgp.ac.in
Sanghita Bhattacharya	Assistant Professor	sbhattacharjee.cse@nitdgp.ac.in
Sanjib Sadhu	Assistant Professor	ssadhu.cse@nitdgp.ac.in



Name	Designation	Email-id
Subhankar Majhi	Assistant Professor	smajhi.cse@nitdgp.ac.in
Sujoy Saha	Assistant Professor	ssaha.cse@nitdgp.ac.in
Narayan Murmu	Assistant Professor	nmurmu.cse@nitdgp.ac.in
Shyantani Maiti	Assistant Professor	smaiti.cse@nitdgp.ac.in
Monalisa Mandal	Assistant Professor	mmandal.cse@nitdgp.ac.in
Subhas Chandra Sahana	Assistant Professor	scsahana.cse@nitdgp.ac.in
Suvadip Batabyal	Assistant Professor	sbatabyal.cse@nitdgp.ac.in

4.4.4 Labs

Sl. No.	Name of Laboratory	Major Equipment
CSE Main building and Annex Building		
1.	Software Lab-I	a) Server – 01 No. b) Desktop - 75 Nos.
2.	Software Lab-II	a) Desktop – 61 Nos.
3.	Research Lab-I	a) Desktop - 17 Nos. b) Workstation - 03 Nos.
4.	Research Lab-II	a) Supermicro GPU Server – 01 No. b) Desktop – 06 Nos. c) Workstation – 01 No.
5.	Research Lab-III	a) Desktop – 8 Nos.
6.	Server Room	a) Rack Server – 01 No.
7.	VLSI Lab	a) Desktop – 35 Nos. b) Server – 1 No. c) Xilinx Spartan 3E (24 nos.)
8.	Biomedical Engineering Lab	a) Workstation - 02 Nos. b) Server - 01 No. c) Mobile Devices d) Printer - 01 No. e) EEG and fNIRS devices
9.	CoE-IoTIS Lab	a) Workstation – 02 Nos. b) Desktop – 02 Nos. c) Tobii-Pro Eyetracker Device – 01 No. d) GSR-EMG Biofeedback Device – 02 Nos. e) Mobile Device – 01 No.
CSE Main Academic Block		
10.	Research Lab	a) Desktops – 11 Nos.
11.	Networking Lab	a) Desktops – 0
12.	Application Lab	a) Desktops – 0

4.4.5 PhD degree awarded till 2024-25

One hundred twenty six.

4.4.6 Specialization

- Digital Image Processing, Computer Vision, and Biometrics
- Swarm Robotics, Distributed Algorithms
- VLSI Design and Test
- Computer Vision
- Medical Imaging
- Computer Science and Engineering
- PhD in Computer Science & Engineering
- DBMS, KMS, CBR, NLP, Cognitive Sciences, ML, DL,
- DBMS, KMS, CBR, NLP, Cognitive Sciences, ML, DL,
- Game Theory and Its Applications.

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- Education Technology, Natural Language and Speech Processing
- Artificial Intelligence and Machine Learning
- Computer Science and Engineering
- Computer Networks, Wireless Communication
- cryptography and Network Security
- Computational Biology, Machine Learning, Pattern Mining, Bioinformatics
- PhD in Computer Science and Engineering
- Computer Science and Engineering
- CAD for VLSI, Algorithmic game theory
- Theoretical Computer Science
- Human Computer Interaction
- Assistive Living • Environment Monitoring
- Wireless Networks.
- System Security
- Deep Learning
- Machine Learning
- Biometrics
- Digital Image Processing
- Computer Vision
- Compiler Design
- Machine learning, Deep Learning, Evolutionary Computation
- AI/ML applications
- IoT, Mobile Computing, Wireless Sensor Networks
- Information Retrieval
- Cryptography, Hardware Security, Cybersecurity, Blockchain
- Cellular Automata
- Software Engineering
- Database System
- Software Engineering, AI & ML, Bio Medical Image Processing
- Networking, Edge Computing
- Quantum Computing
- Steganography
- Design and analysis of Algorithms
- Computer Science and Engineering

4.4.7 Proposed Plan for Research

- Digital Image Processing, Computer Vision, and Biometrics
- To develop AI-based Diagnostic Systems in Healthcare Applications
- This research advances Adaptive and Inclusive Technology to ensure equitable access to complex domains for individuals with disabilities, aiming to transform learning and engagement. By integrating intelligent systems, multimodal interaction, and real-time adaptation, it seeks to create scalable and impactful solutions.
- Designing geometric algorithm to compute separator for bichromatic point sets
- Designing color spanning problems for colored line segments, points
- Apply learning methods for disease detection in the domain of Autism, Dementia, Alzheimers, plant diseases etc.
- 1. Online matching in re-usable goods. 2. Modelling problems in Spatial Crowdsourcing. 3. Embedding emotions in text-to-speech (TTS).
- Effectiveness of LLMs in Indian languages - school education domain.
- Application of Artificial Intelligence and Machine Learning in 1) Biomedical Engineering 2) Astronomy and Astrophysics 3) Transfer Learning based Convolution Neural Network for Medical Image and Astronomical Image Identification
- Plan to do research in the area of mmWave, ISAC and intelligent reflecting surfaces
- Designing Authenticated Key agreement schemes for IoT based healthcare system
- The plan is to integrate multi-omics data and apply the multimodal machine learning approach to get meaningful insight.
- Cognitive Computing
- 1. To impart quality teaching to both UG and PG students, 2. To design algorithmic solutions to problems of societal importance.
- Shape Inclusion problem and imprecise facility location
- To carry out research in System Security and System Forensics
- Retrieval-augmented generation (RAG)



- Agentic AI
- Visual Prompting based Domain Specific Tasks
- To apply sponsored, project proposal to DST
- AI/ML applications
- My present research interests lie in the cross section of IoT, Sensing, Pervasive computing and Sensor Networks. The focus is to identify research challenges that solve societal problems related to human activity recognition, smart home, smart living, environmental pollution monitoring, etc. The main challenge is to customize the classical ML/DL models to run them in resource-constraint-edge devices
- (smartphones/microcontrollers/microcomputers) such that we can have Intelligence embedded in IoT Edge devices. I have already applied to the SERB-Power grant which is under review and also exploring translational research opportunities, patents and seeking collaborations from other research groups both in India and abroad
- Cryptography, Hardware Security, Cybersecurity, Blockchain
- Pattern Classification
- Designing software for addressing rapidly changing requirements is a challenging task. As a result new software development methodologies and tools continue to evolve to address emerging issues and paradigm shift at different level of abstractions. Major focus of research will be on devising software design framework suitable for IoT and SOA based Applications. Prime focus also will be on possible integration of Machine Learning based mechanism for increasing Software system efficacy.
- Developing an AI-Based system for Bio Medical Image Analysis and Disease Detection
- Multi-agent based reinforcement learning
- To develop a quantum image representation technique to capture images in low light conditions
- To develop a new resource efficient quantum image representation technique
- To develop a novel quantum image encryption technique
- Submitted a research proposal at National Quantum Mission as principle investigator to develop an efficient algorithm for capturing high quality images in low light condition utilizing quantum principles

4.4.8 Area of Research Interest

- Digital Image Processing, Computer Vision, and Biometrics
- Swarm Robotics, Distributed Algorithms
- Algorithms for EDA and Test
- Stereo Vision
- Medical Imaging, Medical Image Analysis, Computer Vision, Machine Learning, Information Security
- Adaptive and Inclusive Technology
- Accessibility-aware NLP
- Spatial Audio Processing
- Computational Geometry
- NLP, ML, DL, Knowledge Management, DBMS, Cognitive sciences
- Algorithmic game theory and its applications, AI and Data Science with Its Application. Online Algorithms and Its Application.
- Natural Language Processing, Speech Processing, Education Technology
- 1) Artificial Intelligence and Machine Learning 2) Multimodal Biometric based Person Authentication 3) Astronomy and Black Hole Image Identification using Convolution Neural Network with Transfer Learning
- Bioinformatics and Computational Biology
- Quality-of-experience for video streaming in 5G networks
- IoT Security
- Biomedical and Healthcare Systems, Multi-Processor and Multi-core Architecture, Hardware Security, VLSI Design and Test, Theory and Applications of Cellular Automata (CA).
- Genomics, Multi-omics, Deep learning, Pattern Mining
- Hardware Security, Cognitive Computing, IoT Security
- Computer-aided design and testing of digital VLSI circuits, Algorithms for design and testing of digital microfluidic biochips, Fault-tolerant design of quantum-dot cellular automata circuits, Fairness issues in automated decision making
- Computational Geometry
- Human Computer Interaction
- Assistive Living • Environment Monitoring
- Wireless Networks.
- IoT
- System Security
- Visual Prompting
- Mitigation of Bias in Biometrics

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- Image Captioning
- Zero-Shot Learning
- Neural Architecture Search, Uncertainty Analysis of AI models
- AI/ML applications
- IoT and AI, Smart Healthcare and AI, Intelligent Activity monitoring
- INFORMATION RETREIVAL
- RECOMMENDER SYSTEM
- Cryptography, Hardware Security, Cybersecurity, Blockchain
- VLSI
- Air Pollution Monitoring
- VLSI Testing
- Software Engineering
- Big Data System
- Application of AI & ML in Bio Medical image Processing and Analysis
- MARL for Service management in IoT
- Quantum Image Representation
- Quantum Image Processing
- Quantum Image Encryption
- Quantum Steganography
- Optical Network, D2D Communication and Networking, Mobile edge Computing, Delay Tolerant Network, Wireless Sensor Networks.

4.4.9 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
Tata Consultancy Services, Mumbai	Adaptive and Inclusive Technology	Project and Research
TCS Mumbai	Cognitive Computing	A system is developed for the assessment of cognitive load of the Visually Impaired People
TCS	Assistive Living	Research Project
DRDO	Speech Processing	Research Project
Stone Media, Andheri West, Mumbai, India	Audio and Speech Processing	AI Based Voice to Voice Synthesis: A Potential Solution to Contemporary Dubbing Challenges

4.4.10 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Dhirubhai Ambani Institute of Information and Communication Technology	Computational Geometry	Dr. Supantha Pandit	Doing research and submitting manuscript in journal
Department of Computer Science, Universitat Politècnica de Catalunya Barcelona, Spain	Game Theory, AI and Its Applications to Crowdsourcing, Tourism, etc.	Prof. Fatos Xhafa	Research
IIT (ISM) Dhanbad	Tracking and localization of LHD Vehicles in deep mining areas	Dr. Ayan Das, Dept. of CSE	Publications
Czech Academy of Sciences	Computational Geometry	Vahideh Kaikha	Research
Universitat Politècnica de Catalunya, Spain	Computational Geometry	Rodrigo I. Silveira	Research



Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
The University of Alabama in Huntsville, USA	Environment Monitoring	Satyaki Roy	Research
Department of AI, School of Electronics Engineering, Kyungpook National University, South Korea	Research collaborations	Prof. Rammohan Malepaddi	Research Publication, Joint Proposal submission
Mahishadal Raj College	Federated learning based activity monitoring	Anwesha Mukherjee	Phd guidance and research
Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Meghnad Saha Institute of Technology, Techno India	AI based stress monitoring	Shubrapratim Nath	PhD supervision
IEST Shibpur	Cellular Automata	B K Sikdar	Research
Sikkim Manipal Institute of Technology	Reinforcement Learning	Dr. Udit Chakraborty	Special Lectures, Research Guidance and Publications
G.K.C.I.T., Malda, W.B., India	Research Work	Dr. Babul Prasad Tewari	Joint PhD Supervision
Dr. B. C. Roy Engineering College, Durgapur, W.B., India	Research Work	Dr. Poulomi Mukherjee	Joint PhD Supervision

4.4.11 Innovations and Technology Transfer (Patents filed during)

Title	Inventors	Application Nos	Date of Filling
Secure Data Router	Md Imam Mahdi Suman Avdhesh Yadav Rahat Naz Jaydeep Howlader	6437964 UK Patent	2025-07-19
A portable apparatus for Enabling steady capture of color transformation of finger nail-bed	Mamata Dalui, Dakshina Ranjan Kisku, Sunanda Das, Abhishek Kesarwani, Bibhas Sen, Suchismita Roy, and Anupam Basu	202331017986	2023-03-16
Intelligent, portable, low-cost anaemia detection kit based on observation of palm Colour changes	Mamata Dalui, Dakshina Ranjan Kisku, Bibhas Sen, Suchismita Roy, Anupam Basu, and Dipaankar Chakraborty	202131000046	2021-01-01
Ai-based biomedical image segmentation system and method for disease-specific abnormality detection	Rohit Agarwal, Rajib Kumar Chatterjee, Sukhendu Mondal, Narayan Murmu, Debashis Nandi	202531087742	2025-09-15
IoT Enabled Smart Baby Walker	Ram Chandra Barik, Sasadhara Sahoo, Rasmikanta Pati, Saroj Padhan, Suvamoy Changder	422725-001	2024-08-24

4.4.12 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme

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Self	SERB/ANRF Sponsored Training Program on Automatic Speech Recognition on Santali & Nagpuri	2025-02-13
Prof. Nirmalya Roy	SoCieTY 2025	2025-01-04

4.4.13 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author Name	Paper Name	Journal Name	Other Information
Tuhin Kumar Biswas, Avisek Gupta, Narayan Changder, Swagata m Das, Redha Taguelmimt, Samir Aknine, Animesh Dutta	Compact agent neighborhood search for the SCSGA-MF-TS: SCSGA with multi-dimensional features prioritizing task satisfaction	Information Sciences	Volume: 706 Issue: Pages: 122021
Suman Nandi, Mariana Curado Malta, Giridhar Maji, Animesh Dutta	IC-SNI: measuring nodesâ€™ influential capability in complex networks through structural and neighboring information	Knowledge and Information Systems	Volume: 67 Issue: 2 Pages: 1309 - 1350
Suman Nandi, Mariana Curado Malta, Giridhar Maji, Animesh Dutta	Community-based voting approach to enhance the spreading dynamics by identifying a group of influential spreaders in complex networks	Journal of Computational Science	Volume: 86 Issue: Pages: 102540
Vahideh Keikha, Diptapriyo Majumdar, Supantha Pandit	Constrained hitting set problem with intervals: Hardness, FPT and approximation algorithms	Theoretical Computer Science	Volume: 990 Issue: 990 Pages: 114402
Jaya Banerjee, Ankan Poddar, Anupam Basu, Baisakhi Chakraborty	Investigation of the Occurrence of the Phenomenon of Letter Position Dyslexia in Bengali Language Among Englishâ€“Bengali Speaking Indian Bilingual Children and Inter-comparison of the Phenomenon Between the Two Languages	Wireless Personal Communications	Volume: 136 Issue: Pages: 1531-1594
S. Chakraborty, A. Ghosh, A. Mondal and B. Sen	Towards the Detection of Hardware Trojans with Cost Effective Test Vectors using Genetic Algorithm	J Electron Test	Volume: 40 Issue: https://doi.org/10.1007/s10836-024-06122-w Pages: 371â€“385
Amit Kumar Pramanik, Jayanta Pal and Bibhash Sen	Analysis of fault tolerance capability of QCA circuit under regular clocking	International Journal of Electronics	Volume: https://doi.org/10.1080/00207217.2025.2450738 Issue: Pages: 1â€“23
Abhishek Kesarwani, Sunanda Das, Dakshina Ranjan Kisku & Mamata Dalui	Multi-scale Vision Transformer toward Improved Non-invasive Anaemia Detection using Palm Video	Multimedia Tools and Applications	Volume: 83 Issue: Pages: 85825â€“85848



Author Name	Paper Name	Journal Name	Other Information
Rohit Agarwal, Palash Ghosal, Anup K Sadhu, Narayan Murmu, Debashis Nandi	Multi-scale dual-channel feature embedding decoder for biomedical image segmentation	Computer Methods and Programs in Biomedicine	Volume: 257 Issue: Pages: 108464
Rohit Agarwal, Arindam Chowdhury, Rajib Kumar Chatterjee, Haradhan Chel, Chiranjib Murmu, Narayan Murmu, Debashis Nandi	Deep quasi-recurrent self-attention with dual encoder-decoder in biomedical CT image segmentation	IEEE Journal of Biomedical and Health Informatics	Volume: 28 Issue: 12 Pages: 7195 - 7205
Arindam Chowdhury, Ankit Lodh, Rohit Agarwal, Rahul Garai, Ahana Nandi, Narayan Murmu, Sumit Banerjee, Debashis Nandi	Rim learning framework based on TS-GAN: A new paradigm of automated glaucoma screening from fundus images	Computers in Biology and Medicine	Volume: 187 Issue: - Pages: 109752
Sanjib Saha, Debashis Nandi	SVM-RLF-DNN: A DNN with reliefF and SVM for automatic identification of COVID from chest X-ray and CT images	Digital Health	Volume: 10 Issue: Pages: 1-16
Som Banerjee, and Mamata Dalui	Identification of ECA rules forming MACA in periodic boundary condition	International Journal of Modern Physics C	Volume: 36 Issue: 1 Pages: 2450173
Sunanda Das, Abhishek Kesarwani, Dakshina Ranjan Kisku, and Mamata Dalui	Attention enabled precise haemoglobin prediction: A GNN based non-invasive approach	Biomedical Signal Processing and Control, Elsevier	Volume: 105 Issue: -2025 Pages: 107604
Kankana Datta, Biswapati Jana, and Mamata Dalui Chakraborty	A Cellular Automata Based Secured Reversible Data Hiding Scheme for Dual Images using Bit-Reversal Permutation Technique	Computer Standards & Interfaces	Volume: 92 Issue: 2025 Pages: 103919
Monalisa Mandal and Anamika Das	Integrating Machine Learning and Statistical Methods for Prediction and Feature-based Network Characterization of Stress Response Protein	Computational Biology and Chemistry, Elsevier	Volume: 119 Issue: Pages:
Sayantani Mandal, Subhayu Ghosh, Nanda Dulal Jana, Somenath Chakraborty & Saurav Mallik	Active Learning with Particle Swarm Optimization for Enhanced Skin Cancer Classification Utilizing Deep CNN Models	Journal of Imaging Informatics in Medicine	Volume: 38 Issue: Pages: 2472-2489
Tapas Si; Pá©ricles B. C. Miranda; Utpal Nandi; Nanda Dulal Jana; Saurav Mallik; Ujjwal Maulik	Opposition-Based Chaotic Tunicate Swarm Algorithms for Global Optimization	IEEE Access	Volume: Issue: Pages:
Subhayu Ghosh , Nanda Dulal Jana , Tapas Si , Saurav Mallik EMAIL logo and Mohd Asif Shah	CCLCap-AE-AVSS: Cycle consistency loss based capsule autoencoders for audioâ€visual speech synthesis	Journal of Intelligent Systems	Volume: Issue: Pages:

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Author Name	Paper Name	Journal Name	Other Information
Rohit Agarwal , Palash Ghosal , Anup K. Sadhu, Narayan Murmu, Debashis Nandi	Multi-scale dual-channel feature embedding decoder for biomedical image segmentation	Computer Methods and Programs in Biomedicine	Volume: 257 Issue: Pages: 108464
Rohit Agarwal, Arindam Chowdhury, Rajib Kumar Chatterjee, Haradhan Chel, Chiranjib Murmu, Narayan Murmu, and Debashis Nandi.	Deep Quasi-Recurrent Self-Attention With Dual Encoder-Decoder in Biomedical CT Image Segmentation	IEEE Journal of Biomedical and Health Informatics	Volume: 28 Issue: 12 Pages: 7195 - 7205
Arindam Chowdhury , Ankit Lodh, Rohit Agarwal, Rahul Garai, Ahana Nandi, Narayan Murmu, Sumit Banerjee, and Debashis Nandi	Rim learning framework based on TS-GAN: A new paradigm of automated glaucoma screening from fundus images.	Computers in Biology and Medicine	Volume: 187 Issue: Pages: 109752
Kazi Amrin Kabir, Parag Kumar Guha Thakurta, Samarjit Kar	An Intelligent Geographic Information System-based Framework for Energy Efficient Street Lighting	Signal, Image and Video Processing	Volume: 19 Issue: 305 Pages: 1-16
Rohit Agarwal, Arindam Chowdhury, Rajib Kumar Chatterjee, Haradhan Chel, Chiranjib Murmu, Narayan Murmu, Debashis Nandi	Deep quasi-recurrent self-attention with dual encoder-decoder in biomedical CT image segmentation	IEEE Journal of Biomedical and Health Informatics	Volume: Volume: 28 Issue: Issue: 12 Pages: 7195 - 7205
Rajib Kumar Mondal, Tandra Pal, Sanghita Bhattacharjee	Multi-objective optimization for balanced Q-coverage problem in under-provisioned directional sensor networks	Computers and Electrical Engineering	Volume: 124 Issue: Pages: 110376
Prajna Paramita Pradhan, Vantary Revanthkumar, Sanghita Bhattacharjee	Energy aware forwarder selection in wireless body area networks to enhance stability and lifetime	Wireless Networks	Volume: 31 Issue: 1 Pages: 491-503
Biswajit Maity, Abdul Alim, Popuri Sree Rama Charan, Subrata Nandi, Sanghita Bhattacharjee	A Classihonk: a system framework to annotate and classify vehicular honk from road traffic	Environmental Monitoring and Assessment	Volume: 196 Issue: 10 Pages: 983
Subhas Chandra Sahana, Kharjana, Mebanjop, and Goutam Saha.	Securing Autonomous UAV Cluster with Blockchain-based Threshold Key Management System utilizing Crypto-asset and Multisignature	IEEE Transactions on Mobile Computing	Volume: 24 Issue: 7 Pages: 5765-5778
N. Banerjee, S. Choudhury, B. Choudhury	"Design of a Context-Aware Distributed Service Registry and Discovery Mechanism for IoT	IEEE Internet of Things Journal	Volume: 11 Issue: 15 Pages: 26279-26290
Moumita Moitra & Sujana Kumar Saha	A review on handwritten text segmentation in Indian languages	International Journal of Machine Learning and Cybernetics	Volume: 3269â€“3295 Issue: 2025 Pages: 3269â€“3295



Author Name	Paper Name	Journal Name	Other Information
K. Thakur, S. Maity, P. Nielsen, T. Pal and M. Maiti	A 3D multiobjective multi-item eco-routing problem for refrigerated fresh products delivery using NSGA-II with hybrid chromosome	Computers & Industrial Engineering	Volume: Issue: Pages:
S. Karmakar, S. Kamilya, C. Koley and T. Pal	A Deep Learning Technique for Real-Time Detection of Cognitive Load Using Optimal Number of EEG Electrodes	IEEE Transactions on Instrumentation and Measurement	Volume: 74 Issue: Pages: 1-11

4.4.14 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
S. Karmakar, T. Pal and C. Koley	Detection of Attentiveness During Computer-aided Education using Infrared Sensors	Cognitive Neurodynamics, Springer	Volume:19 Issue No:58 Page No: Year:2025 Month:
Radhika Lama, Sandip Karmakar	STccAMTS: secure traffic congestion control approach for marine transportation system	International Journal of Ad Hoc and Ubiquitous Computing	Volume:49 Issue No:1 Page No:92-104 Year:2025 Month:Dec
Mukherjee, P., Paul, S., & De, T.	Energy aware handoff management for cluster-based D2D communications	International Journal of Ad Hoc and Ubiquitous Computing	Volume:48 Issue No:1 Page No:46-59 Year:2024 Month:Dec
R.K. Mondal, S. Bhattacharjee, and T. Pal	Multi-Objective Optimization for balanced Q-coverage Problem in Under-Provisioned Directional Sensor Networks	Computers and Electrical Engineering	Volume: Issue No: Page No: Year:2025 Month:
Sanjukta Mishra, Samarjit Kar, Parag Kumar Guhathakurta	Cloud-WAVECAP: Ground-based cloud types detection with an efficient wavelet-capsule approach	Journal of Supercomputing	Volume:81 Issue No:424 Page No:1-29 Year:2025 Month:Jan
Prasenjit Mukherjee, Manish Godse, Baisakhi Chakraborty	Detection of Autism Spectrum Disorder (ASD) Symptoms using LSTM Model	WSEAS TRANSACTIONS on BIOLOGY and BIOMEDICINE	Volume:21 Issue No: Page No:40-54 Year:2024 Month:Dec
Dipak Kumar, Ravi Kant Kumar, Jogendra Garain, Dakshina Ranjan Kisku, Jamuna Kanta Sing, Phalguni Gupta	Design of an ensemble face recognition system using optimal local features for unconstrained and age difference environment	International Journal of Biometrics	Volume: Issue No: Page No: Year:2025 Month:
Kailash Pati Mandal, Prasenjit Mukherjee, Devraj Vishnu, Baisakhi Chakraborty	Medical nearest-word embedding technique implemented using an unsupervised machine learning approach for Bengali language	INTERNATIONAL JOURNAL ON SMART SENSING AND INTELLIGENT SYSTEMS	Volume:17 Issue No:1 Page No:1-21 Year:2024 Month:Jun

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4.4.15 Journal: Published in Others in 2024-2025

Author(s) Name	Paper Name	Journal Name	Others Info
Dr. Goutam Sarker	Transfer Learning-Based Convolution Neural Network for Differentiation between Benign and Malignant Cancer Cells Using MobileNetV2	International Journal of Computer Science and Engineering (SSRG)	Volume:12 Issue No:7 Page No:- Year:2025 Month:Jul

4.4.16 Journal: Accepted in Others in 2024-2025

Author(s) Name	Paper Name	Journal Name	Others Info
Sayantana Das, Nanda Dulal Jana, Somenath Chakraborty and Aimin Li, Saurav Mallik,	TransConv: Convolution Infused Transformer for Protein Secondary Structure Prediction	International Journal of Computational Biology and Drug Design	Volume: Issue No: Page No: Year:2024 Month:

4.4.17 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Madhumita Sardar, Deepanwita Das, Srabani Mukhopadhyaya	Exploration of a Grid with Blocked Nodes using a Swarm of Autonomous Robots	4th International Conference on Paradigms of Communication, Computing and Data Analytics (PCCDA 2024)	DOI/ISBN: https://doi.org/10.1007/978-981-97-7946-8_2 Volume: Issue No: Page No:5-31. Year:2024 Month:Apr Presenter:CO-AUTHOR
CS Ashwin, Suchismita Roy	Zero Area Overhead based Scan-Chain Watermarking	12th IEEE International Conference on Intelligent Systems and Embedded Design (ISED-2024)	DOI/ISBN: https://doi.org/10.1109/ised63599.2024.10956598 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Nilanjana Saha, Narayan Changder, Redha Taguelmimt, Samir Aknine, Animesh Dutta	Hide Exposures by Removing Masterminds External Sources on Social Network	AAAI 2025 (39th Annual AAAI Conference on Artificial Intelligence)	DOI/ISBN: https://doi.org/10.1609/aaai.v39i28.35296 Volume: Issue No: Page No:29482 - 29483 Year:2025 Month:February Presenter:SELF
Devlina Karmakar, Mariana Curado Malta, Giridhar Maji, Animesh Dutta	LP-GRU Model: A Graph Analytics Approach to Detect Misinformation Infiltrators in Online Communities	2025 17th International Conference on COMMunication Systems and NETWORKS (COMSNETS)	DOI/ISBN: 10.1109/COMSNETS63942.2025.10885620 Volume: Issue No: Page No:862 - 866 Year:2025 Month:January Presenter:CO_AUTHOR
Suman Nandi, Giridhar Maji, Animesh Dutta	Exploring emerging spreaders through GCN-based link prediction and a novel centrality method	2025 17th International Conference on COMMunication Systems and NETWORKS (COMSNETS)	DOI/ISBN: 10.1109/COMSNETS63942.2025.10885572 Volume: Issue No: Page No:1018 - 1022 Year:2025 Month:January Presenter:CO_AUTHOR



Author(s) Name	Paper Name	Conference Name	Others Info
Srestha Sadhu, Kusum Kumari, Amrita Namtirtha, Animesh Dutta	TGNN-Bet: Approximation of Temporal Betweenness Centrality using Temporal Graph Neural Network	2025 17th International Conference on COMMunication Systems and NETworks (COMSNETS)	DOI/ISBN: 10.1109/COMSNETS63942.2025.10885618 Volume: Issue No: Page No:911 - 915 Year:2025 Month:January Presenter:CO_AUTHOR
Srestha Sadhu, Deepanwita Mallick, Amrita Namtirtha, Animesh Dutta	TMGCN-ATT: A Traffic Prediction Model with Multi- Hop GCN and Self- Attention Mechanisms	2025 17th International Conference on COMMunication Systems and NETworks (COMSNETS)	DOI/ISBN: 10.1109/COMSNETS63942.2025.10885556 Volume: Issue No: Page No:950 - 954 Year:2025 Month:January Presenter:CO_AUTHOR
Sarjita Soo, Nilanjana Saha, Amrita Namtirtha, Animesh Dutta	Identification of Phishing Mechanism of the Mastermind of Anomaly Community in the Social Networks	2025 17th International Conference on COMMunication Systems and NETworks (COMSNETS)	DOI/ISBN: 10.1109/COMSNETS63942.2025.10885585 Volume: Issue No: Page No:926 - 930 Year:2025 Month:January Presenter:CO_AUTHOR
Tuhin Kumar Biswas, Ankit Roy, Animesh Dutta	Utility-Profit Based Large-Scale Simultaneous Coalition Structure Generation and Assignment in Constrained Environments	WI-IAT 2024 (23rd IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology)	DOI/ISBN: 10.1109/WI- IAT62293.2024.00072 Volume: Issue No: Page No:450 - 454 Year:2024 Month:December Presenter:CO_AUTHOR
Suman Nandi, Dwiparna Mandal, Animesh Dutta	CCC: A Spreader Selection Approach to Control Spreading Dynamics in Complex Networks	WI-IAT 2024 (23rd IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology)	DOI/ISBN: 10.1109/WI- IAT62293.2024.00094 Volume: Issue No: Page No:589 - 594 Year:2024 Month:December Presenter:CO_AUTHOR
Srestha Sadhu, Deepanwita Mallick, Amrita Namtirtha, Mariana Curado Malta, Animesh Dutta	LPC: A Local Path- Based Centrality Method for Identifying Influential Nodes in Temporal Networks	CODS-COMAD '24: Proceedings of the 8th International Conference on Data Science and Management of Data (12th ACM IKDD CODS and 30th COMAD)	DOI/ISBN: https://doi.org/10.1145/3703323.370334 Volume: Issue No: Page No:133 - 141 Year:2024 Month:December Presenter:CO_AUTHOR
Nilanjana Saha, Amrita Namtirtha, Animesh Dutta	Hide Mastermind using an Intermediate Connection on Social Network	2024 IEEE 31st International Conference on High Performance Computing, Data and Analytics Workshop (HiPCW)	DOI/ISBN: 10.1109/HiPCW63042.2024.00027 Volume: Issue No: Page No:99 - 100 Year:2024 Month:December Presenter:CO_AUTHOR
C. Paul, N. Banerji, B. Debnath and B. Chakraborty	An Ensemble of Machine Learning Algorithms for Detecting Fake News	2024 IEEE International Conference on Future Machine Learning and Data Science (FMLDS)	DOI/ISBN: 10.1109/FMLDS63805.2024.00048 Volume: Issue No: Page No:215-221 Year:2024 Month:Nov Presenter:CO-AUTHOR
Naren Debnath, Sajal Mukhopadhyay, Fatos Xhafa	An Efficient Algorithm to Prevent Procrastination in Spatial Crowdsourcing	The 19th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC-2024)	DOI/ISBN: 10.1007/978-3-031-76462-2_13 Volume: Issue No: Page No:142-153 Year:2024 Month:Nov Presenter:CO-AUTHOR
Surja Sanyal, Sajal Mukhopadhyay, Fatos Xhafa, Jaya Mukhopadhyay	Crowdsourced Project Selection in Tourist Spots with Voting in Smart Cities	Second Decision Science Alliance International Summer Conference, DSA ISC 2024, Valencia, Spain, June 6–7, 2024	DOI/ISBN: 10.1007/978-3-031-78241-1_10 Volume: Issue No: Page No:105-119 Year:2025 Month:Jan Presenter:CO-AUTHOR

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Author(s) Name	Paper Name	Conference Name	Others Info
Malay K Majhi & Sujan K Saha	A Transfer Learning Based Automatic Speech Recognition System for ODIA Language.	COMSYS 2024.	DOI/ISBN: xxx Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Dr. Goutam Sarker	Integration of Learning based Boosting and Programming based Boosting for Multiple Classifier Classification in Biometric based Person Authentication	2025 6th International Conference on Recent Advances in Information Technology (RAIT)	DOI/ISBN: 979-8-3315-2480-7/25/\$31.00 c 2025 IEEE Volume: Issue No: Page No:- Year:2025 Month:Mar Presenter:SELF
Ritik Kumar, Shyantani Maiti	Deep Learning-Based Prediction of Human Ageing Related Proteins	International Conference on Recent Trends in Computing	DOI/ISBN: https://doi.org/10.1007/978-981-97-8836-1 Volume: Issue No: Page No:9-19 Year:2024 Month:Jul Presenter:CO-AUTHOR
Suvadip Batabyal; Ozgur Ercetin	AI-Empowered Quality-of-Experience: Power Adaptation for Situation Aware Streaming of Live Surveillance Videos	2024 IEEE Wireless Communications and Networking Conference (WCNC)	DOI/ISBN: 10.1109/WCNC57260.2024.10570626 Volume: Issue No: Page No:pp. 1-6 Year:2024 Month:Apr Presenter:SELF
Suvadip Batabyal	Simulating Application Driven Mobile D2D underlay Networks using Gym API	2025 17th International Conference on COMMunication Systems and NETWORKS (COMSNETS)	DOI/ISBN: 10.1109/COMSNETS63942.2025.10885633 Volume: Issue No: Page No:pp. 284-291 Year:2025 Month:Jan Presenter:SELF
Mebanjop Kharjana, Subhas Chandra Sahana, Goutam Saha	Analyzing Multisignature Scheme on Bitcoin based on Cryptography Guidelines	Proceedings of Third International Conference on Advanced Computing and Applications: ICACA 2024 published in Lecture Notes in Networks and Systems	DOI/ISBN: 978-981-97-4799-3 Volume: Issue No: Page No:65-75 Year:2024 Month:Dec Presenter:CO-AUTHOR
Monalisa Mandal and Anamika Das	Linear Regression for Balancing Feature Relevance and Redundancy with Optimization	CODS-COMAD '24: Proceedings of the 8th International Conference on Data Science and Management of Data (12th ACM IKDD CODS and 30th COMAD)	DOI/ISBN: https://doi.org/10.1145/3703323.37037 Volume: Issue No: Page No:314-316 Year:2024 Month:Jun Presenter:CO-AUTHOR
Monalisa Mandal and Anamika Das	An in-depth Analysis of Eps and MinPts Selection in DBSCAN with Genetic Algorithm Optimization	60th International Scientific Conference on Information, Communication and Energy Systems and Technologies (ICEST)	DOI/ISBN: doi: 10.1109/ICEST66328.2025.11098445 Volume: Issue No: Page No:1-4 Year:2025 Month:Aug Presenter:CO-AUTHOR
Amit Kumar Pramanik, Jayanta Pal and Bibhash Sen	Synthesis and Analysis of Regular Clocking-based Full Subtractor in QCA	ASCAT2025	DOI/ISBN: https://doi.org/10.1007/978-3-031-94121-4_16 Volume: Issue No: Page No: 219–228 Year:2025 Month:Mar Presenter:CO-AUTHOR
O. Chowdhury, A. Debnath, S. Chakraborty, A. Mondal and B. Sen	Random Logic Locking with Enhanced Resilience against SAT Attacks	IEEE Calcutta Conference (CALCON) 2024	DOI/ISBN: 10.1109/CALCON63337.2024.10914248. Volume: Issue No: Page No:1-5 Year:2024 Month:Dec Presenter:CO-



Author(s) Name	Paper Name	Conference Name	Others Info
AUTHOR			
Arko Datta, Joyita Chakraborty, Pabitra Majhi, Astom Mondal, Satyaki Roy, Subrata Nandi, Sujoy Saha	PolluSenseCheck: Cost Effective TinyML-based Air Quality Monitoring System with In-Built Sensor Fault Detection	17th International Conference on COMMunication Systems and NETworks (COMSNETS)	DOI/ISBN: 2155-2509 Volume: Issue No: Page No:623-631 Year:2025 Month:Jan Presenter:CO-AUTHOR
Ruma Ghosh, Arnab Mukherjee, Rangan Mukherjee, Arindam Ghosh, Partha Sarathi Paul, Sujoy Saha	SensAKitchen: Contextualizing Kitchen Activities with IoT-Enabled Event Identification	IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT)	DOI/ISBN: 10.1109/CONECCT62155.2024.10677299 Volume: Issue No: Page No:1-6 Year:2024 Month:Jul Presenter:CO-AUTHOR
Mrinal Goswami, Sivam Das, Nilanjan Chattaraj, Sujoy Saha, Charudatta Jadhav, Kunal Srivastava, Vijay Raut	Hand-Gesture Identifying Wearable-Input Device for OS-Platform Independent Generic HCI Application in a Multi-modal Platform	International Conference on Soft Computing and its Engineering Applications	DOI/ISBN: 978-3-031-88041-4 Volume: Issue No: Page No: 202–213 Year:2024 Month:Dec Presenter:CO-AUTHOR
Subhayu Ghosh, Nanda Dulal Jana	GNNAE-AVSS: Graph Neural Network Based Autoencoders for Audio-Visual Speech Synthesis.	42nd International Joint Conference on Neural Networks (IJCNN-2024) at 10th World Congress on Computational Intelligence (WCCI-2024)	DOI/ISBN: https://doi.org/10.1109/IJCNN60899.2024.10651476 Volume: Issue No: Page No: Year:2024 Month:Jun Presenter:CO-AUTHOR
6. Arkapravo Nandi, Subhayu Ghosh, Md. Tousin Akhter, Sandipan Dhar, Nanda Dulal Jana	Correlations of Evaluation Metrics for Voice Conversion: An Experimental Analysis	15th IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT-2024)	DOI/ISBN: https://doi.org/10.1109/ICCCNT61001.2024.10725801 Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:CO-AUTHOR
Subhayu Ghosh, Sonal Kumari, Nanda Dulal Jana	Comparative Performance Analysis of Decision Tree Variants in Heart and Lung Disease Classification.	8th IEEE Kolkata Section Conference (CALCON-2024)	DOI/ISBN: https://doi.org/10.1109/CALCON63337.2024.10914302 Volume: Issue No: Page No: Year:2024 Month: Presenter:CO-AUTHOR
Subhayu Ghosh, Nanda Dulal Jana	Audio-Visual Speech Synthesis Leveraging Capsule Enhanced Generative Adversarial Network.	8th ACM International Conference on Data Science and Management of Data [12th IKDD CODS and 30th COMAD] (CODS-COMAD-2024)	DOI/ISBN: https://doi.org/10.1145/3703323.3703325 Volume: Issue No: Page No: Year:2024 Month: Presenter:CO-AUTHOR
Saksham Garg, Ashish Padhi, Rinku Datta Rakshit and Dakshina Ranjan Kisku	An Effective Pathway of Brain Stroke Detection from CT Scan Images using Local Directional Octa Pattern	International Workshop on Advancing Brain-Computer Interfaces with Machine Learning (ABCWML'24) held in conjunction with the 27th International	DOI/ISBN: https://doi.org/10.1007/978-3-031-87657-8_17 Volume: Issue No: Page No:240–252 Year:2024 Month:Dec Presenter:CO-AUTHOR

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Author(s) Name	Paper Name	Conference Name	Others Info
		Conference on Pattern Recognition (ICPR'24)	
Shweta Patel and Dakshina Ranjan Kisku	Improving Bias in Facial Attribute Classification: A Combined Impact of KL Divergence induced Loss Function and Dual Attention	2nd Workshop on Facial and Body Expressions (FBE'24) held in conjunction with the 27th International Conference on Pattern Recognition (ICPR'24)	DOI/ISBN: https://doi.org/10.1007/978-3-031-87660-8_28 Volume: Issue No: Page No:383–397 Year:2024 Month:Dec Presenter:CO-AUTHOR
D. Kumar, R. K. Kumar, J. Garain, D. R. Kisku, J. K. Sing and P. Gupta	DEM-UFR: Deep Ensemble Method for Enhanced Unconstraint Face Recognition System	22nd OITS International Conference on Information Technology	DOI/ISBN: https://doi.ieeecomputersociety.org/10.1109/OCIT65031.2024.00032 Volume: Issue No: Page No:133-137 Year:2024 Month:Dec Presenter:CO-AUTHOR
Das, A. Kesarwani, D. R. Kisku and M. Dalui	Noninvasive Haemoglobin Estimation from Nail Pallor Leveraging Pre-trained Models and Graph Neural Net-works	5th International Conference on Data Science and Applications (ICDSA'24)	DOI/ISBN: https://doi.org/10.1007/978-981-96-2299-3_11 Volume: Issue No: Page No:143–155 Year:2024 Month:Jul Presenter:CO-AUTHOR
Soumyajit Basak, Prannoy Chakraborty, Subrata Nandi, Sanghita Bhattacharjee	Enhancing Human Activity Recognition with Ensemble of Hybrid Feature Selection Techniques	12th International Conference on Intelligent Systems and Embedded Design	DOI/ISBN: https://doi.org/10.1109/ISED63599.2024.10957654 Volume: Issue No: Page No:1-7 Year:2024 Month:Dec Presenter:CO-AUTHOR
Soumyajit Basak, Joyita Chakraborty, Biswajit Maity, Subrata Nandi, Sanghita Bhattacharjee	An exploratory feature analysis for machine learning-based human activity recognition	15th International Conference on Computing Communication and Networking Technologies (ICCCNT)	DOI/ISBN: An exploratory feature analysis for machine learningbased human activity recognition Volume: Issue No: Page No: Year:2024 Month:Jun Presenter:
Biswajit Maity, Akash Chokhani, Subrata Nandi, Sanghita Bhattacharjee	Real-Time Car Honk Detection for On-the-Go Application using Lightweight Deep Learning Model	IEEE ANTS 2024	DOI/ISBN: https://doi.org/10.1109/ANTS63515.2024.10898423 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:SELF
Rimpa Dutta, Sandip Karmakar	Ransomware Detection in Healthcare Organizations using Supervised Learning Models: Naive Bayes Classifier	ICCCNT 2024	DOI/ISBN: 979-8-3503-7024-9 Volume: Issue No: Page No:1-5 Year:2024 Month:Jun Presenter:
Khitish Kumar Gadnayak; Sujoy Saha; Mousumi Saha	In Light of Challenging Problems and Solutions for Air Pollution Monitoring	ISED- 2024	DOI/ISBN: 10.1109/ISED63599.2024.10957304 Volume: Issue No: Page No:1-6 Year:2024 Month:Dec Presenter:
Somnath Bhowmik, Jaydeep Howlader	Online payment fraud monitoring and detection: Performance analysis of treebased Ensemble	17th International Conference on COMMunication Systems and NETWORKS (COMSNETS)	DOI/ISBN: 10.1109/COMSNETS63942.2025.10885622 Volume: Issue No: Page No:102--107 Year:2025



Author(s) Name	Paper Name	Conference Name	Others Info
	Machine Learning models		Month:Jan Presenter:CO-AUTHOR
Soumen Sarkar, Jaydeep Howlader	Some Notes on Deniability, Obfuscation, and Multiparty Computation	International Conference on Network Security and Blockchain Technology. ICNSBT 2024	DOI/ISBN: 10.1007/978-981-97-8051-8_17 Volume: Issue No: Page No:207--223 Year:2025 Month:Feb Presenter:CO-AUTHOR
Jaydeep Howlader	Nonlinearity in AES Subkey Scheduling—An Augmented Security	International Conference on Network Security and Blockchain Technology. ICNSBT 2024	DOI/ISBN: 10.1007/978-981-97-8051-8_14 Volume: Issue No: Page No:165--179 Year:2025 Month:Feb Presenter:SELF
P. Mukherjee and T. De	Interference Aware Underlay D2D Multicasting through Effective Use of Underutilized RBs	Sixteenth International Conference on Contemporary Computing	DOI/ISBN: https://doi.org/10.1145/3675888.3676126 Volume: Issue No: Page No: 650-657 Year:2024 Month:Aug Presenter:CO-AUTHOR
S. Karmakar, K. Nikhil, A. Basu, C. Koley and T. Pal	Analysis of Entropy of Different EEG Bands to Measure the Cognitive Load during Mental Tasks	Computing Conference 2025, 19-20 June 2025, London, United Kingdom	DOI/ISBN: DOI: 10.1007/978-3-031-92602-0_29 Volume: Issue No: Page No: Year:2025 Month:Aug Presenter:CO-AUTHOR
Karmakar, S. Das, C. Koley and Pal	Detection of Cognitive Workload Using Optimized Number of EEG Features	IEEE Calcutta Conference (CALCON), 2024	DOI/ISBN: DOI: 10.1109/CALCON63337.2024.10914147 Volume: Issue No: Page No: Year:2024 Month:Aug Presenter:CO-AUTHOR
S. Karmakar, T. Pal and C. Koley	A Fuzzy Approach Towards the Measurement of Subject-Specific Cognitive Load during Mental Task Using Hemodynamic Response	2024 International Conference on Emerging Techniques in Computational Intelligence (ICETCI)	DOI/ISBN: doi: 10.1109/ICETCI62771.2024.10704153 Volume: Issue No: Page No: Year:2024 Month:Aug Presenter:SELF
H. Ritesh, C. S. Vinod, S. Karmakar, T. Pal and S. Kamilya	Subject-Specific Temporal Analysis of Cognitive Load Using fNIRS: A Machine Learning Approach	Computing Conference 2025, 19-20 June 2025, London, United Kingdom.	DOI/ISBN: DOI: 10.1007/978-3-031-92602-0_29 Volume: Issue No: Page No: Year:2024 Month:Jun Presenter:CO-AUTHOR

4.4.18 Conference: Accepted in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Hasim Ali, Pamir Ghosh, Abhijit Sharma	DR – CoT: A Multi-Agent Framework for Enhanced Reasoning in Large Language Models	6th International Conference on Recent Advances in Information Technology (RAIT)	DOI/ISBN: 10.1109/RAIT65068.2025.11088893 Volume: Issue No: Page No: Year:2025 Month:Mar Presenter:CO-AUTHOR

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Arindam Chowdhury, Rohit Agarwal, Alloy Das, Ayush Jalan, Sanket Biswas, and Debashis Nandi	Deep Entropy-Sampled O-Net for Joint Retinal Cup-Disc Segmentation in Glaucoma Detection	International Conference on Intelligent Systems & Sustainable Computing	DOI/ISBN: - Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Kazi Amrin Kabir, Parag Kumar Guha Thakurta	LULC Prediction	SUSCON 2024	DOI/ISBN: 305 Volume: Issue No: Page No:1-3 Year:2024 Month:Nov Presenter:CO-AUTHOR
Poulomi Mukherjee, Pasumarthi Priya, Mandavalli L.S Poojitha, and Tanmay De	Improving 5G Network Coverage through Optimized Multicasting in D2D communication	COMSYS-2024	DOI/ISBN: 978-981-96-8309-3 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Nirmalya Mukhopadhyay, Babul P. Tewari, and Tanmay De	Modeling VM Dependency and Anti- Affinity Constraints for VM Migration in IaaS Cloud	16th International IEEE Conference on Computing, Communication and Networking Technologies (ICCCNT 2025)	DOI/ISBN: Yet to be assign Volume: Issue No: Page No: Year:2025 Month:Jul Presenter:

4.4.19 Conference: Published in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
B. Das, J. Pal, Imnasungit L., Md Hasim S and B. Sen	Towards Smart Navigation using QR Codefor Visually Impaired Person	NICEDT 2025	DOI/ISBN: not yet Generated Volume: Issue No: Page No: Year:2025 Month:Feb Presenter:CO- AUTHOR

4.4.20 Conference: Accepted in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Shubhranshu Gorai, Suraj Raj, Vidyarnab Bagchi, Sujoy Saha, Nilanjan Chattaraj, Charudatta Jadhav, Kunal Srivastava, and Vijay Raut	Hand-Gesture Based HCI for Application Control with Custom Action Mapping in Multi-modal Input-Interface	International Conference on Frontiers in Computing and Systems (COMSYS-2024)	DOI/ISBN: 00-00 Volume: Issue No: Page No:0 Year:2024 Month:Dec Presenter:CO- AUTHOR

4.4.21 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Mamata Dalui	Sukanta Das, Enrico Formenti	Cellular Automata Technology (Edited Volume)		Publisher: Springer Publication Date: 2024-0418

4.4.22 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country



Name of the Programme	Organized By	From Date	To Date	Organizing Country
Thirty-ninth AAAI Conference on Artificial Intelligence (AAAI-25) in Philadelphia, USA	AAAI	2025-02-25	2025-03-04	USA
Research Workshop at IISc Bangalore: Frontiers of Geometric Algorithms	The Walmart Center for Tech Excellence at IISc Bangalore	2024-12-11	2024-12-15	India
2024 IEEE Wireless Communications and Networking Conference (WCNC)	IEEE	2024-04-21	2024-04-24	UAE
2025 17th International Conference on COMMunication Systems and NETWORKS (COMSNETS)	IIIT Bangalore	2025-01-06	2025-01-10	India
Fifth International Conference on Frontiers in Computing and Systems (COMSYS2024)	SPRINGER	2024-12-13	2024-12-15	India
One Day Seminar on IoT and Cloud Computing	IEI Durgapur Local Centre Under the Aegis of ETED in Association with the Department of Computer Science & Engineering, Sanaka Educational Trust	2025-03-11	2025-03-11	India
One Day Seminar on "Ambient and Assistive Technology"	IEI Durgapur Local Centre Under the Aegis of CPDB in Association with Dept. of CSE, DIATM Durgapur	2024-07-24	2024-07-24	India
All India Seminar on Machine Learning and Soft Computing Applications in Engineering and Science (MLSC-ES)	IEI Durgapur Local Centre	2024-04-06	2024-04-07	India
16th International Conference on Digital Image Processing (ICDIP'24) - Online	16th International Conference on Digital Image Processing (ICDIP'24)	2024-05-24	2024-05-26	China
2024 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)	IIT Guwahati	2024-12-15	2024-12-18	India
International Conference on Network Security and Blockchain Technology 2024	Jalpaiguri Government Engineering College, and Computer Society of India, Kolkata	2024-06-06	2024-06-08	India

4.4.23 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Analysis of Skin Disease and Detection using Neural Networks	Megha Saloni	Saravanan Chandran	ONGOING	null
Investigation and Development of Steganography Schemes	Sunil Kumar Patel	Saravanan Chandran	SUBMITTED	2025-02-05
Analysis and Design of Image Compression Techniques	Raj Kumar Paul	Saravanan Chandran	SUBMITTED	2025-03-21
Facial Features Extraction for Various Applications using Neural Network	Kshitiza Vasudeva	Saravanan Chandran	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Distributed Exploration by a Swarm of Mobile Robots in Discrete Domain	Madhumita Sardar	Dr. Srabani Mukhopadhyaya	ONGOING	null
Distributed Area Coverage in Continuous Domain	Banashree Mandal	sole	ONGOING	null
Distributed Exploration in Discrete Domain	Sujata Basu	Sole	ONGOING	null
Application of AI in Mental Healthcare	Swarnali Daw	Dr. Suchismita Maiti	ONGOING	null
SAT based Rectilinear Steiner Tree Construction and its applications in Global Routing	Sudeshna Kundu	Suchismita Roy, Shyamapada Mukherjee	DEGREE AWARDED	2022-09-26
SAT based Detailed Routing Solutions for FPGA Architectures	Shyamapada mukherjee	Suchismita Roy	DEGREE AWARDED	2015-12-12
Power Aware Design methodologies in High level Synthesis	Khushbu Chandrakar	Suchismita Roy	DEGREE AWARDED	2020-02-28
Variations of Geometric Two Centre Problem	Sanjib Sadhu	Suchismita Roy, Subhash Nandy, Sasanka Roy	DEGREE AWARDED	2020-08-11
FPGA Interconnect Resources Testing	Shukla Banik	Suchismita Roy, Bibhash Sen	DEGREE AWARDED	2021-04-30
Floorplanning and Placement in VLSI Circuits	Suchandra Banerjee	Suchismita Roy	DEGREE AWARDED	2022-09-24
Hardware Security Issues at Synthesis Level	CS Ashwin	Suchismita Roy	ONGOING	null
Hardware Trojan: Analysis of Attacks and Detection in the context of Hardware Security	Anindan Mondol	Bibhash Sen, Suchismita Roy	DEGREE AWARDED	2023-07-12
Hardware Trojan Detection using Learning Techniques	Sitikantha Chattopadhyay	Suchismita Roy	ONGOING	null
Testing Solutions in Reconfigurable Architectures	Moumita Deb	Suchismita Roy, Shukla Banik	ONGOING	null
Obfuscations and Locking Techniques in Hardware Security	Vaibhav	Suchismita Roy	ONGOING	null
Placement and Routing Solutions using Learning Techniques	Madhurima Halder	Suchismita Roy	ONGOING	null
Design and Development of A-Eye: An Artificial Eye for the Visually Impaired People	Abhishek Kumar Gunjan	Dr. Narayan Murmu	ONGOING	null
Enhancement of Partitional Clustering	Arunita Das	Animesh Dutta	DEGREE AWARDED	2025-01-13
Location Prediction in Social Media using Hybrid Modelling	Amit Paul	Animesh Dutta	DEGREE AWARDED	2025-03-27
Coalition Formation of Multi-agent Systems in Heterogeneous Environment	Tuhin Kr. Biswas	Animesh Dutta	ONGOING	null
Identifying Influential Spreaders through Network Analysis	Suman Nandi	Animesh Dutta	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Influential Spreaders Identification Across a Diverse Range of Networks	Srestha Sadhu	Animesh Dutta	ONGOING	null
Mining Social Graphs to Identify Leaders in Network Activities	Nilanjana Saha	Animesh Dutta	ONGOING	null
Topic Prediction in a Spatio Temporal Social Graph	Devlina Karmakar	Animesh Dutta	ONGOING	null
Anomaly Detection in a Social Network	Sarjita Soo	Animesh Dutta	ONGOING	null
Design of Machine Learning-based CAD System for Medical Image Analysis	Rohit Agarwal	Prof. Debashis Nandi, Dr. Narayan Murmu	ONGOING	null
Redefining Web Accessibility Toward Usability: A Modular AI Framework for Intelligent, Accessible and Navigable Web Content	Hasim Ali	Dr. Abhijit Sharma	ONGOING	null
AI-assisted Liver Cancer Detection and Analysis from Biomedical CT Images	Rohit Agarwal	Prof. Debashis Nandi and Dr. Narayan Murmu	ONGOING	null
AI-Based Glaucoma Detection From Fundus Image in Health Care Systems	Arindam Chowdhury	Debashis Nandi	SUBMITTED	2025-09-08
AI-Based Medical Image Analysis for Healthcare Systems	Sayoni Bhattacharya	Debashis Nand	ONGOING	null
ML-Based Disease Detection and Analysis from Biomedical Images for Healthcare Systems	Rajib Kumar Chatterjee	Debashis Nandi	ONGOING	null
Deep Understanding of Autism Spectrum Disorder Detection Using Machine Learning and Deep Learning Algorithm	Susovan Pradhan	Baisakhi Chakraborty	ONGOING	null
Metaheuristic Assisted Deep learning based plant disease classification	Parag Chatterjee	Baisakhi Chakraborty, Arindam Mondal	ONGOING	null
Software Approach to investigate some phenomenon of dyslexia in children	Jaya Banerjee	Baisakhi Chakraborty, Anupam Basu	DEGREE AWARDED	2025-04-02
A Study on Crowdsourcing and Behavioral Economics	Naren Debnath	Dr. Sajal Mukhopadhyay	ONGOING	null
A Study on Online Matching	Pratik Chowdhury	Dr. Sajal Mukhopadhyay	ONGOING	null
A Study on Spatial Crowdsourcing in Dynamic and Learnable Environment	Subhra Prokash Dutta	Dr. Sajal Mukhopadhyay	ONGOING	null
Efficient Non-invasive Anemia Detection by Analysing Palm Pallor	Sumana Naskar	Mamata Dalui	ONGOING	null
Design and Implementation of Deep Learning Methodologies for Hematological Diagnostics	Rajesh Mukherjee	Mamata Dalui, Ashis Bera	ONGOING	null
Speech Processing in the Languages of Odisha	Malay Kumar Majhi	Sujan Kumar Saha	ONGOING	null
Automatic Evaluation of Bengali Handwritten Answer Books	Moumita Moitra	Sujan Kumar Saha	ONGOING	null
Computational Analysis of Dietary	Sunidhi Priyadarshini	Shyantani Maiti	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Restricted Genes using Deep Learning Methods				
Computational approaches for the detection and diagnosis of Alzheimer's disease.	Amanat Ansari	Shyantani Maiti	ONGOING	null
Computational approach for the development of biomarkers for pancreatic cancer	Mithu Mal	Shyantani Maiti	ONGOING	null
Sensing and Localization in Wireless Network	Nabarupa Das	Suvadip Batabyal	ONGOING	null
Localization and Tracking using Internet of Cameras	Swarup Hazra	Suvadip Batabyal	ONGOING	null
Variations of covering problem for colored geometric objects in R^2	Sukanya Maji	Dr. Sanjib Sadhu	SUBMITTED	2024-12-04
Enhanced Key Management for Information-Centric Networking	Mr. Mebanjop Kharjana	Dr. Subhas Chandra Sahana and Prof. G. Saha	DEGREE AWARDED	2025-05-07
Authenticated Key agreement Schemes for Telecare Medical Information System	Ananya Banerjee (Registration No: 25RCS008)	Dr. Subhas Chandra Sahana	ONGOING	null
Design and Development of AI-enabled Non-invasive Anaemia Detection Systems by Analysing Palm Video	Abhishek Kesarwani	Mamata Dalui, D. R. Kisku (Co-supervisor)	DEGREE AWARDED	2024-09-28
Embedding Emotions in Text-to-Speech	Pritam Shil	Dr. Sajal Mukhopadhyay	ONGOING	null
An Integrative Approach to Understanding Stress Response Proteins through Machine Learning and Bioinformatics	Anamika Das	Monalisa Mandal	ONGOING	null
Design and Implementation of Robust Data Hiding Strategies utilizing Digital Image	Kankana Datta	Mamata Dalui, Biswapati Jana	SUBMITTED	2024-12-27
Design and Development of a Smart, Portable System for Non-Invasive Anaemia Detection through Analysis of Nail Pallor Video	Sunanda Das	Mamata Dalui	ONGOING	null
Exploring NSRTD for Characterization of CA Rules	Som Banerjee	Mamata Dalui	ONGOING	null
Some aspect of recommendation system in citation network	Dhriti Chakraborty	Prasenjit Choudhury	ONGOING	null
Leveraging Large Language Models for Information Retrieval	Indu Kumari	Prasenjit Choudhury	ONGOING	null
Personalized e-learning Recommendation System using Machine Learning	Piyali De	Prasenjit Choudhury	ONGOING	null
On some aspect of network security in mobile crowd computing	Pradipta Roy	Prasenjit Choudhury	ONGOING	null
Hardware Trojan Detection	Surajit Dutta	Bibhash Sen	ONGOING	null
EEG based Cognitive Load Assessment of VIP	Aranayk Banerjee	Bibhash Sen and Suman Halder	ONGOING	null
Feasibility Study and Design of Gesture Based Aid for Effective	Durgesh Lohar	Bibhash Sen	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
HCI: A Cognitive Load Perspective				
Study of Different soft computing approach to detect Hardware Trojans	Sandip Chakrabarty	Bibhash Sen	ONGOING	null
Exploring the impact of cognitive load assessment on Assistive technology: Multimodal approach	Shubhrangshu Chanda	Bibhash Sen	ONGOING	null
Facility location problem	Nandana Ghosh	Sole	ONGOING	null
Leveraging Resource-Constrained Devices for Diverse Societal Applications: From Sound-Based Assistance to Intelligent Infrastructure	Debolina Chowdhury	Sujoy Saha	ONGOING	null
A Self-Reliant Cyber-Physical Framework for Personalized and Healthy Indoor Air Quality	Molay Mondal	Sujoy Saha & Nilanjan Chattaraj	ONGOING	null
Context-aware intelligent framework for indoor event Identification using environmental sensors.	Ruma Ghosh	Sujoy Saha	ONGOING	null
Design and Development of Energy efficient WSN	Ranadeep Dey	Parag Kumar Guha Thakurta	DEGREE AWARDED	2025-09-25
GIS based Sustainable Urban Development	Kazi Amrin Kabir	Parag Kumar Guha Thakurta	ONGOING	null
Deep Learning based meteorological forecasting design	Sanjukta Mishra	Parag Kumar Guha Thakurta	ONGOING	null
Studies on Evolutionary Deep Neural Architecture Search for Image Analysis	Ghosh (21RCS010)	Sole	DEGREE AWARDED	2024-09-06
Speech Synthesis Using Deep Generative Models: Some Advanced Approaches	Sandipan Dhar (21RCS058)	Prof. Swagatam Das	DEGREE AWARDED	2024-11-25
Analyzing the Effectiveness of EEG Analysis Using Machine Learning Methods to Evaluate Postprandial Neural Responses	Rabel Guharoy (21RCS025)	Suparna Biswas	ONGOING	null
Generative Artificial Intelligence Based Audio-Visual Speech Synthesis: Some Advanced Approaches	Subhayu Ghosh (23RCS112)	Sole	ONGOING	null
Fusion-Based Approaches for Multimodal Medical Image Analysis	Brahmanand Dubey (Roll No.: 23CS1111)	Sole	ONGOING	null
Design and Development of AI-enabled Non-invasive Anaemia Detection Systems by Analysing Palm Video	Abhishek Kesarwani	Mamata Dalui and Dakshina Ranjan Kisku	DEGREE AWARDED	2024-09-28
Design and Development of Some Unscripted and Multi-scripted Offline Signature Verification Systems	Teressa Longjam	Dakshina Ranjan Kisku	DEGREE AWARDED	2024-09-28
Energy Efficient Street Lighting	Pragna Laboni Sikder	Parag Kumar Guha Thakurta	DEGREE AWARDED	2025-09-25
AI in Agriculture	Manas Kumar	Parag Kumar Guha	DEGREE	2025-09-

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Topic Name	Scholar	Supervisor	Status	Status Date
	Mohanty	Thakurta	AWARDED	25
Food Waste Management	Subha Shankar Chakraborty	Parag Kumar Guha Thakurta	ONGOING	null
Exploring Outdoor Context using Multimodal Sensor Logs	Biswajit Maity	Sanghita Bhattacharjee	DEGREE AWARDED	2024-04-10
Design and Development of Efficient Data Transmission Methods in Wireless Body Area Networks for Improving Quality of Service	Prajna Paramita Pradhan	Sanghita Bhattacharjee	DEGREE AWARDED	2024-08-30
Federated Learning Driven Framework for Activity and Context Monitoring	Arnab Chakraborty	Sanghita Bhattacharjee	ONGOING	null
AI based new approaches to predict and prevent ransomware attacks	Rimpa Dutta	Sandip Karmakar	ONGOING	null
Functional Specification of Software as a Service for Data Centric Cloud Applications	Amit Kr. Mandal	Anirban Sarkar	DEGREE AWARDED	2018-02-19
Design of an Architectural Framework for Dynamic Web Services	Faisal Ahmad	Anirban Sarkar	DEGREE AWARDED	2017-07-26
A Study on Design Specification for Component Based Software System	Prasenjit Banerjee	Anirban Sarkar	DEGREE AWARDED	2019-04-18
Ontology Driven Domain Specific Software Design	Shreya Banerjee	Anirban Sarkar	DEGREE AWARDED	2019-04-23
Analysis and Specification of an Inter-Cloud Architecture: An Abstraction Model	Gitosree Khan	Anirban Sarkar, Sabnam Sengupta	DEGREE AWARDED	2020-03-14
A Multi-modal Approach for Detection of Anomaly in Human Action Through Imaging	Soumya Ranjan Mishra	Goutam Sanyal, Anirban Sarkar	DEGREE AWARDED	2021-10-11
Functional Specification for User-Centric Service Oriented Enterprise Architecture Framework	Priyanka Chakraborty	Anirban Sarkar	DEGREE AWARDED	2024-07-31
Software Integrated Framework design for Internet of Things based Applications.	Sugyan Kumar Mishra	Anirban Sarkar	DEGREE AWARDED	2024-11-01
Functional Specification of Micro-service based Framework for IoT Applications	Chauhan Kumar Rath	Anirban Sarkar, Amit Kr. Mandal	DEGREE AWARDED	2025-03-03
Study of Multiparty Computation and its Application in Private Function Evaluation	Soumen Sarkar	Dr. Jaydeep Howlader	ONGOING	null
The Study and Design of Fraud Detection System for Digital Payment in India	Somnath Bhowmik	Dr. Jaydeep Howlader, Dr. Sandip Karmakar	ONGOING	null
On the Study of Green Computability of Blockchain Mining Techniques	Tamoghna Mandal	Jaydeep Howlader	ONGOING	null
Secure Function Evaluation - The Role of Obfuscation and Multiparty Computation	Rahat Naz	Jaydeep Howlader	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Design and Analysis of Context-aware Middleware for Service Oriented Computing over Internet of Things	Nandan Banerji	Subhrabrata Choudhury	DEGREE AWARDED	2024-05-21
Study and Design of Continuous Authentication Algorithms for Smartphone using Behavioral Biometrics	Praveen Kumar Rayani	Dr. Suvamoy Changder	DEGREE AWARDED	2024-07-15
An Approach to Develop Quantum Image Representation and Its Applications	Arnab Chatterjee	Dr. Suvamoy Changder	ONGOING	null
Quantum Steganography: An Approach Towards Data Hiding	Ahana Patra	Dr. Suvamoy Changder	ONGOING	null
Recommended System	Ananya Sarkar	Dr. Suvamoy Changder	ONGOING	null
Quantum image processing and applications	Shreyasi Goswami	Dr. Suvamoy Changder	ONGOING	null
Efficient Device-to-Device (D2D) Multicasting Approaches in Fifth Generation (5G) Cellular Networks	Poulomi Mukherjee	Tanmay De	DEGREE AWARDED	2025-05-19
Integrated Optimization Framework for Enhanced Performance in Mobile Edge Environment	Anindita Ghosh	Tanmay De	ONGOING	null
Efficient VM Migration Strategy and Migration-Aware VM Design for Improved DVMC in Virtualized Cloud Infrastructures	Nirmalya Mukhopadhyay	Tanmay De and Babul Prasad Tewari	ONGOING	null
Enhancing Connectivity Through Device-to-Device Communication in 6G	Moumi Das	Tanmay De and Poulomi Mukherjee	ONGOING	null
Yet to be decided	Arpita Chowdhury	Tanmay De	ONGOING	null
Biosensor Based Cognitive Load Assesment	Subashis Karmakar	Prof. Chiranjib Koley	ONGOING	null
Coverage and Connectivity of Wireless Sensor Network in the Paradigm of Computational Intelligence	Rajib Kumar Mondal	Sanghita Bhattacharjee	ONGOING	null
Some Soft Computing Techniques for Uncertain Decision Making Problems	Surajit Dan	Dr. Samarjit Kar	SUBMITTED	2025-04-30

4.4.24 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Coalition Formation in Multi Agent Systems: An Algorithmic Approach	Animesh Dutta	ANRF, Govt of India	660000.0	2024
STEM accessibility (from web) for the visually impaired	Dr. Abhijit Sharma and Dr. Suvrojit Das	TCS Mumbai	2786300.0	2021
System for Automatic Evaluation of Handwritten Answer Books in	Sujan Kumar Saha	SERB/ANRF	2001190.0	2022

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Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Bengali.				
Automatic Speech Recognition System in Santali and Nagpuri Languages: Resource Creation and System Development.	Sujan Kumar Saha	SERB/ANRF	2961112.0	2022
Cognitive load assessment methods for the blind, in adaptation to new assistive technologies	Bibhash Sen, Indrajit Dutta, Anupam Basu, D R Kisku	TCS Mumbai	2992000.0	2021
STEM accessibility (from web) for the visually impaired	Dr. Abhijit Sharma (PI) Dr. Suvrojit Das (Co-PI)	TCS, Mumbai	2786300.0	2021
Assistive Technology on multimodal disabilities	Nilanajan Chattaraj, Sujoy Saha, Mousumi Saha	TCS	2986500.0	2021
Performance evaluation of open source LID, speaker diarization and speech enhancement algorithms	Nilanjan Chatarj, Sujoy Saha, Suman Samui	DRDO	2998380.0	2023
i-PolluSense: Intelligent Air & Noise Pollution Sensing and Alert Companion	Subrata Nandi, Sanghita Bhattacharjee, Sujoy Saha	IIT Kharagpur AI4ICPS IHub Foundation	4566400.0	2024
i-PolluSense: Intelligent Personalized Air & Noise Pollution Sensing and Alert Companion	Subrata Nandi, Sanghita Bhattacharjee, Sujoy Saha	IIT Kharagpur AI4ICPS IHub Foundation	45.66	2024

4.4.25 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
QOE Optimized Multimedia Content Delivery through caching in D2D underlay Networks	Suvadip Batabyal	ANRF (Core Research Grant)	2025
Cognitive Load Assessment of Visually Impaired Person during Adaptation of New IT Product as well as Assistive Technology	Bibhas Sen, Dakshina Ranjan Kisku, Tushar Kanti Bera	Tata Consultancy Services	2025
AI based Education	Parag Kumar Guha Thakurta (Co-PI)	Meity	2023
Neuro Computing and Computational Intelligence: Developing a model for analyzing the reading disability of the Dyslexic child	B Sen, S Bhattacharjee, P Guhathakurta, Anupam Basu, Tandra pal	Meity	2023
Remote Health: A Framework for Healthcare Services using Mobile and Sensor-Cloud Technologies	Anirban Sarkar	Information Technology Research Academy (ITRA), MCIT, GOI	2018
Connected Smart Health Services for Rural India	Anirban Sarkar	Interdisciplinary Cyber Physical Systems (ICPS), Department of Science & Technology (DST), GOI	2023



4.4.26 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Suchismita Roy	Microelectronics Journal	Elsevier	2024-12-24
Sajal Mukhopadhyay	Internet of Things	Elsevier	2024-09-22
Dakshina Ranjan Kisku	IEEE Signal Processing Letters	IEEE	2024-08-21
Dakshina Ranjan Kisku	Scientific Reports	Nature	2025-02-08
Parag Kumar Guha Thakurta	EAAI	Elsevier	2025-01-24

4.4.27 Participation in National Committees/Visits

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Bibhash Sen	Online Expert Visiting Committee (EVC)	AICTE	2025-03-26	2025-03-26
Dakshina Ranjan Kisku	Visiting Committee Meeting of AICTE	Online	2025-03-27	2025-03-29
Dakshina Ranjan Kisku	LITD Biometrics Sectional Committee of BIS	Online	2025-01-06	2025-01-06
Dakshina Ranjan Kisku	LITD 32 Biometrics Sectional Committee of BIS	Online	2024-11-21	2024-11-21
Parag Kumar Guha Thakurta	NA	NA	2025-09-25	2025-09-25
Prasenjit Choudhury	NA	NA	2025-09-25	2025-09-25

4.4.28 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Saravanan Chandran	Moderator	Tripura public service commission	2025-02-10	2025-02-10
Baisakhi Chakraborty	PhD coursework CSP21	NITTTR Kolkata	2024-12-10	2024-12-16
Sujan Kumar Saha	PhD Thesis Evaluation	KIIT Bhubaneswar	2024-05-02	2024-07-02
Mamata Dalui	Member of Board of Studies, Dept. of AI ML, CSE	Haldia Institute of Technology	2021-08-16	2025-09-10
Dakshina Ranjan Kisku	Paper Setter for ODD Semester Examinations, 2024-25	Asansol Engineering College, WB	2024-12-08	2024-12-08
Dakshina Ranjan Kisku	BoS for BTech CSE (AIML)	Asansol Engineering College, WB	2024-05-22	2029-05-21
Dakshina Ranjan Kisku	BoS for BTech CSE	Asansol Engineering College, WB	2024-05-22	2026-05-21
Parag Kumar Guha Thakurta	B.Tech in Cyber Security	Asansol Engg. College	2024-09-25	2024-09-25
Prasenjit Choudhury	NA	NA	2025-09-25	2025-09-25
Mousumi Saha	MCA 6th SEM Project Evaluation	NIT, Jamshedpur	2024-05-17	2024-05-17
Suvamoy Changder	Board of Studies for Curriculum Design and Syllabus Formation	Dr. BC Roy Engineering College Durgapur	2024-11-19	2024-11-19

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Suvamoy Changder	Board of Governors	Dr. B. C. Roy Academy of Professional Courses	2025-08-18	2025-10-04

4.4.29 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Saravanan Chandran	Data Science and Business Systems	SRM Institute of Science & Technology Kattankulathur	2024-06-11	2024-06-11
Saravanan Chandran	Computing	SRM Institute of Science & Technology Kattankulathur	2024-10-23	2024-06-24
Dakshina Ranjan Kisku	Computer Science and Engineering	Dr. B. C. Roy Engineering College, Durgapur	2024-12-09	2024-12-09
Dakshina Ranjan Kisku	Computer Science and Engineering	Asansol Engineering College, WB	2024-12-12	2024-12-12
Dakshina Ranjan Kisku	Computer Science and Engineering	Bankura Unnayani Institute of Engineering, WB	2024-05-29	2024-05-29
Dakshina Ranjan Kisku	Masters of Computer Application	Asansol Engineering College, WB	2024-09-04	2024-09-04
Parag Kumar Guha Thakurta	NA	NA	2025-09-25	2025-09-25
Prasenjit Choudhury	NA	NA	2025-09-26	2025-09-25
Suvamoy Changder	Panel of Experts	Dr. B. C. Roy Academy of Professional Courses	2025-02-17	2025-02-17

4.4.30 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Saravanan Chandran	Keynote Speech	4th International Conference on Expert Clouds and Applications	Bengaluru	2024-04-18	2024-04-19
Suvdip Batabyal	Edge Intelligence for Video Streaming Services	National Conference on Computing and Communication Innovations (NCCCI 2025)	Asansol Engineering College	2025-02-28	2025-02-28
Suvdip Batabyal	Opportunistic Communication: Augmenting 5G Networks and Beyond	One-day seminar on "IoT and Cloud Computing"	Sanaka Educational Trust's Group of Institutions	2025-03-11	2025-03-11
Mamata Dalui	The Future of Healthcare: Ambient Assistive Technology for Anaemia Screening	5-Day Faculty Development Program on Future Trends in Machine Learning and DataScience-Driven IoT Applications (FTMLDSA IoT-2025)	HALdia Institute of Technology	2025-03-10	2025-03-13



National Institute of Technology Durgapur

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Bibhash Sen	Embedded Security for Ensuring Trust in Digital System Using Physical Unclonable Functions (PUF)	Faculty Development Program on Hardware Security (HaSEC24)	NIT Rourkela	2024-12-07	2025-09-11
Bibhash Sen	Cognitive Load Theory and its application for Visually impaired Person	Advancing Medical Applications with Generative AI: Challenges and Prospects	NIT Rourkela	2025-02-24	2025-09-28
Dakshina Ranjan Kisku	Revolutionizing Visual Tasks with Vision Transformer	2nd International Conference on Big Data Computing and Modeling (ICBDCM2025)	Online Conference	2025-03-27	2025-03-27
Dakshina Ranjan Kisku	Vision Transformer: Key Basics and Case Studies	ATAL FDP on AI Beyond the Basics: Exploring Advanced Concepts and Real World Applications	Asansol Engineering College, WB	2025-02-10	2025-02-15
Dakshina Ranjan Kisku	Artificial Intelligence & Machine Learning, and Its Practical Usage	Training Programme for DVC Employees	DVC, DSTPS Andar, WB	2024-10-25	2024-10-25
Dakshina Ranjan Kisku	The Future of Image Captioning: An Aid to Visually Impaired People	Webinar	University of Engineering & Management, Kolkata	2024-08-02	2024-08-02
Dakshina Ranjan Kisku	Image Captioning: From Theory to Applications	International Conference on Emerging Technologies (ICEMTEC'24)	Pune, India	2024-07-11	2024-07-12
Dakshina Ranjan Kisku	Faster and Precise Image Captioning	16th International Conference on Digital Image Processing (ICDIP'24)	Haikou, China	2024-05-24	2024-05-26
Parag Kumar Guha Thakurta	AI in Sustainable Agriculture	Workshop	Durgapur	2024-09-17	2024-09-17
Suvamoy Changder	Education beyond crisis: Tech, skills and industries ties for stronger future	National Seminar	Balai Charan Secondary Teacher's Training Institute	2025-06-18	2025-06-18
Suvamoy Changder	Quantum Edge Intelligence	ATAL FDP	MCKV Institute of Engineering, Liluah	2025-09-13	2025-06-13
Suvamoy Changder	Education in the Age of Automation: Reskilling India's Youth for Jobs of the Future	National Seminar	Purnadisha Joychandi Teacher Training College	2025-07-11	2025-07-11

4.4.31 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date

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Mamata Dalui	All India Seminar on Machine Learning and Soft Computing Applications in Engineering and Science (MLSC-ES'24)	IEI Durgapur Local Centre	ORAL SESSION 4	2024-04-06	2024-04-06
Dakshina Ranjan Kisku	One Day Seminar on "IoT and Cloud Computing"	Sanaka Educational Trust, Durgapur	Full Session	2025-03-11	2025-03-11
Dakshina Ranjan Kisku	One Day Seminar on "Ambient and Assistive Technology"	DIATM Durgapur	Full Session	2024-07-24	2024-07-24
Dakshina Ranjan Kisku	Online Session on "Object Detection and Algorithms" at the 16th International Conference on Digital Image Processing (ICDIP'24)	Haikou, China	2	2024-05-24	2024-05-26
Dakshina Ranjan Kisku	All India Seminar on Machine Learning and Soft Computing Applications in Engineering and Science (MLSC-ES)	IEI Durgapur Local Centre	Full Session	2024-04-06	2024-04-07
Suvamoy Changder	IEEE International Conference on Computing, Intelligence, and Applications (CIACON 2025)	Dr. B. C. Roy Engineering College, Durgapur	July 19, 2025, Time: 12:00 PM -02:00 PM IST	2025-07-19	2025-07-19

4.5 Department of Chemical Engineering

4.5.1 Department at a Glance:

In the academic year 2024-25, Department of Chemical Engineering at NIT Durgapur excelled in research and teaching, emphasizing innovation, and nurturing skilled chemical engineers. Offering a comprehensive range of programs, including B.Tech, one M.Tech, and Dual Degree options, a total of 254 students benefitted from our cutting-edge curriculum and the expertise of our sixteen dedicated faculty members. These accomplished faculty members, recognized for two awards or recognitions, have significantly elevated the department's education quality. Supported by a diligent team of five staff members, the smooth functioning of departmental activities facilitated seamless academic and research operations. Research remained at the forefront of our endeavors, with twenty-five significant projects addressing critical challenges in chemical engineering. The impact of our research was amplified by securing substantial research grants and forging collaborations with prestigious institutions and industries. This dedication resulted in 96 publications, and our contributions were presented at twenty-nine various national and international conferences, garnering recognition for the department's achievements. In addition to academic pursuits, we actively fostered ties with the industry, establishing eight meaningful partnerships with prominent companies. These collaborations provided our students valuable opportunities for joint projects, internships, and industrial training, enriching their learning experiences with practical exposure. Our students' outstanding performance in academics and extracurricular activities further showcased the department's excellence. Acknowledged through ten awards and accolades, they demonstrated an unwavering dedication to chemical engineering. Moreover, participation in national and international competitions displayed their passion and talent, enhancing the department's reputation. In pursuing academic excellence, we invested in modernizing our infrastructure by introducing state-of-the-art laboratories and advanced equipment. These enhancements significantly bolstered our research capabilities and enriched the



practical education we provide to our students. Furthermore, our alumni continued to be invaluable assets, and we organized one alumni engagement events during the year, featuring lectures and mentorship programs to inspire and guide current students on their academic and professional paths. Beyond our institute's boundaries, we actively engaged in seven community outreach programs and social initiatives, promoting awareness of chemical engineering's societal applications, and positively impacting the broader community. We extend heartfelt gratitude to our faculty, staff, students, Alumni, and industry partners for their unwavering support, solidifying our position as a leading institution in chemical engineering. As we look to the future, we eagerly anticipate building upon this success and continuing to excel in our pursuit of excellence.

4.5.2 Mission & Vision

Mission:

- 1) To produce highly qualified, well- rounded and motivated graduates possessing fundamental understanding and knowledge in Chemical Engineering who can provide service and leadership to the nation and the world.
- 2) To pursue creative research and new technologies in Chemical Engineering in order to serve the needs of industry, government & society.
- 3) To achieve visibility by active participation in conferences and technical activities.

Vision:

- 1) To impart quality technical education in Chemical Engineering and focus on research and innovation in thrust areas of Chemical and related areas of engineering.

4.5.3 Faculty

Name	Designation	Email-id
Parimal Pal	HAG Professor&HOD	ppal.che@nitdgp.ac.in
Kartik Chandra Ghanta	Professor	kcghanta.che@nitdgp.ac.in
Tamal Mandal	Professor	tmandal.che@nitdgp.ac.in
Anup kumar Sadhukhan	Professor	aksadhukhan.che@nitdgp.ac.in
Gopinath Halder	Professor	ghalder.che@nitdgp.ac.in
Susmita Dutta	Professor	sdutta.che@nitdgp.ac.in
Jaya Sikder	Associate Professor	jsikder.che@nitdgp.ac.in
Sandip Kumar Lahiri	Associate Professor	sklahiri.che@nitdgp.ac.in
Mrinal Kanti Mandal	Associate Professor	mkmandal.che@nitdgp.ac.in
Swapan Paruya	Associate Professor	sparuya.che@nitdgp.ac.in
Bimal Das	Assistant Professor	bdas.che@nitdgp.ac.in
Abhiram Hens	Assistant Professor	ahens.che@nitdgp.ac.in
Rajib Ghosh Chaudhuri	Assistant Professor	rgchaudhuri.che@nitdgp.ac.in
Bikash Kumar Mondal	Assistant Professor	bkmondal.che@nitdgp.ac.in
Debayan Das	Assistant Professor	ddas.che@nitdgp.ac.in
Manisha Bal	Assistant Professor	mbal.che@nitdgp.ac.in

4.5.4 Equipment (Newly added)

Sl. No.	Name of the equipment	Date of Purchase	Amount (Rs)
1.	Multiparameter system for pH TDS Conductivity Ion	07.02.2025	614654
2.	Thermostatic water circulating bath	24.12.2024	57,230.00
3.	Pyrolyzer Setup	18.02.2025	4,96,780.00
4.	Cloud and pour point test apparatus	23.01.2025	4,60,000.00
5.	Probe Sonicator	03.12.2024	1,65,700.00
6.	Liquid fuel analyzer, Make: CEM, Model: DISCOVER	21.01.2025	19,99,989.00
7.	Ion Exchange	15.01.2025	93,555.00
8.	Packed Bed Absorption	15.01.2025	1,23,555.00
9.	SOILD IN AIR DIFFUSION	15.01.2025	42,555.00
10.	Forced Draft Tray Dryer	02.12.2024	70,000.00
11.	Packed Bed Distillation Column	15.01.2025	1,23,555.00

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12.	Shell and Tube Heat Exchanger	15.01.2025	1,23,555.00
13.	Emissivity of Test Body	15.01.2025	42,555.00
14.	Plate Type Heat Exchanger	15.01.2025	1,23,555.00
15.	Thermal Conductivity of Liquid	15.01.2025	93,555.00
16.	Oil Bath	15.01.2025	15,390.00
17.	Silicone Oil	03.12.2024	21,660.00
18.	Optical Microscope	21.02.2025	10,00,000.00
19.	Tube Furnace with Inert Gas Connection	15.01.2025	2,49,000.00
20.	BOD incubator with shaker and voltage stabilizer	24.12.2024	96,760.00
21.	Refrigerated circulating bath	15.01.2025	90,990.00
22.	BOD INCUBATOR SHAKER	02.12.2024	1,59,300.00
23.	Recycled Bed Reactor (Peristaltic Pumps feed system)	27.01.2025	1,95,880.00
24.	Adiabatic Batch Reactor	15.01.2025	63,555.00
25.	Isothermal Reactor	15.01.2025	63,555.00
26.	A Trinocular Microscope With Camera and Desktop	31.01.2025	2,69,500.00
27.	Autoclave	24.12.2024	93,220.00
28.	BOD Incubator Shaker	02.12.2024	1,62,840.00
29.	FERMENTER with Accessories	14.02.2025	8,72,610.00
30.	MAGNETIC STIRER WITH HOT PLATE	27.12.2024	45,312.00
31.	Multiparameter System with Analyser along with two Probes of Cyanide and Ammonia	12.03.2025	6,50,475.00
32.	Ultrapure Water Systems	27.11.2024	3,80,000.00
33.	Jaw Crusher	24.12.2024	88,500.00
34.	Rotap Sieve Shaker	15.01.2025	72,555.00
35.	Biological Autoclave with a voltage stabilizer	23.12.2024	82,010.00
36.	Hot Water Bath with voltage Stabilizer	15.01.2025	18,990.00
37.	Khjeldal Nitrogen Distillation Setup with Fumehood	23.12.2024	1,36,290.00
38.	BOD Incubator with Shaker and Voltage Stabilizer	04.04.2025	1,73,000.00
39.	High-Precision Electronic Balance, Internal Calibration	13.02.2025	1,77,000.00
40.	Vi Microsystems Bus Topology For Networking Trainer kit Networking Trainer Educational kit	06.03.2025	2,45,000.00
41.	Vi Microsystems Bus Topology For Networking Trainer kit Networking Trainer Educational kit	06.03.2025	1,32,000.00
42.	Vi Microsystems Bus Topology For Networking Trainer kit Networking Trainer Educational kit	06.03.2025	2,53,700.00
43.	ORIGIN LAB Professional V2024	23.12.2024	11,89,440.00
44.	i7 Desktop Computer (07 Nos)	04.03.2025	8,91,954.00
45.	i9 Desktop Computer (16 Nos)	04.03.2025	27,76,592.00
46.	MFP Laserjet Printer (Mono) (4 Nos)	04.03.2025	3,17,512.00

4.5.5 Labs

Sl. No	Name of Laboratory	Major Equipment



Sl. No	Name of Laboratory	Major Equipment
1.	Heat Transfer Laboratory	1.Double Pipe Heat Exchanger 2.Forced convection apparatus 3.Drop wise and Film Wise Condensation 4.Emissivity Measurement Apparatus 5.Thermal Conductivity of Metal Rod 6.Shell and Tube Heat Exchanger 7.Natural Convection Apparatus 8.Composite Wall Apparatus 9.Unsteady State Heat Transfer Unit 10.Double Effect Evaporator. 11. Plate type heat exchanger 12. Thermal conductivity of liquid
2.	Mass Transfer Laboratory	1.Forced draft Tray Dryer 2.Open Pan Evaporator 3.Distillation Column 4.Rotary Dryer 5.Diffusion Experiment 6.Cooling Tower Experiment 7.Concentric Pipe Heat Exchanger 8.Bubble cap Distillation column 9.Simple batch distillation column 10.Crystallizer 11.Vacuum Dryer 12.Vacuum Drum Dryer 13.Solid Liquid Extraction Column 14.Liquid –Liquid Extraction in Packed column 15.Vacuum Crystallizer unit 16. Packed bed absorption 17. Packed bed distillation column 18. Ion Exchange
3.	Fluid Flow Laboratory	1.Packed Bed 2.Hydraulic Bench Apparatus 3.Reynolds Experiment 4.Helical Coil Apparatus 5.Bernoulli Apparatus 6.Pipe Friction Apparatus 7.Pitot Tube Apparatus 8.Parallel Friction Pipe Experiment 9.Pipe Fittings Apparatus 10.Pipes in Parallel 11.Reciprocating Pump 12.Pipe Friction apparatus
4.	Mechanical Operation Laboratory	1. Elutriator Experiment 2.Cyclone Separator Experiment 3.Vibrating Screening Experiment 4.Ball Mill Apparatus 5.Jaw Crusher Apparatus 6.Agitated Vessel Experiment 7.Kneader Mixer 8.Plate & Frame filter Press 9.Roll Crusher 10.Cone Classifier 11.Screening 12.Thickener 13. Rotap Sieve Shaker

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Sl. No	Name of Laboratory	Major Equipment
5.	Environmental and Membrane Technology Laboratory	1.Clean Air Station (Biosafety) 2.Electronic balance 3.Autoclave 4.Air compressor 5.Vacuum Pump 6.Solar Heater 7.Rotameters-3Nos 8.Streaming Pot.Device 9.Memb-integrated Hybrid Bioreactor 10. Thermostatic bath with circulator 2 Nos. 11.High Press SS pump 12.Commercial Membranes 13.Electrodes with stds (Na, Cl) 14. Multiparameter system for pH TDS Conductivity Ion
6.	Fuel Laboratory	1.ASTM Distillation 2.Pensky mortens apparatus 3.Aniline point apparatus 4. Reid vapour pressure app. 5. Able App. 6.Solar collector 7.Redwood viscometer 8.Bomb calorimeter 9.Conradson carbon residue 10. Shattering index app. 11.Dean Stark Apparatus 12.Furnace 13.Air-oven 14.Desicator 15.O ₂ cylinder 16.Weight Balance 17.Muffle Furnace 18.Gas cylinder for Oxygen 19.Gas cylinder for Nitrogen 20.Autoclave 21. Cloud and pour point test apparatus
7.	Chemical Reaction and Bio-Chemical Engineering Laboratory	1.Isothermal Batch Reactor 2.Plug-Flow Reactor 3.Continuous Stirrer Tank Reactor 4.RTD Studies CSTR 5.Removal of Methylene Blue Die Using 6.Fenton's Reagent 7.Adiabatic reactor 8.Rtd study with packed bed reactor(old) 9.Rtd study with packed bed reactor(New) 10.Cascade reactor 11.Autoclave 12.Shaker 13.D O meter 14.PH meter 15.Deep Freeze 16.Double distillation Column 17.Bio safety cabinet 18.Air compressor 19.BOD Incubator Shaker 20. FERMENTER with Accessories 21. Ultrapure Water Systems 22. Recycled Bed Reactor (Peristaltic Pumps feed system)



Sl. No	Name of Laboratory	Major Equipment
8.	Process Control & Instrumentation Laboratory	1.Control valve characteristic 2.Intertacting non-interacting System 3.Level control trainer 4.Temp.Control Trainer 5.Damping coefficient of manometer 6.Calibration of thermocouple 7.Pressure control trainer 8. Autoclave
9.	Central Research Laboratory -I	1.Performance Liquid Chromatography System with computer Accessories (HPLC) Model: Agilent 1200 series , Make: Agilent Technologies 2.Gas Chromatograph (GC) Model: GC7700, Make: Techcomp 3.Thermo Gravimetric Analyzer Model: DTG-60, Make: Shimazu, 4.High speed Refrigerated Ultra Centrifuge with accessories 5. Rheometer with Pentium IV computer, colour inkjet printer, oil free compressor (0.5 hp) and driver software. 6.Variable band with double beam UV-VIS, Spectrophotometer 7.TOC Analyzer Make: O.I. Analytical (USA), Model: TOC 1030W 8.HPLC grade de-ionized water purifier Make: Millipore, Model: Direct-Q® 3 9.Laboratory Freezer with wheel Brand: Elanpro, Model: ECG 374
10.	Central Research Laboratory -II	1.Atomic Absorption Spectroscopy with Graphite furnace Model: iCE 3500 AA Spectrometer (Wide PMT), True dual Atomizer for Flame and Furnace System, (True Double Beam Optics) 2.Fluorescence Spectrophotometer Model: Agilent model Cary Eclipse Fluorescence Spectrophotometer with Polarizer and Accessories Make: Agilent Technologies 3.Gas Chromatography Mass Spectrophotometer (GC-MS) with S/SI Injector Model: Agilent model GC+5977B – High Performance Turbo QUADRUPOLE GC-MS Spectrometer, Make: Agilent Technologies 4. Surface area Analyzer
11.	Dry Laboratory	1.TGA with interconnected with FTIR Model: STA6000 Simultaneous Thermal Analyser (TGA-DTA-DSC) System, Make: PerkinElmer
12.	Environmental Laboratory	Clean Air Station (Biosafety) Electronic balance Autoclave Air compressor Vacuum Pump Solar Heater Rotameters-3 Nos Streaming Pot. Device Memb-integrated Hybrid Bioreactor

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Sl. No	Name of Laboratory	Major Equipment
		Thermostatic bath with circulator 2 Nos. High Press SS pump Commercial Membranes Electrodes with std.s (Na, Cl)
13.	Combustion Engineering Laboratory	1.Drop Tube Furnace with Thermocouple (1400°C) and all other accessories. 2.Cylindrical mass loss furnace with micro balance and all other accessories.
14.	Multi-phase Flow Modelling Laboratory	Horizontal and vertical recirculating pipeline for flow study of solid-liquid mixture Horizontal and vertical recirculating pipeline for flow study of gas-liquid/liquid-liquid mixture Rheometer with Pentium IV computer, colour inkjet printer, oil free compressor (0.5 hp) and driver software. Data acquisition system including computer, printer and driver software Pressure Transducer Magnetic flowmeter
15.	UG Computing Laboratory	Hardware: 30 number of Desktop Computers with windows OS Software: Matlab, Origin, Aspen Plus, Ansys, COMSOL Multiphysics etc.
16.	PG Computing Laboratory	Hardware: 15 No. of Desktop Computers and 04 number of Computing Workstations Software: Matlab, Aspen Plus, Origin, Ansys, COMSOL Multiphysics LAMMPS etc. OS: Windows and Linux

4.5.6 PhD degree awarded till 2024-25

Ninety (90)

4.5.7 Any other relevant information

Prof. (HAG) Parimal Pal of the Department has been recognized as one of the **top 0.5% of the World Scientists** (considering all branches) by Stanford University Report since 2020. International rank in the Chemical Engineering is 181 as per Elsevier Science Research Citation Report 2024. Department has fetched prestigious awards under the leadership of Prof. Parimal Pal such as HIYOSHI Environment award 2018 from Hiyoshi Corporation Japan, Best research award on Clean Technology and Environmental Policy by Springer Verlag, Germany, IChE best research award in the millennium Chemical Engineering Congress etc. Prof. Pal also earned 9 copy and patent rights on several green technologies for application in process industries. Three books authored by Prof. Parimal Pal have been published by the world's largest and most reputed publisher, the Elsevier Science. Prof. Parimal Pal has been selected Fellow of the Royal Society Chemistry, London. He is as one of the Top 200 Chemical Engineering Researchers of the world as per Research impact Report 2024. He was invited by Royal Society of Chemistry, London in panel discussion for new direction to Education and research. He was appointed as Expert by NBA and UPSC. **Prof. Gopinath Halder** from the Department of Chemical Engineering, NIT Durgapur has been recognized as one of the **top 1% of the World Scientists** reported by Elsevier and Stanford University, California, USA, 2023. **Prof. Sumita**



Dutta has been selected as **Associate Editor** of Applied Water Science. **Dr. Bimal Das** from the Department of Chemical Engineering, NIT Durgapur has been elected as “**Chairman**” of “**The Institution of Engineers (India)**”, Durgapur Local Centre for the session of 2025-27.

The Department is **DST-FIST sponsored**. Successfully implemented the 1st DST-FIST project in the Institute. 2nd Phase is almost completed.

4.5.8 Specialization

- Chemical Engineering
- Colloids and Interfacial science
- Nanotechnology
- Process modeling and Simulation Pyrolysis, Gasification and Combustion
- Multiphase flow
- Mass Transfer, Membrane Technology, Sustainable Green Technology, Petroleum Technology, Water Treatment Technology, Process Intensification
- Thermodynamic and Kinetic Modeling of Chemical Absorption process
- Process Development for CO₂ capture and conversion
- Pinch Technology based process integration
- Chemical Engineering
- Paper Microfluidics
- Modeling and Simulation
- AI application in chemical industry
- Environmental engg, Air pollution control, Separation Process, CFD
- Bubble dynamics, Two-phase flow, Multiphase flow
- Chemical Engg
- Clean water and sanitation, Affordable and clean energy
- CFD and Heat Transfer, Molecular Dynamics Simulation, Process modelling and Simulation, Microfluidics and Nanotechnology
- Bioprocess Engineering, Waste Management, Transport phenomena. Biochemical Engineering
- Chemical Engineering

4.5.9 Proposed Plan for Research

- 1. Exploring Synthesis and Characterization with Emerging Applications of Novel Conducting Polymers 2. Development and Performance Evaluation of Rechargeable Aluminium-Ion Batteries: A Study on Design, Fabrication, and Testing 3. Analytical Modelling and performance analysis of Ultra-Wide Bandgap (UWB) Semiconductor Heterostructure for its application in gas sensing 4. Eco-friendly Nano silica derived from Rice Straw: Transforming Arsenic Detection with Electrochemical Sensors
- Production of liquid and gaseous fuels from plastic and biomass wastes, Process modeling and scale up of batch pyrolyzer and economic analysis
- Two phase flow
- Slurry flow modeling
- Developing Sustainable Process Technology
- Developing low cost adsorbent for liquid phase application
- Process modeling and scale up of adsorption process
- Biochemical process development for CO₂ sequestration
- Biodiesel and bioethanol synthesis; and their upscaling
- Our international collaborations this year focus on advancing paper-based diagnostics through two major initiatives: the India–Japan project aims to integrate flow modeling, sugar-treated and hydrogel-modified membranes, and LAMP assay development with precise heater design for thermal control, while the India–Tunisia project targets the development of a real-time paper-based LAMP diagnostic platform with embedded sensors, mobile interfacing, and AI-driven analytics for tuberculosis detection. Complementing these efforts, Chandra Bhushan’s doctoral research on dispersion and viscous fingering in paper assays provides critical insights into minimizing instability and enhancing assay sensitivity, directly strengthening both collaborative programs. Together, these projects establish a strong framework for innovation in low-cost, reliable, and globally deployable point-of-care testing technologies.
- 1. Development of digital twin for industrial process equipment. 2. development of real time fault diagnosis applications for process equipments

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- The research will focus on development of sustainable technology for microplastic remediation in aquatic system and design and development of a nanofluid based scrubbing system with magnetic fields for flue gas treatment, addressing both water and air pollution control.
- Thin Film, Energy Material, Nanocomposite
- Industry, innovation and infrastructure, Responsible consumption and production
- Boiling heat transfer, Droplet and Bubble Dynamics, Industrial reactor modelling
- Phycoremediation of pollutant from different wastewater

4.5.10 Area of Research Interest

- Multiphase Flow, Adsorption, Environment Engineering, Biopolymer, Electrochemical Sensor, Nano particle
- Desalination
- Biodegradable SMART packaging materials
- Gas Sensor
- Wettability of solid surfaces
- Reaction kinetics, yield and composition analysis for thermal and catalytic pyrolysis of plastic and biomass wastes
- Two phase flow
- Sustainable Process Technology Development
- CO2 capture and utilization
- Wastewater treatment
- Bioenergy generation, Wastewater treatment of pharmaceutical industries
- Paper-based microfluidics and porous media transport phenomena Modeling of dispersion, viscous fingering, and flow instabilities in porous membranes Sugar-treated and hydrogel-modified paper assays for flow control Point-of-care diagnostics (with emphasis on LAMP-based nucleic acid testing) Process modeling, transport phenomena, and advanced simulation methods in chemical engineering
- Optimization of industrial chemical processes to boost profit
- Water treatment, Microplastic Degradation, Air pollution control, Energy & Environment, CFD
- Bubble dynamics, Two-phase flow, Multiphase flow
- Membrane Separation Processes
- Industrial membrane solutions for effluent and ethanol purification, Eco - friendly high - efficiency membranes for ETP, Membrane technology for ZLD
- CFD and Heat Transfer, Molecular Dynamics Simulation, Reactor modelling
- Waste management, treatment and valorization
- Phycoremediation

4.5.11 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
Scientific Design Company Ltd, US	joint research to develop digital application of ethylene glycol plant	Joint development of digital twin
ONGC, MCPI Private Limited, NIT Durgapur, IITBHU, JU, IITKGP, NIT JAIPUR, CALCUTTA UNIVERSITY	5 days STC Programme on Sustainable Technologies for Water Treatment	STC Programme
Birla Jute corporation Ltd	Nanocomposite Jute geo textile	Research work
Essar Oil & Gas Exploration & Production Limited (EOGEL)	Coal Bed Methane (CBM) produce water treatment	Ongoing DST - WTI project supported by Govt. of India
Scientific Design Company Ltd. (USA)	Industrial Reactor Analysis	Consultancy Project



4.5.12 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Brainware University	Research	Prof. Deepshikha Datta	Research
Central Mechanical Research Institute Durgapur	Environmental Engineering	Dr. Biswajit Ruj/Amit Ganguli	Paper publication, Joint supervision of students
Lappeenranta University of Technology, Finland	Sustainable development	Prof.L.Linnanrn	Joint Research Publication
KIIT, Bhubaneswar, Odisha	Water Treatment	Dr.Sankha Chakraborty	Research publication
Université de Carthage, Tunisia	Paper Microfluidics and AI/ML	Prof. Hassen Zairi	Submitted a project
Waseda University	Paper Microfluidics and Heat Transfer	Dr. Faisal Sarbaland and Prof. Masahiro Furuya	Submitted a Project
University of Cincinnati, Ohio	Paper Microfluidics	Dr. Aashish Priye	Writing a review paper and working on multiple publications
National Institute of Technology Silchar	Biofuel generation and heterogeneous nanocatalyst	Dr. Samuel Lathazuala Rokhum	Research paper publications and sponsored project proposal submission
Indian Institute of Technology Jodhpur	Energy and Environmental research	Dr. Angan Sengupta	Paper publications and sponsored project proposal submission
Indian Institute of Technology Delhi	Solar energy, flat plate collector design	Prof. K. Ravi Kumar	Sponsored project proposal submission
Thapar Institute of Engineering and Technology	Biofuel and carbon pellet synthesis	Prof. Sanghamitra Barman	Research paper publications and sponsored project proposal submission
Manipal Academy of Higher Education, Karnataka	Microplastics remediation	Dr. Dibyajyoti Halder	Research paper publications and sponsored project proposal submission
Kyushu University, Japan	Non-CFC refrigeration and adsorbent	Prof. B. B. Saha	Collaborative research and paper publications
Department of Biotechnology, Brainware University, Barasat, Kolkata, 700125, West Bengal, India d School of Technology, Woxsen University, Hyderabad, 502345, Telangana, India	Research Work	Manisha Bal, Debajyoti Bose, Shouvik Saha, Gopinath Halder	Article on Efficacy of exopolysaccharide in dye-laden wastewater treatment: A comprehensive review published in Chemosphere, 355, May 2024,141753
IIT Kharagpur, IIT ISM Dhanbad, NIT Hamirpur, King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia	A Five Days Short Term Course (STC) on Sustainable Power Generation and Advanced Energy Storage System	Dr Manisha Bal, Dr Bimal Das	STC Programme
IIT-ISM Dhanbad	H2 production	Prof Aditya Kumar	Research work
Department of Chemical Engineering, Indian Institute of Petroleum and Energy,	Environmental sustainability	Dipankar Pal	Chemical Engineering and Processing - Process Intensification

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Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Visakhapatnam, India			
IIT Kanpur	Joint Research	Prof Gautam Biswas	Joint Publications
CSIR- CMERI Durgapur	Joint Research guidance	Dr. Priyabrata Banerjee	Joint Research guidance
Vilnius Gediminas Technical University, Lithuania	Environmental Engineering	Prof. Edita BALTRĖNAITĖGEDIENĖ	Joint Publication

4.5.13 Innovations and Technology Transfer (Patents filed during)

Title	Inventors	Application Nos	Date of Filing
Membrane-based Method/Process for removal of Antibiotics from water	S.Pal, Z.Ahamed, P.Pal	2024310315 63A	2024-04-20

4.5.14 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
1. Prof. B. C. Meikap, 2. Prof. P Bhattacharyya, 3. Prof. R. Chowdhury, Professor 4. Prof. K. Adhikari 5. Prof. T.Mandal 6. Prof. S. Chaudhuri 7. Dr. A. Mandal 8. Prof. S.Dutta 9. Dr. D. Bhandary 10. Dr. S. Karmakar 11. Mr. S. Das 12. Dr. O. Midda 13. Dr. S. Roy	A Five-Days Short Term Course (STC) on Sustainable Technologies for Water Treatment	2025-01-13
1. Dr. B C Meikap 2. Dr. Ananta Sarkar 3. Dr. SuvernaTrivedi 4. Dr. Tarun Kumar Naiya 5. Dr. Suman Dutta 6.Dr. Hammad Siddiqui 7. Dr. Mohammad Furquan 8. Dr.Gopinath Halder 9.Dr. Susmita Dutta 10. Dr. Sandip KumarLahiri	A Five Days Short Term Course (STC) on Sustainable Power Generation and Advanced Energy Storage System	2024-07-01
Prof. P. Bhattacharya, Ex-Professor (JU), Heritage Institute of Technology Prof. S. Datta, Ex Professor (JU) Prof. B.Majumdar, NIT Raipur Prof. S. De, IIT Kharagpur Prof. R. Sen, IIT Kharagpur Prof. L. Upadhyay, NIT Raipur Prof. R.C. Vaishya, MNIT Allahabad Prof. D. Das, Ex Professor,IIT Kharagpur Prof. N. K. Mondal, Burdwan UniversityProf. P. Das, Jadavpur University Prof. A. Bhowal, Jadavpur University Dr. B. Bhunia, NIT Agartala Prof. T. Kumar, ISM Dhanbad	Waste management, treatment - 2 (STP -2)and valorization	2024-09-18

4.5.15 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Pronoy Kumar Sinha,Gokulan Ravindiran, Deepshikha Datta,Bimal Das	Bioremediation of phenolic compounds in coal-contaminated environments:	Environmental Quality Management	Volume:34 Issue No:1 Page No:e22237 Year:2024 Month:Sep



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	Bio-kinetic studies using a mixed bacterial culture		
E. Voisin, S. Thakur, J. Nayak, S.Chakraborty, P. Pal	. Application of neural network in prediction of acetic acid yield by Acetobacters	South African Journal of Chemical Engineering, Elsevier Scence	Volume:50 Issue No: Page No:427-436 Year:2024 Month:
Seragadam Padma, Badri Srinivas, Bikash Kumar Mondal, Kartik Chandra Ghanta, Susmita Dutta	Sustainable approach to reduce Lead (II) from wastewater using indigenous bacterial strains	Journal of the Indian Chemical Society	Volume:101 Issue No:9 Page No:101223 Year:2024 Month:Sep
Biswajit Sarkar, Susmita Dutta, Sandip Kumar Lahiri	Multigene geneticprogramming approach for modelling andoptimisation of removal of heavy metals from ash pond water using cyanobacterial-microalgal consortium	Indian Chemical Engineer	Volume:66 Issue No:5 Page No:453-471 Year:2024 Month:Sep
Prantik Mondal, Sandip Kumar Lahiri, Kartik Chandra Ghanta	Understanding two-phase flow behaviour: CFD Assessment of silicone oil–air and water–air inan intermediate vertical pipe	The Canadian Journal of Chemical Engineering	Volume:102 Issue No:12 Page No:4416-4439 Year:2024 Month:Dec
Abhay Kumar,Nandan Shashikant Prabhune, Bhaskar Bishayee,SushmitaNandi, Abhilasha Rai, Bulti Kandar, Sandip KumarLahiri, Susmita Dutta	Effect of total dissolved solids(TDS) on removal of fluoride from synthetic wastewater using alumina: Batch study, modelling,and optimization	Journal of the Indian Chemical Society	Volume:102 Issue No:1 Page No:101552 Year:2025 Month:Jan
Pratyush Kumar Pal, Abhiram Hens, Narottam Behera, Sandip Kumar Lahiri	Digital twins: Transforming the chemical process industry—A review	The Canadian Journal of Chemical Engineering	Volume:103 Issue No:8 Page No:3611-3636 Year:2025 Month:Jan
Biswajit Kamila, Anup Kumar Sadhukhan, Parthapratim Gupta, Prabir Basu	2-D modeling of torrefaction of a large biomass particle: effect of L/D ratio, internal convection and shrinkage.	International Journal of Green Energy	Volume: https://doi.org/10.1080/15435075.2024.2414230 Issue No: Page No: Year:2024 Month:Nov
Biswajit Kamila, Arindam Mandal, Anup Kumar Sadhukhan,	2-D CFD modeling of gasi fication of a large biomass char particle in CO2 environment	Biofuels	Volume:370 Issue No: Page No:123025 Year:2024 Month:Dec
Sau, Arnab, Kamila, Biswajit, Baltrėnaitė-Gedienė, Edita, Dutta, Susmita and Ghanta,	Treatment of slaughterhouse wastewater using waste derived biochar: experiment and modelling	International Journal of Chemical Reactor Engineering	Volume:23 Issue No:4 Page No:471-483 Year:2025 Month:May

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Kartik C..			
Bulti Kandar, Nilanjana Ghorui, Chandreyee Datta, Kartik Chandra Ghanta, Susmita Dutta	Treatment of biologically treated synthetic refinery wastewater using Stenotrophomonas maltophilia sp. NITD 24: Experiment and analysis	Journal of Environmental Chemical Engineering	Volume:13 Issue No:3 Page No:116305 Year:2025 Month:Jun
Kandar, Bulti, Rai, Abhilasha, Dutta, Susmita and Ghanta, Kartik Chandra	Bioremediation of p- nitrophenol using an indigenous algal strain Tetrademus sp. NITD18: a sustainable approach	International Journal of Chemical Reactor Engineering	Volume:22 Issue No:8 Page No:879-891 Year:2024 Month:Aug
Seragadam Padma,Badri Srinivas, Bikash Kumar Mondal, Kartik Chandra Ghanta, Susmita Dutta	Sustainable approach to reduce Lead(II) from wastewater using indigenous bacterial strains	Journal of the Indian Chemical Society	Volume:101 Issue No:9 Page No:101223 Year:2024 Month:Sep
Prantik Mondal, Sandip Kumar Lahiri, Kartik Chandra Ghanta	Assessment of ansys- fluent Code for Computation of Two- PhaseFlow Characteristics: A Comparative Study of Water–Air and SiliconOil–Air in a VerticalPipe	Journal of Fluids Engineering	Volume:146 Issue No:12 Page No:121403 Year:2024 Month:Dec
Arnab Sau, Samaroha Ghosh, Bulti Kandar, Kartik Chandra Ghanta, Edita Baltr ėnaiteGedienė, Susmita Dutta	Enhanced slaughterhouse wastewater treatment: A comparative approach with phycoremediation and adsorption	Journal of the Indian Chemical Society	Volume:101 Issue No:12 Page No:101499 Year:2024 Month:Dec
Bose, Debanik, Ghanta, Kartik C. and Hens, Abhiram.	CFD-based investigation of NO x removal from industrial waste gas by selective catalytic reduction (SCR) and selective non- catalytic reduction (SNCR) process using NH3	International Journal of Chemical Reactor Engineering	Volume:23 Issue No:6 Page No:701-713 Year:2024 Month:Sep
Sirshendu Banerjee, Amar Nath Samanta, Bimal Das, Bikash Kumar Mondal	Thermodynamic Modeling of an Aqueous N, N- Dimethyldipropylene tri amine and Benzylamine Blend for Efficient CO2 Capture	ChemPhysChe m	Volume:26 Issue No:1 Page No:e202400624 Year:2024 Month:Oct
Sayantan Sarkar, Deepshikha Datta, Shouvik Saha, Bimal Das	Bimal Das Assessing the efficacy of three bio-based flocculants in the reclamation of spent lubricating oil	The Canadian Journal of Chemical Engineering	Volume:102 Issue No:6 Page No:2068-2082 Year:2024 Month:Jun



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Mondal, S., Chakraborty, T., Chaudhuri, R. G., Mandal, M. K., Chaudhuri, H., & Pal, S.	Nanocomposite-modified jute geotextile as a sustainable solution for subgrade strength in low-traffic roadways: a performance analysis	Journal of Materials in Civil Engineering	Volume:37 Issue No:3 Page No: Year:2025 Month:Mar
Rajneesh Anand, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Abhiram Hens	Effect of patterned condensation surface on the performance of a newly designed basin- type solar desalination unit	Applied Thermal Engineering	Volume:249 Issue No: Page No: Year:2024 Month:Jul
Geetika Jain, Sinu Sanghamitra, Monalisa Mukherjee, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Sandip Chakrabarti	De novo Cu-MOF@CNS nanocomposite coated on a cotton fibrils framework for sustainable solar- driven desalination	Nanoscale	Volume:16 Issue No: Page No:16684-16696 Year:2024 Month:Aug
Joyeeta Bose , Somnath Chowdhury , Utpal Adhikari , Jaya Sikder	Optimisation of direct contact membrane distillation to enhance brackish water desalination and study polyvinylidene fluoride (PVDF) membrane performance	Computers and Chemical Engineering	Volume:181 Issue No:108529 Page No:108529 Year:2024 Month:Feb
P. Biswas, R. M. Agarwal, B. Bhushan, A. Hens, and G. Biswas	Interfacial hydrodynamics of electrosprays using leaky dielectric fluids	Physics of Fluids	Volume:37 Issue No: Page No:22149 Year:2025 Month:Feb
I. Kumar, S. K. Lahiri, A. Hens, and G. Biswas	Influence of surface morphology and temperature on nanoscale boiling of liquid nitrogen on a platinum substrate	International Journal of Thermal Sciences	Volume:210 Issue No: Page No:109655 Year:2025 Month:Mar
D. Bose, I. Kumar, and A. Hens	Enhancing fuel-air mixing in COG-BOG non- premixed combustion: A CFD analysis with different turbulent models	Journal of the Indian Chemical Society	Volume:101 Issue No: Page No:101222 Year:2024 Month:Jun
R. Anand, M. Kanti Mandal, R. Ghosh Chaudhuri, and A. Hens	Effect of patterned condensation surface on the performance of a newly designed basin- type solar desalination unit	Applied Thermal Engineering	Volume:249 Issue No: Page No:123399 Year:2024 Month:May
D. Bose, A. Bangal, A. Hens, and S. Barma	Design and optimization of reactive distillation for enhancing supercritical transesterification process to produce biodiesel	Chemical Engineering and Processing - Process Intensification	Volume:203 Issue No: Page No:109887 Year:2024 Month:Jun

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D. Bose, K. C. Ghanta, and A. Hens	CFD-based investigation of NO _x removal from industrial waste gas by selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) process using NH ₃	International Journal of Chemical Reactor Engineering	Volume:23 Issue No:6 Page No:701 Year:2024 Month:Sep
Kumar, R., Khan, S. K., Kandar, B., & Dutta, S.	Integrated approach for removal of oil from contaminated seawater	Separation Science and Technology	Volume:1–12 Issue No:https://doi.org/10.1080/01496395.2025.2453894 Page No: Year:2025 Month:Jan
Runda, A., Ghosh, S., Kandar, B., & Dutta, S.	Phycodesalination Potential of <i>Graesiella emersonii</i> sp. NITD 23 Studied for Treating Synthetic Seawater, Industrial Wastewater, and Brackish Water	Journal of Environmental Engineering	Volume:151(4) Issue No: Page No:https://doi.org/10.1061/JOEEDU.EEENG-7897 Year:2025 Month:Jan
Kumar, A., Prabhune, N. S., Bishayee, B., Nandi, S., Rai, A., Kandar, B., ... & Dutta, S.	Effect of total dissolved solids(TDS) on removal of fluoride from synthetic wastewater using alumina: Batch study, modelling,and optimization	Journal of the Indian Chemical Society	Volume:102(1) Issue No:https://doi.org/10.1016/j.jics.2024.101552 Page No: Year:2025 Month:Jan
Sau, A., Ghosh, S., Kandar, B., Ghanta, K. C., BaltrėnaitėGedienė, E., & Dutta, S.	Enhanced slaughterhouse wastewater treatment: A comparative approach with phycoremediation and adsorption	Journal of the Indian Chemical Society	Volume:101(12) Issue No:https://doi.org/10.1016/j.jics.2024.101499 Page No: Year:2024 Month:Dec
Kandar, B., Rai, A., Dutta, S. & Ghanta, K.	Bioremediation of p-nitrophenol using an indigenous algal strain <i>Tetrademus</i> sp. NITD18: a sustainable approach	International Journal of Chemical Reactor Engineering	Volume:22(8) Issue No:https://doi.org/10.1515/ijcre-2024-0056 Page No: Year:2024 Month:Aug
Padma, S., Srinivas, B., Mondal, B. K., Ghanta, K. C., & Dutta, S.	Sustainable Approach to ReduceLead (II) from Wastewater Using Indigenous Bacterial Strains	Journal of the Indian Chemical Society	Volume:101223 Issue No:https://doi.org/10.1016/j.jics.2024.101223 Page No: Year:2024 Month:Sep
Sayantan Sarkar, Deepshikha Datta, K.S. Deepak, Bikash Kumar Mondal and Bimal Das	Comparative assessment efficacy of yield maximisation of recovered used lubricating oil byCa (OH)2-Iso-butanol/KOH-1butanol extractive-flocculate process by central composite design approach	International Journal of Environment and Waste Management	Volume:34 Issue No:4 Page No:472-503 Year:2024 Month:Sep
Sayantan Sarkar, Deepshikha Datta, SVN Pammi, Bimal Das	Surface functionalization of synthesized sodium alginate frombrown algae for maximizing the yield of re-refined usedlubricating oil using	Petroleum Science and Technology	Volume:43 Issue No:5 Page No:552-569 Year:2024 Month:Mar



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	extraction-flocculation-an environmentfriendly approach		
Dharmana Tejeswararao, Deepshikha Datta, Nagamani Naidu Bonnada, Bimal Das	Europium activated bismuth containing double perovskite catalyzed synthesis of coumarin derivatives and its cytotoxicity evaluation	Journal of the Iranian Chemical Society	Volume:22 Issue No:2 Page No:445-456 Year:2025 Month:Jan
Sirshendu Banerjee, Amar Nath Samanta, Bimal Das, Bikash Kumar Mondal	Thermodynamic Modeling of an Aqueous N, N-Dimethyldipropylene triamine and Benzylamine Blend for Efficient CO ₂ Capture	ChemPhysChem	Volume:26 Issue No:3 Page No:e202400624 Year:2024 Month:Oct
Deepshikha Datta, Mehulee Patra, Divakar Pamanji, Gokulan Ravindiran, Bimal Das	A sustainable approach to enhance biodegradability of recycled LDPE with starch biofillers derived from potato peels and rice husk ash*	Indian Chemical Engineer	Volume:67 Issue No:1 Page No:49-68 Year:2024 Month:Nov
Shelfali Mamataj, Subhojit Roy, Gokulan Ravindiran, Deepshikha Datta, Bimal Das	Contemporary research on synthesis of silver nanoparticles and its applications	Indian Chemical Engineer	Volume:67 Issue No:1 Page No:91-120 Year:2024 Month:Oct
Deepshikha Datta, Divakar Pamanji, Gokulan Ravindiran, Sudipta Kumar Das, Priyasi Bhangar, Bimal Das	Drinking water treatment through Optimising Phosphate Coagulation collected from four villages in Srikakulam, India: a Response Surface Methodology approach	Indian Chemical Engineer	Volume:67 Issue No:1 Page No:16-30 Year:2024 Month:Oct
Sayantan Sarkar, Deepshikha Datta, Bimal Das	Experimental elucidation of performance of four extracting solvents for reclamation of spent lubricating oil using extraction-flocculation process	Clean Technologies and Environmental Policy	Volume:27 Issue No:1 Page No:97-115 Year:2025 Month:Jan
Shelfali Mamataj, Bhaskar Roy, Deepshikha Datta, Ritam Dutta, Bimal Das	Sensing Performance Analysis of Passivated β -(Al _x Ga _{1-x}) ₂ O ₃ /Ga ₂ O ₃ Schottky Diode Gas Sensor with Catalytic Metals at High Temperature	Journal of The Institution of Engineers (India): Series B	Volume: Issue No: Page No:1-10 Year:2024 Month:Nov
Sampurna Santra, Deepshikha Datta, Koushik Sardar, Bimal Das	Fabrication and optimization of working electrodes by using nanosilica extracted from rice straw	Biomass Conversion and Biorefinery	Volume: Issue No: Page No:1-18 Year:2024 Month:Sep

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Deepshikha Datta, Sampurna Santra, Sayantan Sarkar, Bimal Das	Role of extracted nanosilica from rice husk on the structure, property and biodegradability of low density polyethylene/starch biodegradable film	Asia-Pacific Journal of Chemical Engineering	Volume:19 Issue No:5 Page No:e3087 Year:2024 Month:Sep
Sampurna Santra, Deepshikha Datta, Soheli Biswas, Bimal Das	Role of Silica, Carbon, and ZnO Nanomaterials in the Fabrication of Electrochemical Sensors for the Detection of Water Contaminants and Food Dye	Particle & Particle Systems Characterization	Volume:41 Issue No:9 Page No:2400020 Year:2024 Month:Sep
Neha Majee, Chandra Bhushan, Debayan Das	Experimental studies on controlling dispersion and fluid flow in paper membranes/assays using hydrogel	Chemical Engineering Research and Design	Volume:208 Issue No: Page No:126-140 Year:2024 Month:Jun
Debayan Das, Samaksh Gupta	Flow control and imbibition dynamics studies in paper membranes using inert additives	Chemical Engineering Science	Volume:299 Issue No: Page No:120504 Year:2024 Month:Jul
Chandra Bhushan, Debayan Das	Sugar-Assisted Mitigation of dispersion and flow instabilities in Paper-Based assays	Chemical Engineering Science	Volume:315 Issue No: Page No:121893 Year:2025 Month:May
Neha Majee, Chandra Bhushan, Debayan Das	Characterization of hydrogel-induced flow control in paper-based microfluidics platform	Microfluidics and Nanofluidics	Volume:29 Issue No: Page No:55 Year:2025 Month:Jul
Mohd Arsalan, Suzain Akhtar, Rhithuparna D., Salman Siddiqui, Wasi Ur Rahman, Mohamed Fahad Alajmi, Afzal Hussain, Gopinath Halder,	Elucidating the thermo-mechanochemical stability and electrochemical potential of PVP@ZP+Ze composite ion exchange membrane for industrial application	Process Safety and Environmental Protection	Volume:195 Issue No: Page No:106767 Year:2025 Month:Jan
Nabanita Ghosh, Rhithuparna D, Mufeez Mev, Yatin Yadav, Samuel Lalthazuala Rokhum, Jeng Shiun Lim, Gopinath Halder	Repurposing the spent cooking oil using biogenic CLAC@SO ₃ H for biodiesel production: Assessment on scale-up potential	Energy Conversion and Management	Volume:315 Issue No: Page No:118742 Year:2024 Month:Jun
Ravindra Kumar, Anup Kumar Sadhukhan, Gupta P, Singh RK, Ruj B"	Recovery of enhanced gasoline- range fuel from catalytic pyrolysis of waste polypropylene: effect of heating	Process Safety and Environment Protection"	Volume:188 Issue No: Page No:793–806. Year:2024 Month:May



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	rate,temperature, and catalyst onreaction kinetics, products yield, and compositions.		
Biswajit Kamila, Anup Kumar Sadhukhan, Parthapratim Gupta, Arindam Mandal	2D Modeling and Simulation of Pyrolysis of a Thermally Thick Biomass Particle"	Combustion science and technology	Volume:DOI 10.1080/00102202.2024.2368756 Issue No: Page No: Year:2024 Month:Jun
Biswajit Kamila, Anup Kumar Sadhukhan, Parthapratim Gupta, Prabir Basu	2D CFD modeling for pyrolysis of a large biomass particle Effect of L/D ratio, internal convection and shrinkage	Chemical Engineering Research and Design	Volume:208 Issue No:2 Page No: 921–933. Year:2024 Month:Jul
Ravindra Kumar, Anup Kumar Sadhukhan, Rohit Kumar Singh, Biswajit Ruj, Parthapratim Gupta	Investigations on the effect of kaolin catalyst on the yield of various products obtained from pyrolysis of low-density polyethylene (LDPE) wastes and reaction kinetics	Environmental Science and Pollution Research	Volume:https://doi.org/10.1007/s11356-024-35320-4 Issue No: Page No: Year:2024 Month:Oct
Ankita Mukherjee, Biswajit Ruj, Anup Kumar Sadhukhan, Parthapratim Gupta, Chintak Kamalesh Parashar, PradipKumar Chatterjee	Applications of H ₂ - Enriched syngas and slag products from plastic wastes via novel plasma dual-stage-arc pyrolysis	Journal of Environmental Management	Volume:370 Issue No: Page No:123025 Year:2024 Month:Oct
Prantik Mondal, Sandip Kumar Lahiri, Kartik Chandra Ghanta	Assessment of ansys-fluent Code for Computation of Two-Phase Flow Characteristics: A Comparative Study of Water–Air and Silicone Oil–Air in a Vertical Pipe	Journal of Fluids Engineering	Volume:146 Issue No:12 Page No:121403 Year:2024 Month:Jun
Sayantan Sarkar, Deepshikha Datta, KS Deepak, Bikash Kumar Mondal, Bimal Das	Comparative assessment efficacy of yield maximisation of recovered used lubricating oil by Ca (OH) ₂ -Iso-butanol/KOH-1butanol extractive-flocculate process by central composite design approach	International Journal of Environment and Waste Management	Volume:34 Issue No:4 Page No:472-503 Year:2024 Month:Sep
Arpita Das, AdityaPrasad Jati,Manickam Selvaraj, Rupam Katak, Gurunathan Baskar, Gopinath Halder,Samuel Lalthazuala Rokhum,	Psidium guajava (guava) leaves derived functional activated carbon as a heterogeneous catalyst for conversion of Jatropha curcas oil to	Journal of Analytical and Applied Pyrolysis	Volume:181 Issue No: Page No:106636 Year:2024 Month:Jul

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	biodiesel		
Rashid Imran Ahmad Khan, Nabanita Ghosh, Sadaf Ahmad, Kashish Varshney, Mohammad Nasir, Gopinath Halder	Deciphering the application efficacy of titanium dioxide mediated calcareous nanocatalyst towards biodiesel production	Materials Today Sustainability	Volume:27 Issue No: Page No:100911 Year:2024 Month:Jul
Gokulan Ravindiran, K Karthick, Sivarethinamohan Rajamanickam, Deepshikha Datta, Bimal Das, G Shyamala, Gasim Hayder, Azees Maria	Ensemble stacking of machine learning models for air quality prediction for Hyderabad city in India	iScience	Volume:28 Issue No:2 Page No: Year:2025 Month:Feb
Debajyoti Bose, Riya Bhattacharya, Pranathi Ganti, Alwiya Rizvi, Gopinath Halder, Arjun Sarkar	Bioelectricity production and bioremediation potential of Withania somnifera in plant microbial fuel cells	Energy Nexus	Volume:15 Issue No: Page No:100314 Year:2024 Month:Jun
Nabanita Ghosh, Shiva Prasad Gouda, Samuel LalthazualaRokhum, Gopinath Halder	Elucidating the scale-up potential of biogenic magnetized nanocatalyst towards intensifiedbiodiesel production	Chemical Engineering Journal	Volume:495 Issue No: Page No:152998 Year:2024 Month:Jun
Joseph V.L.Ruatpuia, GopinathHalder, MichaelVanlalchhandama,F anai Lalsangpuui, Rajender Boddula, Noora Al-Qahtani, Subramaniapillai Niju, Thangavel Mathimani, Samuel Lalthazuala Rokhum,	Jatropha curcas oil a potential feedstock for biodiesel production: A critical review	Fuel	Volume:370 Issue No: Page No:131829 Year:2024 Month:Apr
Saheli Kar, Tamal Mandal, Gopinath Halder	Sorptive and microbial remediation of enrofloxacin laden water: A holistic review on approaches, contrivances, hindrances and perspectives	Process Safety and Environmental Protection	Volume:188 Issue No: Page No:877-904 Year:2024 Month:May
Fate Abhay Sandip, Yash Maheshwari, Shashank Shekhar, Payal Das, Manisha Bal	Exploring nanocellulose's role in revolutionizing the pharmaceutical and biomedical fields	International Journal of Biological Macromolecules	Volume: Issue No: Page No:132837 Year:2024 Month:Jun



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Indrani Paul, Rupsa Biswas, Gopinath Halder	Traversing the potential of phytoremediation and phycoremediation as pioneering technologies in microplastic mitigation – A critical review	Science of the Total Environment	Volume:956 Issue No: Page No:177200 Year:2024 Month:Oct
Bisheswar Karmakar, Sankha Chakraborty, Ramesh Kumar, Gopinath Halder,	Biodiesel synthesis from Ricinus communis and Pongamia pinnata oil blends by injecting superheated methanol – isopropanol mixtures: Optimization through CCD and ANN approaches	Renewable Energy	Volume:249 Issue No: Page No:123223 Year:2025 Month:Mar
Rhithuparna D., Bushra Saad, Many Mridul, Samuel Lalthazuala Rokhum, Gopinath Halder,	Acetalization of glycerol to solketal over Musa acuminata leaf-derived acid functionalized catalyst,	Chemical Engineering Journal	Volume:514 Issue No: Page No:163259 Year:2025 Month:Mar
Baisnabdas Pathak, Saptarshi Samajdar, Deepshikha Datta, Bimal Das	Development and Evaluation of Sustained Release Tablet Using A Natural Polysaccharide Isolated from the Fruit Pulp of Ziziphus Mauritiana.	Trends in Carbohydrate Research	Volume:16 Issue No:4 Page No: Year:2024 Month:Oct
Saheli Kar, Tamal Mandal, Gopinath Halder	Deciphering enrofloxacin sorption by activated N-biochar: Equilibrium, kinetics, life cycle cost and DNA-toxicity study,	Journal of Hazardous Materials Advances	Volume:21 Issue No: Page No:100666 Year:2025 Month:Feb
Payal Das, Manisha Bal	Modeling and optimization study for microplastic removal from aquatic medium using Chroococciopsis species	Chemical Engineering Science	Volume:304 Issue No: Page No:121085 Year:2025 Month:Feb
Rwiddhi Sarkhel , Biswanath Bhunia ,Parthapratim Gupta , Tamal Mandal	Insightful analysis of cyanobacterial-assisted degradation of different polymers and their kinetics	Algal Research	Volume:81 Issue No:103565 Page No:2211-9264 Year:2024 Month:Jun
Nabanita Ghosh, Abu Mustafa Khan, Gopinath Halder	Advances in calcium oxide mediated catalytic biodieselproduction: A paradigm shift in complying with UN's SDG7	Applied Energy	Volume:391 Issue No: Page No:125954 Year:2025 Month:Mar
Rhithuparna D., Samuel Lalthazuala Rokhum, Gopinath Halder	Unveiling efficacies of tamarind seed catalysts towards glycerol valorisation: Optimization, kinetics, thermodynamics, cost analysis and E-metrics	Journal of Cleaner Production	Volume:506 Issue No: Page No:145508 Year:2025 Month:Mar

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Rashid Imran Ahmad Khan, Rhithuparna D., Abdul Razzaq Khan, Sadaf Ahmad, Samuel Lalthazuala Rokhum, Gopinath Halder	Unveiling the efficacy of TiO ₂ mediated calcareous nanocatalyst towards cost-effective biodiesel synthesis	Biomass and Bioenergy	Volume:198 Issue No: Page No:107852 Year:2025 Month:Feb
Rhithuparna D., Gopinath Halder	Unleashing carbon quantum dots as novel nanocatalyst from waste plastic wrappers towards biodiesel production	Resources, Conservation & Recycling	Volume:218 Issue No: Page No:108255. Year:2025 Month:Feb
Mohd Arsalan, Mohd Adeel Khan, Rhithuparna D., Wasi Ur Rahman, Mohamed Fahad Alajmi, Afzal Hussain and Gopinath Halder,	Fabrication, characterization and electrochemical analysis of a polyvinylidene fluoride plus zeolite embedded manganese phosphate composite ion exchange membrane	Physical Chemistry Chemical Physics	Volume:27 Issue No: Page No:5575 – 5585 Year:2025 Month:Feb
Susmita Pandit, Rhithuparna D., Jaya Sikder, Gopinath Halder	Advances in membrane technology for sustainable treatment of coal bed methane produced water: A paradigm shift	Separation and Purification Technology	Volume:363 Issue No: Page No:132046 Year:2025 Month:Jan
Priyanka Khan, Pritam Dey, Rajnarayan Saha, Soumya Banerjee, Gopinath Halder	Insight into linear and non-linear biosorptive uptake of ciprofloxacin by surface-functionalized cost-competent sorbent	Microchemical Journal	Volume:211 Issue No: Page No:113043 Year:2025 Month:Jan
Debasish Das Sharma, Priyanka Khan, Rupsa Biswas, Sumona Show, Anoar Ali Khan, Gopinath Halder	Deciphering the linear and nonlinear biosorptive removal of the anti-inflammatory drug enrofloxacin	New Journal of Chemistry	Volume:49 Issue No: Page No:2898 – 2916 Year:2025 Month:Jan
Debanjan Dey, Priyanka Khan, Rupsa Biswas, Shouvik Saha, Gopinath Halder	Pioneering adsorption-based technological advancements in Ibuprofen remediation: A critical evaluation	Process Safety and Environmental Protection	Volume:196 Issue No: Page No:106874 Year:2025 Month:Jan
Saheli Kar, Tamal Mandal , Gopinath Halder *	Deciphering enrofloxacin sorption by activated N-biochar: Equilibrium, kinetics, life cycle cost and DNA-toxicity study	Journal of Hazardous Materials Advances	Volume:19 Issue No:1000666 Page No:2772-4166 Year:2025 Month:Feb
Manisha Bal Payal Das , Sudhir Kumar Barik	Microplastic Transport Dynamics and the Path Forward with Magnetic Nanoparticle Based Solutions	Journal of Environmental Management	Volume:384 Issue No: Page No:125496 Year:2025 Month:Apr
Saheli Kar , Arnab Ghosh , Sayak Acharya , Sabyasachi Bose , Roshan Bedia , Tamal Mandal	Advancement of sustainable trypan blue degradation through rice husk ash based-heterogenous Fenton catalyst and study with gaussian process	Journal of Water Process Engineering	Volume:63 Issue No:105460 Page No:2214-7144 Year:2024 Month:May



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	regression		
Saheli Kar, Tamal Mandal , Gopinath Halder	Sorptive and microbial remediation of fluoroquinolone enrofloxacin laden water: A holistic review on approaches, contrivances, hindrances and perspectives	Process Safety and Environmenta l Protection	Volume:188 Issue No:877-904 Page No:0957- 5820 Year:2024 Month:May
Sumona Show, Ramisa Akhter, Indrani Paul, Payal Das, Manisha Bal, Riya Bhattacharya, Debajyoti Bose, Amita Mondal, Shouvik Saha, Gopinath Halder	Efficacy of exopolysaccharide in dye- laden wastewater treatment: A comprehensive review	Chemosphere	Volume: Issue No: Page No:141753 Year:2024 Month:May
Nabanita Ghosh, Jaya Sikder, Gopinath Halder	Harnessing a recoverable supermagnetic biogenic nanocatalyst towards transesterified biodiesel production	Chemical Engineering Journal	Volume:503 Issue No: Page No:158448 Year:2024 Month:Dec
Supongsena Ao, Heather F. Greer, Lana A. Alghamdi, Umer Rashid, Gopinath Halder, Andrew E.H. Wheatley, Samuel Lalthazuala Rokhum,	Snail shell derived magnetic nanocatalysts for biodiesel production: Process optimization through response surface methodology, kinetics, and thermodynamic studies	Biomass and Bioenergy	Volume:191 Issue No: Page No:107442 Year:2024 Month:Nov
Ravindra Kumar, Anup Kumar Sadhukhan, Biswajit Ruj	Impact of tire char as a catalyst on product yields and reaction kinetics for waste polypropylene pyrolysis towards a circular economy	Journal of Indian Chemical Engineer	Volume:https://doi.org/10.1080/00194506.2025.2 486142 Issue No: Page No: Year:2025 Month:Mar
I. Kumar, S. K. Lahiri, A. Hens	Heat transfer analysis of liquid nitrogen film boiling in the presence of reduced gravity and electric field	Numerical Heat Transfer, Part A: Applications	Volume: Issue No: Page No: Year:2024 Month:Oct
P K Pal, A Hens, N Behera, S K Lahiri	Digital twins: Transforming the chemical process industry—A review	The Canadian Journal of Chemical Engineering	Volume: Issue No: Page No: Year:2024 Month:Dec

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4.5.16 Journal: Published in Others in 2024-2025

Author(s) Name	Paper Name	Journal Name	Others Info
Bisheswar Karmakar, Gopinath Halder	Deciphering methanolysis of Calophyllum inophyllum oil into biodiesel using KOHdoped Aegle marmelos biochar catalyst: Thermo-kinetics, optimization and cost analysis	Cleaner Chemical Engineering	Volume:11 Issue No: Page No:100153 Year:2025 Month:Jan

4.5.17 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Ravindra Kumar, Anup Kumar Sadhukhan, Biswajit Ruj	Energy Recovery via Thermal and Catalytic Pyrolysis of Post-Consumer PP and LDPE: Kinetic Studies and Yield Analysis	Int. Conf. on Chemical Resilience & Sustainable Practices: Advanced Materials in Water Purification Strategies for Desalination, Energy	DOI/ISBN: ISBN: 978-9348059-63-5 Volume: Issue No: Page No:44 Year:2025 Month:Feb Presenter:CO-AUTHOR
Chakraborty, Tapabrata; Mondal, Sahinur Rahaman; Pal, Supriya; Mandal, Mrinal Kanti; Chaudhuri, Rajib Ghosh; Chaudhuri, Hirok	Stability Analysis of Open-Cast Coal Mine Overburden Dump Slopes Reinforced with Nano-Composite Coated Jute Geotextile Through Numerical Modeling	Sustainable Civil Infrastructures	DOI/ISBN: 10.1007/978-3031-91976-3_13 Volume: Issue No: Page No:129-138 Year:2024 Month:Dec Presenter:CO-AUTHOR
Adhikary, Avishek; Pal, Supriya; Ghosh, Sudipta; Chaudhuri, Hirok; Mandal, Mrinal Kant; Ghosh Chaudhuri, Rajib	Efficacy Assessment of Vetiver (Chrysopogon zizanioides) for the Removal of Persistent Organic Pollutants Using Vertical Surface Flow Constructed Wetland System	Geotechnical Special Publication (ASCE)	DOI/ISBN: 10.1061/9780784485699.013 Volume: Issue No: Page No:115-125 Year:2024 Month:Mar Presenter:CO-AUTHOR

4.5.18 Conference: Published in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Abu Mustafa Khan, Suhaib Ansari, Gopinath Halder	Sustainable Biodiesel Production with MOFs: A circular solution for waste management	International Conference on Sustainable Developments in Air and Waste Management	DOI/ISBN: 9781003613121 Volume: Issue No: Page No:188 Year:2024 Month:Dec Presenter:CO-AUTHOR
Nabanita Ghosh, Gopinath Halder	Exploring the Scalability of Biogenic Magnetized Nanocatalyst Towards Biodiesel Production	Intranational Conference on Advances in Sustainable Solutions for Energy Transitions (ASSET2025) organised by IIT Guwahati	DOI/ISBN: ABS182 Volume: Issue No: Page No:102 Year:2025 Month:Jan Presenter:CO-AUTHOR



Koustav Roy, Swapan Paruya	A revisit to “vapour bubble collapse in isothermal and nonisothermal liquid”	ESMOC 2024-4th Energy System Modeling and Optimization Conference, December 9-11, 2024	DOI/ISBN: NIL Volume: Issue No: Page No:19 Year:2024 Month:Dec Presenter:SELF

4.5.19 Conference: Accepted in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Swapan Paruya	A similarity analysis for dynamics of bubble growth in pool boiling	ESMOC 2024-4th Energy System Modeling and Optimization Conference, December 9-11, 2024	DOI/ISBN: NIL Volume: Issue No: Page No:13 Year:2024 Month:Dec Presenter:SELF

4.5.20 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
P.Pal	D. A. Giannakoudakis, J. Nayak, S. Chakraborty	Paperback ISBN: 9780443218842 Metal Value Recovery from Industrial Waste Using Advanced Physicochemical Treatment Technologies		Publisher: Elsevier Science Publication Date: 2024-0801
Bikash Kumar Mondal	Samaroha Ghosh, Susmita Dutta, Surabhi Chaudhuri	Impact of COVID-19 Waste on Environmental Pollution and Its Sustainable Management: COVID-19 Waste and Its Management	Microplastic Pollution: Occurrence, Sources and Impact of COVID-19 Generated Waste	Publisher: Springer Nature Switzerland Publication Date: 2024-05-05
Bimal Das	Deepshikha Datta, Sayantan Sarkar, Soheli Biswas, Esha Mandal	Multidisciplinary Applications of Marine Resources	Valorization of Marine Waste Towards the Production of High-Value-Added Products, Bioplastics, and Other Industrial Applications	Publisher: Springer Nature Singapore Publication Date: 2024-08-28
Bimal Das	Deepshikha Datta, Nikita Kumari, Esha Mandal, Sayantan Sarkar	Sustainable Packaging Strengthened by Biomass	Ecosystem and biodiversity conservation of sustainable packaging	Publisher: Woodhead Publishing Publication Date: 2025-01-01
Bimal Das	Deepshikha Datta, Soheli Biswas, Sayantan Sarkar, Nikita Kumari	Sustainable Packaging Strengthened by Biomass	Advancement in sustainable food packaging systems derived from sustainable agriculture and food	Publisher: Woodhead Publishing Publication Date: 2025-01-01
Gopinath Halder	Rashid Imran Ahmad Khan, Sadaf Ahmad	A Comprehensive Lab Manual For Food Technology		Publisher: MAHI Publishers Publication Date: 2024-1221

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Gopinath Halder	Sucharita Samanta, Pratiti Pradhan	Algal Biomass Technology and Research	Mechanistic Eradication of Ciprofloxacin from Pharmaceutical Wastewater by Algal- Biomass: Current Prospective, Strategies and Challenges	Publisher: Apple Academic Press, Taylor & Francis Group Publication Date: 2024-11-21
Manisha Bal		Environmental Hydrocarbon Pollution and Zero Waste Approach Towards a Sustainable Waste Management.	Hydrocarbon Waste: The Unseen Threat to Our Biosphere—Origins, Traits, Fate, and Environmental Impact	Publisher: Publisher Springer Nature Publication Date: 2025-03-01
Bimal Das	Deepshikha Datta, Sayantan Sarkar, Deep Laha, Piyansi Bhangar, Sudipta Kumar Das	Multidisciplinary Applications of Marine Resources: A Step towards Green and Sustainable Future	Application of Marine Biomass for Carbon Neutrality, Sustainable Environment and Bioeconomy, Regulations, and Policy Framework	Publisher: Springer Nature Singapore Publication Date: 2024-08-28
Bimal Das	Deepshikha Datta, Esha Mandal, Soheli Biswas	Material and Energy Recovery from Solid Waste for a Circular Economy	Advancements in the recovery and refinement of landfill gas from sanitary landfills	Publisher: CRC Press Publication Date: 2024-0708

4.5.21 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
First International Conference on Sustainable Technologies, ICST- 2024	National Institute of Technology- Durgapur	2024-12-12	2024-12-15	India
Online session on Capacity Building for Promoting Positive Mental Health, Resilience and Wellbeing in HEIs	Malaviya Mission Teacher Training Programme	2025-06-27	2025-06-27	India
ESMOC 2024-4th Energy System Modeling and Optimization Conference	NIT Durgapur	2024-12-09	2024-12-11	India
International Conference on Energy, Functional Materials/Molecules and Nanotechnology (ICEFN-2025)	Kumain University, Nainital	2025-03-20	2025-03-22	India
International Conference on Advanced Materials and Start-up Ecosystem” held from DECEMBER	Trivandrum Engineering Science and Technology (TrEST) Research Park	2024-12-13	2024-12-15	India

4.5.22 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Sustainable Process Technology for Amino Acid	P.Dey	Prof.P.Pal	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Search and production of Safe Food preservative	S.Palui	Prof.P.Pal	ONGOING	null
Experimental and Theoretical Investigation of Equilibrium Carbon Dioxide Solubility in Polyamine Based Mixed Solvent for Post-Combustion CO ₂ Capture Application	Sirshendu Banerjee	Bikash Kumar Mondal, Bimal Das	ONGOING	null
Utilization and assimilation of inorganic carbon using micro algae and production of biomass, extraction of essential value added products and biofuel	Sukhen Das	Bikash Kumar Mondal, Mukesh Singh	ONGOING	null
Low Cost Adsorptive Process Development for Antibiotics Removal from Contaminated Water	Anwesha Mukherjee	Bikash Kumar Mondal	ONGOING	null
Reclamation of Used Lubricating Oil using Eco-friendly Approach	Sayantan Sarkar	Bimal Das, Bikash Kumar Mondal, Deepshikha Datta	DEGREE AWARDED	2024-05-17
Study of Dispersion and Viscous Fingering in paper analytical devices	Chandra Bhushan	Debayan Das	ONGOING	null
Experimental Investigation of Sorptive Riddance of Micropollutant Enrofloxacin via Biowaste derived Activated char	DEBASISH DAS SHARMA	Prof. Gopinath Halder	DEGREE AWARDED	2024-04-22
Experimental Investigation of Biodiesel Synthesis From Inedible Feedstocks Employing Biomass-derived Heterogeneous Catalyst	Nabanita Ghosh	Prof. Gopinath Halder	SUBMITTED	2025-07-14
Biodiesel synthesis from inedible feedstocks using catalytic and non-catalytic contrivances coupled with glycerol valorisation	Rhithuparna D.	Prof. Gopinath Halder	SUBMITTED	2025-08-05
Integrated treatment of coal-bed methane produced water	Susmita Pandit	Dr. Jaya Sikder, Prof. Gopinath Halder	ONGOING	null
Membrane separation of emerging contaminants from coal-bed methane produced water	ARPITA JASH	Dr. Jaya Sikder, Prof. Gopinath Halder	ONGOING	null
Removal of Ciprofloxacin from the aqueous media by the sorption and photocatalytic process	Priyanka Khan	Prof. Gopinath Halder, Prof. Rajnarayan Saha	ONGOING	null
Experimental study of catalytic heterogeneous transesterification of inedible feedstocks towards biodiesel synthesis	Rashid Imran Ahmad Khan	Prof. Gopinath Halder	SUBMITTED	2025-05-22
Sustainable Microalgae-Based Solutions For Microplastics Contamination In Aquatic Systems	Payal Das	Manisha Bal	ONGOING	null
Hydrodynamic Characteristics of Gas-Liquid Two-Phase Flow in a	Prantik Mondal	Kartik Chandra Ghanta & Sandip Kumar Lahiri	SUBMITTED	2025-02-28

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Topic Name	Scholar	Supervisor	Status	Status Date
Vertical Pipe				
Removal of Pollutants from Refinery Wastewater through Microbial Route	Bulti Kandar	Kartik Chandra Ghanta & Susmita Dutta	ONGOING	null
A Sustainable Way to treat Chicken Slaughterhouse Wastewater	Arnab Sau	Susmita Dutta & Kartik Chandra Ghanta	ONGOING	null
Study of Free Surface Flow using Numerical Simulations	Braj Bhushan	Kartik Chandra Ghanta & Abhiram Hens	ONGOING	null
Collapse of a Vapor Bubble Translating in a Subcooled Liquid	Koustav Roy	Swapan Paruya	SUBMITTED	2024-11-11
Enhancing industrial reactor performance through artificial intelligence- based modelling and optimization	Somnath Chowdhury	Dr. Sandip Kumar Lahiri Dr. Abhiram Hens	SUBMITTED	2025-05-26
Application of Artificial intelligence in metal industry	Somashish Saha	Dr. Sandip Kumar Lahiri Dr. Abhiram Hens	ONGOING	null
Application of artificial intelligence in Bioreactor	Suchandan Banerjee	Dr. Sandip Kumar Lahiri	ONGOING	null
Intelligent Systems for Chemical process Monitoring and control : A digital twin perspective	Pratyush Kumar Pal	Dr. Sandip Kumar Lahiri Dr. Abhiram Hens	ONGOING	null
Development of Fault Diagnosis system for chemical process industries	Sumana Roy	Dr. Sandip Kumar Lahiri	ONGOING	null
Application of Artificial intelligence in steel industry	Narottam Behera	Dr. Sandip Kumar Lahiri Dr. Bimal Das	ONGOING	null
Hydrodynamic Characteristics of Gas-Liquid Two-Phase Flow in a Vertical Pipe	Prantik Mondal	Prof Kartik Chandra Ghanta, Dr Sandip Kumar Lahiri	DEGREE AWARDED	2025-08-04
Biodegradable Packaging Film	Paulami Banerjee	Dr. Raib Ghosh Chaudhuri	ONGOING	null
Green Hydrogen Production	Sayantan Adak	Dr. Mrinal Kanti Mandal, Dr. Rajib Ghosh Chaudhuri	ONGOING	null
Desalination	Sinu Sanghramitra	Dr. Rajib Ghosh Chaudhuri, Dr. Abhiram Hens	ONGOING	null
Pavement Design with Chemically modified Jute	Sahinur Rahaman Mondal	Dr. Supriya Pal, Dr. Rajib Ghosh Chaudhuri	ONGOING	null
Development of smart Packaging Film	Mousumi Maji	Dr. Mrinal Kanti Mandal, Dr. Rajib Ghosh Chaudhuri	ONGOING	null
Advanced PVDF and Cellulose Acetate Nanocomposite Membranes for Efficient, Desalination and Textile Dye Wastewater Treatment	Joyeeta Bose	Dr. Jaya Sikder	SUBMITTED	2024-12-19



Topic Name	Scholar	Supervisor	Status	Status Date
Development and Optimization of Membrane-Based Hybrid Processes for Sustainable Treatment of Coal Bed Methane (CBM) Produce Water: Emphasizing Agriculture Reuse and Energy Efficiency.	Arpita Jash	Dr. Jaya Sikder, Prof. Gopinath Halder	ONGOING	null
The explicit studies for treatment, management, and possible valorization of targeted industrial wastes	Rwiddhi Sarkhel	Prof. Tamal Mandal & Ex. Prof. Parthapratim Gupta	ONGOING	null
Experimental Investigation of adsorptive and catalytic oxidative remediation of Industrial wastewater: A comprehensive insight	Saheli Kar	Prof. Tamal Mandal	ONGOING	null
Study of liquid nitrogen boiling under different external forces	Indradev Kumar	Abhiram Hens & S K Lahiri	SUBMITTED	2025-06-28
Microbial treatment of dairy industry whey water	Anshu Kumari	A Hens & S Dutta	ONGOING	null
Study of free surface flow using numerical simulations	Braj Bhushan	K C Ghanta and A Hens	ONGOING	null
Removal of fluoride from waste water using low-cost materials	Mr. Bhaskar Bishayee	Prof. Susmita Dutta and Dr. Biswajit Ruj	DEGREE AWARDED	2024-08-21
Bioremediation of heavy metals using indigenous bacterial strains	Mrs. Padma Seragadam	Prof. Susmita Dutta, Prof.K.C. Ghanta and Prof. B. Srinivas.	DEGREE AWARDED	2024-12-16

4.5.23 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Design of a two-dimensional (2D) paperbased CRISPR/CAS integrated LAMP (Loop-Mediated Isothermal Amplification Reaction) device for point-of-care applications	Debayan Das	ANRF	5706000.0	2025
Microwave-Irradiated Continuous Biodiesel Production under Subcritical Condition towards Fuel Performance Assessment and Glycerol Valorization	Prof. Gopinath Halder	Department of Science and Technology, Govt. of India	4075764.0	2022
Technological frontier towards sustainable treatment of Coal bed Methane Produced Water via Integrated Desalination Contrivance	Dr. Jaya Sikder, Prof. Gopinath Halder, Prof. Dalia Dasgupta Mandal	Department of Science and Technology, Govt. of India	7436678.0	2023
Technological Frontier Towards Sustainable Treatment of Coal Bed Methane Produced Water via Integrated Desalination Contrivance	Dr. Jaya Sikder	DST - WTI	7436678.0	2023
“Centre for Technological Excellence in Water Purification	PI-Prof. Tamal Mandal	DST-WTI	5844000.0	2019

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(CTEWP)				
Studies on the effect of anammox group of bacteria for the treatment of waste water containing nitrogenous contaminants	PI-Prof. Tamal Mandal	Core Research Grant (Science & Engineering Research Board)	3700000.0	2021
Solar Converted Thermal Energy Harvesting Mangrove and Composite Layer Mechanistic Photo-thermal Material in Interfacial Water Evaporator-Collector Desalination System to Potable Water	R Ghosh Chaudhuri, A Hens, M K Mondal	DST	4500000.0	2021

4.5.24 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
Experimental Studies and Mathematical Modeling of DNA Amplification Reaction	Debayan Das	DST	2023
Process Intensification of Biodiesel Synthesis from Nonedible Oil via Superheated Propanol Injection Technique	Prof. Gopinath Halder	Department of Science and Technology, Govt. of India	2021
Green Approach for Extraction of Nanocellulose and its Potential Application in Waste Water Treatment	Manisha Bal	IChE	2021

4.5.25 Testing & Consultancy Services Rendered

Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
Scientific Design Company Inc, USA	Soft sensor at drying column overhead	980875.0	ongoing
Scientific Design Company Inc, USA	Argon Purge optimization module	980875.0	ongoing
Scientific Design Company Inc, USA	Cost based performance dashboard of ethylene glycol plant	1438618.0	ongoing
Scientific Design Company Inc, USA	Energy dashboard of ethylene glycol plant	1438618.0	ongoing
PepsiCo Sankrail Dhulagarh Howrah	ETP Feasibility Study at PepsiCo Sankrail Dhulagarh Howrah Plant	649000.0	Completed
Scientific Design Company, Inc USA	Understanding the industrial reactor code for necessary upgradation and future application	1040000.0	successfully completed



4.5.26 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Parimal Pal	Biochemical Engineering	Elsevier	2024-06-30
Parimal Pal	Biochemical Engineering Journal	Elsevier Science	2024-08-04
Parimal Pal	Journal of Environmental Management	Elsevier	2024-12-24
Parimal Pal	Journal of Environmental Technology	Taylor and Francis	2025-01-24
Parimal Pal	Journal of Environmental Processes	Springer	2025-02-09
Parimal Pal	Chemical Engineering Science	Elsevier	2025-02-09
Parimal Pal	Journal of CO ₂ Utilization	Elsevier	2025-03-04
Parimal Pal	Renewable and Sustainable Energy Reviews	Elsevier	2025-03-07
Debayan Das	International Journal of Heat and Mass Transfer	Elsevier	2025-08-29
Debayan Das	Chemical Engineering Communications	Taylor and Francis	2025-05-30
Debayan Das	Langmuir	ACS Publications	2025-01-30
Anup Kumar Sadhukhan	Waste Management	Elsevier	2024-07-23
Anup Kumar Sadhukhan	Process Safety and Environmental Protection	Elsevier	2024-10-07
Anup Kumar Sadhukhan	Renewable Energy	Elsevier	2024-10-28
Manisha Bal	Chemosphere	Elseviers	2024-11-27
Manisha Bal	Chemosphere	Elseviers	2025-02-16
Manisha Bal	Groundwater for sustainable development	Elsevier	2024-08-18
Manisha Bal	Groundwater for sustainable development.	Elsevier	2024-07-18
Manisha Bal	International journal of environmental science and technology	Springer	2024-04-11
Manisha Bal	International journal of environmental science and technology	Springer	2024-03-28
Manisha Bal	International journal of environmental science and technology	Springer	2024-03-30
Manisha Bal	International journal of environmental science and technology	Springer	2024-03-01
Manisha Bal	Journal of Hazardous Materials Advances	Elsevier	2025-01-27
Manisha Bal	Journal of Hazardous Materials Advances	Elsevier	2024-12-04
Manisha Bal	Process Safety and Environmental Protection	Elsevier	2024-07-25
Gopinath Halder	Advanced Science	Wiley	2024-12-15
Manisha Bal	Sādhana	Springer Nature	2024-11-22
Manisha Bal	Science of the total environment	Elsevier	2024-06-10
Gopinath Halder	Fuel	Elsevier	2024-04-12
Gopinath Halder	Chemical Engineering Journal	Elsevier	2024-04-30
Gopinath Halder	Renewable Energy	Elsevier	2024-05-06

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Reviewer	Name of the Journal	Publisher	Date of Final Review
Manisha Bal	South African journal of chemical engineering	Elsevier	2024-05-07
Gopinath Halder	International Journal of Phytoremediation	Taylor & Francis	2024-06-24
Gopinath Halder	Bioresource Technology Reports	Elsevier	2024-05-03
Gopinath Halder	Chemical Engineering Journal	Elsevier	2024-08-29
Gopinath Halder	Chemosphere	Elsevier	2024-07-17
Gopinath Halder	Chemical Papers	Springer	2024-08-17
Gopinath Halder	Canadian Journal of Chemical Engineering	Wiley	2024-12-10
Gopinath Halder	Catalysis Science and Technology	Royal Society of Chemistry	2024-05-14
Gopinath Halder	DeCarbon	Elsevier	2024-07-27
Gopinath Halder	Environmental Quality Management	Wiley	2024-10-30
Gopinath Halder	Energy Science & Engineering	Wiley	2024-12-07
Gopinath Halder	Energy Conversion and Management	Elsevier	2024-04-22
Gopinath Halder	Environmental Pollution	Elsevier	2024-05-21
Gopinath Halder	Biomass conversion and Biorefinery	Springer	2024-05-17
Gopinath Halder	Energy & Fuels	American Chemical Society	2024-06-19
Gopinath Halder	Chemical Engineering Research and Design	Elsevier	2024-07-29
Manisha Bal	Water, air and soil pollution	Springer Nature	2024-05-06
Gopinath Halder	Circular Economy and Sustainability	Springer	2024-09-17
Gopinath Halder	Energy Conversion and Management: X	Elsevier	2024-10-09
Gopinath Halder	Energy Reports	Elsevier	2024-11-05
Gopinath Halder	Environmental Research	Elsevier	2024-09-10
Gopinath Halder	Environmental Science and Pollution Research	Springer	2024-10-13
Gopinath Halder	Journal of Hazardous Materials Advances	Elsevier	2025-01-07
Gopinath Halder	Environmental Science: Water Research & Technology	Royal Society of Chemistry	2025-01-21
Gopinath Halder	Chemical Engineering Communications	Taylor & Francis	2025-01-08
Gopinath Halder	International Journal of Environmental Analytical Chemistry	Taylor & Francis	2025-02-12
Gopinath Halder	International Journal of Sustainable Energy	Taylor & Francis	2024-11-12
Gopinath Halder	Journal of Cleaner Production	Elsevier	2024-10-19
Gopinath Halder	Journal of Hazardous Materials	Elsevier	2024-11-01
Gopinath Halder	Industrial & Engineering Chemistry Research	American Chemical Society	2024-12-12
Gopinath Halder	International Journal of Green Energy	Taylor & Francis	2025-02-18



Reviewer	Name of the Journal	Publisher	Date of Final Review
Gopinath Halder	Industrial Crops and Products	Elsevier	2025-01-08
Gopinath Halder	Inorganic Chemistry Communications	Elsevier	2025-02-05
Gopinath Halder	Journal of the American Oil Chemists' Society	Wiley	2025-02-17
Gopinath Halder	Biomass & Bioenergy	Elsevier	2025-02-03
Gopinath Halder	Journal of Environmental Chemical Engineering	Elsevier	2025-03-18
Gopinath Halder	Energy Nexus	Elsevier	2025-03-02
Gopinath Halder	Journal of Environmental Management	Elsevier	2025-02-10
Gopinath Halder	International Journal of Environmental Science and Technology	Springer	2025-02-26
Gopinath Halder	Journal of Industrial and Engineering Chemistry	Elsevier	2025-03-03
Gopinath Halder	Journal of the Indian Chemical Society	Elsevier	2024-12-20
Gopinath Halder	Materials Today Sustainability	Elsevier	2024-09-02
Swapan Paruya	Qeios	Qeios Ltd. London (UK)	2024-06-15
Swapan Paruya	International Journal of Thermal Sciences	Elsevier	2024-08-15
Swapan Paruya	CMES-Computer Modeling in Engineering & Sciences	Intelligent Journal System	2025-02-04
Swapan Paruya	International Journal of Heat and Mass Transfer	Elsevier	2024-06-24

4.5.27 Participation in National Committee

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Anup Kumar Sadhukhan	MALAVIYA MISSION TEACHER TRAINING PROGRAMME (MMTPP)	IIT ISM Dhanbad	2025-09-23	2025-09-23

4.5.28 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Parimal Pal	BOARD of Studies	KIIT, Odisha	2025-10-20	2025-09-21
Gopinath Halder	Post-graduate Examination-Board of studies	The University of Burdwan	2024-05-11	2024-05-11
Gopinath Halder	Post-graduate in Chemical Engg Examination-Board of studies	Haldia Institute of Technology	2024-05-28	2024-05-28
Gopinath Halder	Doctoral thesis examination and conduction of viva-voce	The University of Burdwan	2025-01-06	2025-01-06
Gopinath Halder	Doctoral thesis examination and conduction of viva-voce	Jadavpur University	2024-11-23	2024-11-23
Gopinath Halder	Doctoral thesis examination and conduction of viva-voce	Kalinga Institute of Industrial Technology (KIIT), Deemed to be University, Bhubaneswar	2024-06-24	2024-06-24
Gopinath Halder	Doctoral thesis examination and conduction of viva-voce	University of Calcutta	2025-02-28	2025-02-28

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Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Kartik Chandra Ghanta	PhD	Osmania University	2025-03-05	2025-05-12
Jaya Sikder	PhD Thesis Examination	CSIR-North East Institute of Science & Technology Jorhat-785006, Assam, India	2025-02-05	2025-03-06
Tamal Mandal	Board of Examiners to evaluate the thesis titled “EXPLORING THE ADSORPTION POTENTIALS OF PRISTINE Mg-Al LAYERED DOUBLE HYDROXIDE FOR ENVIRONMENTAL REMEDIATION”, submitted by Mr Sravan Bokka (Roll No.: 2021MM01), for admission to the degree of Doctor of Philosophy (Ph.D.)	Indian Institute of Technology (IIT) Patna	2025-01-22	2025-03-08
Tamal Mandal	External Examiner for the evaluation of the Ph.D. Thesis	Chandigarh University	2024-04-11	2024-08-03

4.5.29 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Parimal Pal	Chemical Engg. HAG Prof. Selection	NIT Raipur	2024-09-17	2025-09-18
Parimal Pal	Chemical Engineering, Project Selection	Ministry of Education, Govt. of Singapore	2024-09-20	2025-09-21
Gopinath Halder	Mechanical Engg	Thapar Institute of Engineering and Technology	2024-07-29	2024-07-29
Gopinath Halder	Environmental Science	The University of Burdwan	2024-10-15	2024-10-15
Gopinath Halder	Chemical Engg	Maulana Azad National Institute of Technology Bhopal	2024-12-17	2024-12-17
Jaya Sikder	PhD Science program	CSIR-CMERI	2024-11-19	2024-11-19

4.5.30 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Debayan Das	Paper Microfluidics: The Future of Low-Cost Diagnostics through a Chemical Engineering Lens	Invited Talk	MS Ramaiah Institute of technology	2025-05-30	2025-05-30
Gopinath Halder	Biofuel: A potential biogenic contender towards energy crisis mitigation	International Conference on Sustainable Technologies2024	National Institute of Technology Durgapur	2024-12-12	2024-12-15
Anup Kumar Sadhukhan	High-Efficiency, LowEmissions Clean Coal and Carbon Capture, Utilization and Storage Technologies	MALAVIYA MISSION TEACHER TRAINING PROGRAMME (MMTTP)	IIT ISM Dhanbad	2025-09-23	2025-09-23



Gopinath Halder	Biodiesel: A Sustainable Alternative towards Mitigation of Energy Crisis	Faculty development programme	National Institute of Technology Durgapur	2024-07-01	2024-07-05
Gopinath Halder	Deciphering the valorization of biogenic waste into biofuel	A Short Term Programme on Waste Management, Treatment and Valorization	National Institute of Technology Durgapur	2024-09-19	2024-09-23
Sandip Kumar Lahiri	Startup eco system	The Institute of Chartered Accountants of India	Durgapur	2025-01-25	2025-01-25

4.5.31 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Manisha Bal	A Five-Days Short Term Course (STC) on Sustainable Technologies for Water Treatment	NIT Durgapur	5 days	2025-01-13	2025-01-17
Swapan Paruya	ESMOC 2024-4th Energy System Modeling and Optimization Conference	NIT Durgapur	Computational Fluid Dynamics & Heat Transfer	2024-12-09	2024-12-11

4.6 Department of Electronics and Communication Engineering

4.6.1 Department at a Glance:

The Department started its journey in the year 1983 with the introduction of an undergraduate course. Apart from the four years B. Tech, course the Department also offers two full-time M. Tech, courses, one in Next Generation Communication & Networks and another in Microelectronics and VLSI. The Department also offers Ph.D. in several areas. The faculties are engaged in diverse research on Telecommunication, Antenna and Microwave, Microelectronics and VLSI, Signal and Image processing, and Computational Systems Biology. It is well equipped with sophisticated laboratories in the areas of VLSI, Signal Processing, Microwave, Antenna, and Wireless Communication. The Department has been supported by large-scale projects such as C2S and SMDP for VLSI, DST-FIST for Wireless Communications, and NPMAS for MEMS Research. Sponsored research from DST and SERB has been initiated over the years. The research strength has been reflected by the quality publications of the Department. Faculties of the Department are involved in outreach activities by organizing several short-term courses, and workshops. Faculty members also have academic collaborations with Universities in and outside India. The Department is committed to imparting quality education at undergraduate and postgraduate levels and promulgating quality research in diverse fields of application of electronics engineering.

4.6.2 Mission & Vision

Mission:

- To advance and cater knowledge in the areas of Communication, Signal Processing and VLSI.
- To teach state of the art technologies to meet the growing challenges.
- To carry out research in frontier areas.

Vision:

- To produce highly competent and resourceful young engineers who can perform well in varied professions.

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- To develop a strong fundamental base which enable students to explore academic and collaborative interactions with industry, academia and research organizations.
- To develop excellent research facilities.

4.6.3 Faculty

Name	Designation	Email-id
Choubey Arvind	Professor	achoubey.ece@nitdgp.ac.in
Bhattacharjee Anup Kumar	Professor	akbhattacharjee.ece@nitdgp.ac.in
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Kundu Sumit	Professor	skundu.ece@nitdgp.ac.in
Mahanti Gautam Kumar	Professor	gkmahanti.ece@nitdgp.ac.in
Mahapatra Rajat	Professor	rmahapatra.ece@nitdgp.ac.in
Mal Ashis Kumar	Professor	akmal.ece@nitdgp.ac.in
Chandra Aniruddha	Associate Professor	achandra.ece@nitdgp.ac.in
Dhar Roy Sanjay	Associate Professor	sdroy.ece@nitdgp.ac.in
Kar Rajib	Associate Professor	rkar.ece@nitdgp.ac.in
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Mandal Sujit Kumar	Assistant Professor	skmandal.ece@nitdgp.ac.in
Mondal Hemanta Kumar	Assistant Professor	hkmondal.ece@nitdgp.ac.in
Ranwa Sapana	Assistant Professor	sranwa.ece@nitdgp.ac.in
Samui Suman	Assistant Professor	ssamui.ece@nitdgp.ac.in

4.6.4 Equipments

Sl. No.	Name of the equipment		Date of Purchase	Amount (INR)
1	Vector Network Analyzer (6GHz),Key Sight	01	23.11.2024	909510.00
2	Microwave test bench, Klystron based	10	23.11.2024	858950.00
3	Online UPS 10KVA, Microtek	02	22.11.2024	363598.00
4	DC Power supply, GW Instek	25	18.12.2024	1220000.00
5	Micro Processor Trainer, Model XPO KIT / 8086 & 88 based	16	31.12.2024	157200.00
6	Micro Controller Trainer kit, XPO KIT / 8051	16	31.12.2024	175872.00
7	Orange Raspberry Pi4	05	31.12.2024	93370.00
8	Desktop Computer, Intel core i7, 13700, HP 600G9MT	15	07.03.2025	1619771.00
9	Desktop Computer, Intel core i9, 14900, HP600G9MT	10	07.03.2025	1470652.00

4.6.5 Labs

Sl. No.	Name of Laboratory	Major equipment
1	Basic Electronics Laboratory (UG)	Oscilloscope, Function generator, Multimeter, Power Supply, Electronic Component Development Board
2	Electronic Devices and Circuit Laboratory (UG)	Oscilloscope, Function generator, Multimeter, Power Supply, Electronic Component Development Board
3	Nano Device Laboratory (Research)	Sputtering system (RF and DC) DC probe station with high temperature system Silvaco TCAD Device Simulator Source measure unit



Sl. No.	Name of Laboratory	Major equipment
4	Digital Circuits and System Lab (UG)	Oscilloscope, Function generator, Multimeter, Power Supply, Electronic Component Development Board
5	Network Analysis and Synthesis Laboratory (UG)	Oscilloscope, Function generator, Multimeter, Power Supply, Electronic Component Development Board
6	Electronics System Design Laboratory (UG)	Oscilloscope, Function generator, Multimeter, Power Supply, Electronic Component Development Board
7	Cognitive Radio Networks Research Laboratory (Research)	USRP LAB View Qualnet
8	Microwave & Antenna Laboratory (UG)	Oscilloscope, Spectrum Analyser, Power Meter
9	ECE Research and Development Laboratory (Research)	Computer, Workstation
10	Analog Communication Laboratory (UG)	Oscilloscope, Waveform generator, Spectrum analyser
11	Digital Communication Laboratory (UG)	Oscilloscope, Waveform generator, Spectrum analyser
12	Advanced Communication Laboratory (UG, PG)	Computer
13	Computer Laboratory (UG, PG)	Computer
14	Digital Signal Processing Laboratory (UG, PG)	Computer
15	Computer Aided Design Laboratory (UG, PG)	Computer
16	Microwave and Antenna Research Laboratory (Research)	Vector Network Analyzer (40 GHz) Spectrum Analyzer (9KHz-1.5GHz) NRP2 Power Meter Power Sensor NVR-Z51 FEKO, ANSYS HF Suite, MWO
17	PG Lab (PG)	Computer
18	VLSI Design Laboratory (UG, PG)	EDA Tools: Cadence, Synopsys, Siemens, Ansys Multiple FPGA Development Boards Analog Discovery Kits
19	Smart Mechatronics & MAV Laboratory (Research)	3D Printer, Laser Cutting machine
20	5G Laboratory (Research)	5G core, 5G radio, MEC & application server, 5G Evaluation board, IoT Gateway, 5G camera AI enabled

4.6.6 PhD degree awarded till 2024-25

6

4.6.7 Specialization

- Wireless communication
- VLSI Design

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- Semiconductor Device
- Microwave devices, circuits and antennas
- Wireless Communication
- Signal Processing
- VLSI
- Wireless Communications
- Microwave and mm Wave Technology
- Analog & Mixed Signal VLSI
- Semiconductor Devices and Technology
- Smart Electromechanical Devices and Mechatronics
- Wireless Communications
- Antenna Optimization, Signal Processing
- RF and Microwave Engineering
- Bioinformatics and Computational Biology, Medical Image Processing
- Audio Signal Processing, Machine Learning
- Electronics and Communication
- Microelectronics, Nanosensors, THz Nanotechnology

4.6.8 Proposed Plan for Research

- A quantum computing research plan involves developing new quantum hardware, algorithms, and error correction methods to achieve quantum advantage
- Microstrip antenna
- Machine learning based Mobility Management in Wireless Systems
- Design a new emerging device and its application as Biosensor.
- THz Nano Technology
- Exploring Analog Design Methods for Basic Analog & ADC Blocks
- To explore novel synaptic device technologies and their integration into scalable neuromorphic architectures.
- Have plan for setting up a new research lab on advanced wireless and networking where students can explore theoretical and practical aspects of communication networks.
- Advanced Antenna Arrays For 5G and Future Generation Wireless Communication Systems
- Development of Beamforming Antenna Array for Next-Generation Communication System
- Drug Repositioning or Repurposing
- Advancing Audio Signal Processing for Intelligent Applications This research explores methods in audio signal processing for extracting meaningful information from speech and environmental sounds. Core focus will be on robust feature extraction techniques such as MFCCs, log-mel spectrograms, and wavelet transforms, combined with machine learning models like CNNs, CRNNs, and Transformers for classification, separation, and enhancement tasks. Benchmark datasets including Speech Commands and ESC-50 will be utilized. The study will also emphasize real-time deployment using TinyML on resource-constrained embedded devices. Expected contributions include algorithms achieving improved accuracy, reduced latency, and enhanced robustness to noise, enabling practical applications in communication, assistive technology, and human-machine interaction.
- THz Nanotechnology and Nanosensor fabrications based on 2D materials
- MAV system

4.6.9 Area of Research Interest

- 6G, mmWave, Vehicular Communication, FSO
- VLSI Design, High-performance computing, Energy-efficient interconnect architectures for manycore systems, Heterogeneous System Architecture (HSA), AI-ML, Quantum Computing
- Simulation and Analytical modeling of emerging nano devices
- Microwave devices, circuits and antennas
- D2D Communication, Mobility Management, Physical layer security, Handoff, Cognitive Radio Networks



- Biomedical Signal processing
- VLSI Circuit optimization
- Energy Harvesting, Physical Layer Security, RIS, RSMA, NOMA, Device to Device Communication
- mm Wave Systems, RFIC, 6G Communication
- Design of AMS Blocks in Nanometer CMOS
- Emerging materials for neuromorphic devices (e.g., memristors, phase-change materials, ferroelectrics). Low-power synaptic devices for energyefficient learning; Device variability, reliability, and endurance challenges in neuromorphic hardware.
- Smart Electromechanical Devices and Mechatronics
- Non terrestrial Communications, Cellular IoT, Digital Twin, Quantum Optimization,
- Antenna Optimization, Signal Processing
- Antenna, Antenna array synthesis, Beamforming antenna array for Next Generation Communication
- Gene Regulation Networks
- Speech Signal Processing Computational Intelligence Digital VLSI System Design Machine learning applications Embedded Machine Learning
- MAV system

4.6.10 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
TCS	Assistive Technology	Sponsored Project
DRDO	Speech Processing	Sponsored Project
TCS Research	RIS for Next Generation Communication	Research Advisor to TCS Research
IISc & LAM Research	Virtual 3D Process Simulator	Training on SEMulator3D

4.6.11 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
The University of British Columbia, Canada	Millimetre wave channel sounding	A. Chandra	Developing a joint IEEE standard
Brno University of Technology	Vehicular communication	A. Chandra	Joint measurement experiment, data analysis, and publication
University of North Texas in Denton, Texas	Biomedical applications.	Prof. Saraju Mohanty	Research in the domain of biomedical applications.
Vellore Institute of Technology, Vellore, Tamilnadu	Wireless Communication	02	Joint research; DSC member of PhD students
University of Parma, Italy	Wireless Communication	03	Joint research
KL University	Semiconductor Device	2	Submitted 1 project proposal to ARG (ANRF)
University of Parma, Italy	Wireless Communication	Prof. Gianluigi Ferrari, Prof. Riccardo Raheli, Prof. Luca Davoli	Writing paper jointly

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Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
IISc & LAM Research	CMOS Processor Simulator	Ashis Kumar Mal	Training on SEMulator3D
University of Liverpool, UK	GaN Devices	Ivona Mitrovic	Joint research works and publication
Sardar Vallabhbhai National Institute of Technology, Surat	Gan Devices	Partha Das	Joint research works and publications
IIT Bhubaneswar	Non Terrestrial Communications	Dr. Atri Mukhopadhyay	Ongoing research work
NIT Silchar	Non Terrestrial Communications	Dr. Sucharita Chakraborty	Ongoing research work
NIT warangal	Antenna Optimization, Signal Processing	Dr. Gopi Ram	Joint PhD program
IIT Kharagpur	Embedded System	Prof. Indrajit Chakrabarti	Hardware Prototype Design

4.6.12 Innovations and Technology Transfer (Patents filed during)

Title	Inventors	Application Nos	Date of Filling
Computer-Implemented System for Assessing and Diagnosing Diseases	Hemanta Kumar Mondal and Prasenjit Maji	202431055496 A	2024-07-20
Communication System For Network Prone Areas	S. Ghosh, S. Dhar Roy, S. Kundu	202431093784A	2024-11-29
Design and Implementation of Combined Array Antenna for Point-to-Point 5 G mm-Wave Communication and Wireless Applications	Arun Raj and Durbadal Mandal	202531005689	2025-01-24

4.6.13 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
[2]. Patra, R., Maji, P., Srivastava, D.S. Hemanta Kumar Mondal	Machine learning-driven performance assessment of network-on-chip architectures	The Journal of Supercomputing, Springer Nature	Volume:80 Issue No: Page No: 24483–24519 Year:2024 Month:Jul
N. Singh, S. K. Jha, A. Chandra, R. Zavorka, P. Horky, T. Mikulasek, J. Blumenstein, A. Prokes, J. Wojtun, J. M. Kelner, C. Ziolkowski	Channel modeling for 60 GHz fixed mmWave O2I and O2O uplink with angular misalignment	IEEE Antennas and Wireless Propagation Letters	Volume:23 Issue No:5 Page No:1653–1657 Year:2024 Month:May



Author(s) Name	Paper Name	Journal Name	Others Info
R. Zavorka, T. Mikulasek, J. Vychodil, J. Blumenstein, A. Chandra, H. Hammoud, J. M. Kelner, C. Ziolkowski, T. Zemen, C. Mecklenbrauker, A. Prokes	Characterizing the 80 GHz channel in static scenarios: Diffuse reflection, scattering and transmission through trees under varying weather conditions	IEEE Access	Volume:12 Issue No:2024 Page No:144738–14474 Year:2024 Month:Oct
Rajashree Das and Aprajita Kumari	Sensitivity analysis on stack gate-dielectric GaAs tri gate FinFET based oxygen gas sensor	Applied Physics A	Volume:130 Issue No:422 Page No:1-7 Year:2024 Month:May
Partha Banerjee, Rajib Das, Aritra Acharyya, Dwaipayan Ghosh, Arindam Biswas, Hiroshi Inokawa, Hiroaki Satoh & A. K. Bhattacharjee	Edge-Terminated GaN Reverse Double-Drift IMPATT Structure for Efficient Millimeter-Wave Radiation	IETE Journal of Research	Volume: Issue No: Page No:1-17 Year:2025 Month:Mar
S. Ghosh, S. Dhar Roy, B. Panigrahi, S. Kundu	On Providing Energy Harvested Multi-Hop D2D Communication with UAV Bridge in Disaster Area	Wireless Personal Communications, Springer	Volume:139 Issue No:1319 (2024) Page No: Year:2024 Month:Oct
D. K. Nayak, A. Singh, S. Dhar Roy, S. Kundu	Performance Analysis of NR 5G Cellular Vehicle to Everything Communication in Mode 3	Wireless Personal Communications, Springer	Volume:137 Issue No: Page No:27-48 Year:2024 Month:Jul
P. Ghosh, S. Dhar Roy, S. Kundu	Outage of cooperative NOMA with an energy harvesting relay in an underlay cognitive radio network	IJCS, Wiley	Volume:37 Issue No:8 Page No: Year:2024 Month:May
S. Mondal, L. Davoli, S. Dhar Roy, S. Kundu, G. Ferrari, R. Raheli	Throughput and delay analysis of cognitive M2M communications	Journal of Network and Computer Applications, Elsevier	Volume:225 Issue No: Page No: Year:2024 Month:May
A. Baranwal, S. Dhar Roy, S. Kundu	Outage and ergodic capacity analysis of a full-duplex energy-harvesting cooperative non-orthogonal multiple access network	IJCS, Wiley	Volume:37 Issue No:6 Page No: Year:2024 Month:Apr
S. Ghosh, A. Bhowmick, S. Dhar Roy, S. Kundu	UAV-RIS Enabled NOMA Network for Disaster Management With Hardware Impairments	IEEE Transactions on Aerospace and Electronic Systems,	Volume:60 Issue No:6 Page No: Year:2024 Month:Dec
P. Ghosh, S. Dhar Roy, S. Kundu	Energy Harvesting–Assisted Two-User Cooperative NOMA With Ambient Backscattering	IJCS, Wiley	Volume:38 Issue No:4 Page No: Year:2025 Month:Jan
P. Ghosh, H. Sarkar, S. Sharma, S. Dhar Roy, S. Kundu	Outage analysis of a two users NOMA with partial selection of an energy harvesting	Wireless Networks, Springer	Volume:31 Issue No:4 Page No: Year:2025

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Author(s) Name	Paper Name	Journal Name	Others Info
	relay		Month:Mar
H. Patidar, A. Das, R. Kar	Small Planar Antenna Array Design Using Length and Spacing through Matlab-HFSS Interfacing	International Journal of Communication	Volume:37 Issue No:9 Page No: Year:2024 Month:Jun
A. Baranwal, S. Sharma, S. D. Roy, & Sumit Kundu	On performance of a full duplex SWIPT enabled cooperative NOMA network	Wireless Networks	Volume:30(3) Issue No: Page No:1643-1656 Year:2024 Month:
Baranwal, A., Dhar Roy, S., & Sumit Kundu.	Outage and ergodic capacity analysis of a full-duplex energy-harvesting cooperative non-orthogonal multiple access network	International Journal of Communication Systems	Volume:37 Issue No:6 Page No:e5710 Year:2024 Month:
Mondal, S., Davoli, L., Roy, S. D., Sumit Kundu, Ferrari, G., & Raheli, R.	Throughput and delay analysis of cognitive M2M communications	Journal of Network and Computer Applications	Volume:225 Issue No: Page No:103856 Year:2024 Month:
Ghosh, P., Dhar Roy, S., & Sumit Kundu.	Outage of cooperative NOMA with an energy harvesting relay in an underlay cognitive radio network	International Journal of Communication Systems	Volume:37 Issue No:8 Page No:e5749 Year:2024 Month:
Ghosh, S., Roy, S. D., Panigrahi, B., & Sumit Kundu.	On Providing Energy Harvested Multi-hop D2D Communication with UAV Bridge in Disaster Area	Wireless Personal Communications	Volume:138 Issue No:3 Page No:1501-1529 Year:2024 Month:
Ghosh, S., Bhowmick, A., Roy, S. D., & Sumit Kundu.	UAV-RIS Enabled NOMA Network for Disaster Management with Hardware Impairments	IEEE Transactions on Aerospace and Electronic Systems	Volume: Issue No: Page No: Year:2024 Month:
Ghosh, P., Dhar Roy, S., & Sumit Kundu.	Energy Harvesting–Assisted Two-User Cooperative NOMA With Ambient Backscattering	International Journal of Communication Systems	Volume:38 Issue No:4 Page No:e6133 Year:2025 Month:
Baranwal, A., Sarkar, H., Sharma, S., & Kundu, Sumit.	On outage performance and ergodic capacity analysis of two user NOMA in a cooperative cognitive radio network with an energy harvesting relay	International Journal of Communication Systems	Volume:38 Issue No:6 Page No:e70015 Year:2025 Month:
Ghosh, P., Sarkar, H., Sharma, S., Roy, S. D., & Sumit Kundu.	Outage analysis of a two users NOMA with partial selection of an energy harvesting relay	Wireless Networks	Volume: Issue No: Page No:115 Year:2025 Month:



Author(s) Name	Paper Name	Journal Name	Others Info
Baranwal, A., Roy, S. D., & Kundu, Sumit.	Secrecy and reliability performance of an energy-harvesting-enabled two-user NOMA system	ETRI Journal	Volume: Issue No: Page No: Year:2025 Month:
Jeet Banerjee, Abhik Gorai, Rowdra Ghatak	A compact UWB MIMO antenna augmented with isolation improvement structures in situ with ground stubs and slots	International Journal of Microwave and Wireless Technologies	Volume:16 Issue No:3 Page No:454-465 Year:2024 Month:Apr
Shashi Kanta Tripathy, Abhik Gorai, Trupti Mayee Behera, Rowdra Ghatak	A miniaturized dual band terahertz metamaterial based absorber as a biosensor for non-melanoma skin cancer diagnostic	Optik	Volume:316 Issue No: Page No: Year:2024 Month:Sep
Riya Chakraborty, Abhik Gorai, Jyoti Ranjan Panda, Rowdra Ghatak	A dongle-sized bandwidth-reconfigurable filtenna for UWB/5G-n77 band applications	International Journal of Electronics Letters	Volume:13 Issue No:1 Page No:83-95 Year:2024 Month:Oct
Jeet Banerjee, Abhik Gorai, Rowdra Ghatak	Development and investigation of a compact band-notched MIMO antenna attaining wideband isolation for UWB applications	Journal of Electromagnetic Waves and Applications	Volume:38 Issue No:11 Page No:1283-1299 Year:2024 Month:Jun
Sayani Bindai, Sapana Ranwa, Rowdra Ghatak	A tunable and polarization insensitive wideband THz absorber using a perturbed fractal patterned metasurface augmented with graphene	Journal of Optics	Volume:27 Issue No:4 Page No:045101 Year:2025 Month:Feb
Prabir Ghosh. Abhik Gorai, Subhrakanta Behera, Rowdra Ghatak	A Compact MIMO Array Antenna with Wideband Circular Polarization Using Magneto-Electric Dipole Elements for Millimeter-Wave Applications	Journal of Infrared, Millimeter, and Terahertz Waves	Volume:24 Issue No:46 Page No: Year:2025 Month:Mar
Anu Samanta, Indranil Hatai and Ashis Kumar Mal	A survey on hardware accelerator design of deep learning for edge devices	Wireless Personal Communications	Volume:137 Issue No:3 Page No:1715--1760 Year:2024 Month:Jul
Partha Das, Harry Finch, Holly J Edwards, Saeed Almalki, Vinod R Dhanak, Rajat Mahapatra and Ivona Z Mitrovic	Accurate band alignment of sputtered Sc2O3 on GaN for high electron mobility transistor applications	Semiconductor Science and Technology	Volume:39 Issue No:7 Page No:075017 Year:2024 Month:Jun
Punam Tiwary, Rajat Mahapatra & Amit K. Chakraborty	Pyramid-like zinc oxide microstructures as humidity sensor	Journal of Materials Science: Materials in Electronics	Volume:35 Issue No: Page No:1424 Year:2024 Month:Jul

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Author(s) Name	Paper Name	Journal Name	Others Info
S. Biswas , A. D. Paul , C. Ghosh, A. Mondal, and R. Mahapatra	Active Electrode Dependence of HfO _x -Based Flexible RRAM With a Stack Engineered Thermal Enhancement Layer	IEEE TRANSACTIONS ON ELECTRON DEVICES	Volume:71 Issue No:12 Page No:7470 Year:2024 Month:Oct
Punam Tiwary, Amit K. Chakraborty, Holly J. Edwards, Vinod R. Dhanak & Rajat Mahapatra	Graphene Oxide Humidity Sensor: Effect of Substrates	Journal of Electronic Materials	Volume:54 Issue No: Page No:321 Year:2024 Month:Nov
S Biswas, G Kumar Mahanti, N Chattaraj	Extreme Learning Machine Model For Multi-Fault Diagnosis of Analog Circuits	Journal of Electronic Testing	Volume:41 Issue No:2 Page No:221-239 Year:2025 Month:
Nilanjan Chattaraj	SMA Actuated Bi-Stable Electromechanical Mechanism Design for High-Current Circuit-Breaker Switching Application	Journal of Vibration Engineering and Technologies	Volume:13 Issue No:4 Page No:229 Year:2025 Month:
Arghyadip Roy and Nilanjan Biswas	Robust & Low Complexity Task Scheduling Algorithms for a Mobile Edge Computing System	IEEE Transactions on Green Communications and Networking	Volume:9 Issue No:3 Page No:1340-1353 Year:2024 Month:Oct
Arun Raj, D Mandal	Design and performance analysis of dielectric resonator antenna array for 5G mm-wave ground-based navigation and wireless applications	Arabian Journal for Science and Engineering	Volume:50 Issue No: Page No:10611–10640 Year:2024 Month:
Arun Raj, D Mandal	Design and Analysis of Sierpinski Fractal Antennas for Millimeter-Wave 5G and Ground-Based Radio Navigation Applications	Transactions on Emerging Telecommunications Technologies	Volume:35 Issue No:11 Page No:e70001 Year:2024 Month:Oct
Arun Raj, D Mandal	Design and analysis of graphene-based PBG and EBG array antennas for wideband and multiband mm-wave applications	Waves in Random and Complex Media	Volume: Issue No: Page No:1-35 Year:2024 Month:Oct
Arun Raj, D Mandal	Design and Performance Analysis of Graphene Integrated CPW Fed Fractal Antennae for 5G mm-Wave and Ground Based Navigation Applications	MAPAN	Volume:39 Issue No: Page No:967-993 Year:2024 Month:Oct
Arun Raj, D Mandal	Design and performance analysis of fractal slot array antenna for advanced 5G mm-	International Journal of Electronics	Volume:112 Issue No:8 Page No:1821–1843



Author(s) Name	Paper Name	Journal Name	Others Info
	wave applications		Year:2024 Month:Sep
Gopi Ram, D Mandal	TMLAA for Automatic Harmonic Beam Steering Towards User Defined Direction Using Black Hole Mechanics Optimization	IEEE Transactions on Cognitive Communications and Networking	Volume:10 Issue No:4 Page No:1386-1397 Year:2024 Month:Aug
Arun Raj, D Mandal	Design and implementation of hybrid fed array antennae for Sub-6 GHz and 5G mmwave communication and wireless applications	International Journal of Microwave and Wireless Technologies	Volume:16 Issue No:4 Page No:605-624 Year:2024 Month:Jan
Avishek Chakraborty , Ravi Shankar Saxena, Indrasen Singh, Jyoti Bansal, Alaa Salim Abdalrazzaq, Mustafa Asaad Rasol, Anita Gehlot, Sandip Bhattacharya, Kalyan Sundar Kola, Gopi Ram, Durbadal Mandal	Radiation Pattern Synthesis of Smart Fourth Dimensional (4D) Antenna Arrays Using Optimal Pulse Splitting Method Scientia Iranica		Volume: 10.24200/sci.2024.63 482.8420 Issue No: Page No: Year:2024 Month:Oct
AA Shaikh, AK Mukhopadhyay, S Poddar, S Samui	Toward robust and accurate myoelectric controller design based on multiobjective optimization using evolutionary computation	IEEE Sensors Journal	Volume:24 (5), Issue No: Page No:6418-6429 Year:2024 Month:Jan
Sayani Bindai, Sapana Ranwa and Rowdra Ghatak*	A tunable and polarization insensitive wideband THz absorber using a perturbed fractal patterned metasurface augmented with graphene	Journal of Optics	Volume:27 Issue No:4 Page No:045101 (15pp) Year:2025 Month:Feb

4.6.14 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Rajashree Das	A Simulation Study on Optimizing the Self-Heating and Hot Carrier Effects using Heterodielectric Buried-Oxide FinFETs	Pramana Journal of Physics	Volume: Issue No: Page No: Year:2025 Month:Jun

4.6.15 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info

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Author(s) Name	Paper Name	Conference Name	Others Info
Ramapati Patra, Hemanta Kumar Mondal	Performance Enhancement of Network-on- Chip Architecture using Machine Learning Techniques	4th Asian Conference on Innovation in Technology (ASIANCON)	DOI/ISBN: 10.1109/ASIANCON62057.2024.10837852 Volume: Issue No: Page No:1-8 Year:2024 Month:Aug Presenter:CO-AUTHOR
Ramapati Patra, Hemanta Kumar Mondal	Performance Assessment of 3D Network-on-Chip Architecture using Ensemble Learning Technique	3rd International Conference for Advancement in Technology (ICONAT)	DOI/ISBN: 10.1109/ICONAT61936.2024.10775272 Volume: Issue No: Page No:1-8 Year:2024 Month:Sep Presenter:CO-AUTHOR
S.K.Porel, S. Nag, D. Sengupta, A. Chandra, H. K. Mondal	Power-Efficient Asynchronous FIFO Architecture for Forest Surveillance System	4th Asian Conference on Innovation in Technology (ASIANCON)	DOI/ISBN: 10.1109/ASIANCON62057.2024.10837991 Volume: Issue No: Page No:1-6 Year:2024 Month:Aug Presenter:CO-AUTHOR
Aniruddha Mallick, H. Prasad, P Maji, S Banerjee, H. K. Mondal	Deep Learning for Brain Tumor Detection with FPGA Pathway	IEEE-iSES Conference, Delhi	DOI/ISBN: 10.1109/iSES63344.2024.00082 Volume: Issue No: Page No:364-367 Year:2024 Month:Dec Presenter:CO-AUTHOR
S.Nag, S.K.Porel, D. Sengupta, A. Chandra, H. K. Mondal	Power Conscious Asynchronous FIFO for Forest Event Surveillance	IEEE-iSES Conference, Delhi	DOI/ISBN: 10.1109/iSES63344.2024.00026 Volume: Issue No: Page No:75-80 Year:2024 Month:Dec Presenter:CO-AUTHOR
S.Nag, S.K.Porel, D. Sengupta, A. Chandra, H. K. Mondal	Consequence of Various Clock Parameters on Power / Timing Analysis for VLSI Circuits	IEEE-iSES Conference, Delhi	DOI/ISBN: 10.1109/iSES63344.2024.00085 Volume: Issue No: Page No:376-379 Year:2024 Month:Dec Presenter:CO-AUTHOR
S.K.Porel, S.Nag, A. Chandra, H. K. Mondal	Power, Performance and Area Optimization of Asynchronous FIFO	IEEE-iSES Conference, Delhi	DOI/ISBN: 10.1109/iSES63344.2024.00083 Volume: Issue No: Page No:368-371 Year:2024 Month:Dec
D. S. Srivastava, S. Kundu, A. Senapati, H. K. Mondal	Offline Power Estimation in CMOS VLSI Circuit Using Machine Learning Model	IEEE-iSES Conference, Delhi	DOI/ISBN: 10.1109/iSES63344.2024.00051 Volume: Issue No: Page No: 210-213 Year:2024 Month:Dec Presenter:CO-AUTHOR
A. Ganguly, A. Chakraborty, A. A. Ambekar and H. K. Mondal	Power, Performance, and Area Optimisation of the RISC-V Processor	2024 IEEE International Symposium on Smart Electronic Systems (iSES)	DOI/ISBN: 10.1109/iSES63344.2024.00064 Volume: Issue No: Page No:271-274 Year:2024 Month:Dec



Author(s) Name	Paper Name	Conference Name	Others Info
Presenter:CO-AUTHOR			
J. Wojtun, C. Ziolkowski, J. M. Kelner, A. Chandra, R. Shukla, A. Ghosh, A. Prokes, T. Mikulasek, R. Zavorka, P. Horky	Spectral efficiency for mmWave downlink with beam misalignment in urban macro scenario	URSI Atlantic Radio Science Meeting (URSI AT-RASC)	DOI/ISBN: https://doi.org/10.46620/URSI-ATRASC24/WVAQ4220 Volume: Issue No: Page No:1-4 Year:2024 Month:May Presenter:CO-AUTHOR
S. Sarkar, A. Chandra, A. Dey	Classification of cognitive stress with StressGAN-GP	IEEE International Conference on Communication, Computing and Signal Processing (IICCCS)	DOI/ISBN: https://doi.org/10.1109/IICCCS61609.2024.10763691 Volume: Issue No: Page No:1-5 Year:2024 Month:Sep Presenter:CO-AUTHOR
R. Zavorka, T. Mikulasek, J. Vychodil, A. Prokes, J. Blumenstein, A. Chandra, J. M. Kelner, C. H. Ziolkowski, H. Hammoud, J. Wojtun	Long-term dynamic channel analysis at 60 & 80 GHz for autonomous ground vehicles	IEEE Conference on Antenna Measurements & Applications (CAMA)	DOI/ISBN: https://doi.org/10.1109/CAMA62287.2024.10986285 Volume: Issue No: Page No:1-6 Year:2024 Month:Oct Presenter:CO-AUTHOR
A. Ghosh, A. Chakrabarty, A. Chandra, S. Kundu, S. Chakrabarti	Detecting malignant tumors using a network of spiking neurons through a population based stochastic temporal encoding	IEEE India Conference (INDICON)	DOI/ISBN: https://doi.org/10.1109/INDICON63790.2024.10958309 Volume: Issue No: Page No:1-6 Year:2024 Month:Dec Presenter:CO-AUTHOR
J. Wojtun, C. Ziolkowski, J. M. Kelner, T. Mikulasek, R. Zavorka, J. Blumenstein, A. Prokes, A. Chandra, N. Narayan, A. Ghosh	Variability of radio signal attenuation by single deciduous tree versus reception angle at 80 GHz	European Conference on Antennas and Propagation (EuCAP)	DOI/ISBN: https://doi.org/10.23919/EuCAP63536.2025.10999896 Volume: Issue No: Page No:1-5 Year:2025 Month:Mar Presenter:CO-AUTHOR
J. Wojtun, C. Ziolkowski, J. M. Kelner, T. Mikulasek, R. Zavorka, J. Blumenstein, A. Prokes, A. Chandra, R. Shukla, A. Ghosh	Synthesis of omnidirectional path loss model based on directional model and multi- elliptical geometry	European Conference on Antennas and Propagation (EuCAP)	DOI/ISBN: https://doi.org/10.23919/EuCAP63536.2025.10999302 Volume: Issue No: Page No:1-5 Year:2025 Month:Mar Presenter:CO-AUTHOR

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Author(s) Name	Paper Name	Conference Name	Others Info
Rajashree Das and Aprajita Kumari	Performance Analysis of Horizontal/Vertical Stack Dielectrics on Temperature of GaAs based FinFET	ICCCNT	DOI/ISBN: 10.1109/ICCCNT61001.2024.10725581 Volume: Issue No: Page No:1-4 Year:2024 Month:Jun Presenter:CO-AUTHOR
Aprajita Kumari and Rajashree Das	Enhanced RF/Analog Performances of Beyond 6nm tox of Dual Stack Gate Dielectric GaAs based FinFET	CCIS	DOI/ISBN: 10.1109/CCIS63231.2024.10932022 Volume: Issue No: Page No:1-5 Year:2024 Month:Dec Presenter:CO-AUTHOR
Rajashree Das	Investigation on digital inverter circuit based on Germanium FinFET	IC2E3	DOI/ISBN: 10.1109/IC2E362166.2024.10827342 Volume: Issue No: Page No:1-5 Year:2024 Month:Jun Presenter:SELF
P. Ghosh, S. Dhar Roy and S. Kundu	Outage Analysis of an Incremental Relaying Aided Accumulated Energy harvesting Based Two Users NOMA Network Assisted by an IRS	National Conference on Communications (NCC), New Delhi, India	DOI/ISBN: 10.1109/NCC63735.2025.10983512 Volume: Issue No: Page No:1-6 Year:2025 Month:Mar Presenter:CO-AUTHOR
P. Ghosh, S. D. Roy and S. Kundu	Outage of an IRS Enabled Two Users NOMA in a Spectrum Shared Network	IEEE 21st India Council International Conference (INDICON), Kharagpur, India	DOI/ISBN: DOI: 10.1109/INDICON63790.2024.10958502 Volume: Issue No: Page No:1-6 Year:2024 Month:Dec Presenter:CO-AUTHOR
S. Ghosh, A. Bhowmick, S. D. Roy and S. Kundu	Secrecy Outage of a RIS Aided Two Users NOMA with Hardware Impairments	2024 IEEE 21st India Council International Conference (INDICON), Kharagpur, India,	DOI/ISBN: DOI: 10.1109/INDICON63790.2024.10958357 Volume: Issue No: Page No:1-6 Year:2024 Month:Dec Presenter:CO-AUTHOR
D. Nayak, U. Murmu, S. Dhar Roy	Advanced Handover Algorithm for 5G Network Robustness via NR5G Technology and Non-Standalone Architecture	Proceedings of the 2024 Sixteenth International Conference on Contemporary Computing	DOI/ISBN: 9798400709722 Volume: Issue No: Page No:612–617 Year:2024 Month:Oct Presenter:CO-AUTHOR
P. Ghosh, S. Ghosh, S. D. Roy and S. Kundu	Outage Analysis of an IRS Assisted Two Users NOMA with Energy Harvesting Relay Selection	2024 IEEE Region 10 Symposium (TENSYP), New Delhi, India	DOI/ISBN: doi: 10.1109/TENSYP61132.2024.10752282 Volume: Issue No: Page No:1-7 Year:2024 Month:Sep Presenter:CO-AUTHOR



Author(s) Name	Paper Name	Conference Name	Others Info
P. Ghosh, H. Yenna, S. D. Roy and S. Kundu	Outage Analysis of an EH Relay aided Network with AmbientBackscattering	2024 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), Bangalore, India	DOI/ISBN: doi: 10.1109/CONECCT62155.2024.10677243. Volume: Issue No: Page No:1-6 Year:2024 Month:Jul Presenter:CO-AUTHOR
Priyanka Ghosh., Roy, S. D., & Sumit Kundu	Outage of an IRS Enabled Two Users NOMA in a Spectrum Shared Network	IEEE 21st India Council International Conference (INDICON)	DOI/ISBN: 10.1109/INDICON63790.2024.10958502 Volume: Issue No: Page No:1-6 Year:2024 Month: Presenter:CO-AUTHOR
Ghosh, A., Chakraborty, A., Chandra, A., Sumit Kundu, & Chakrabarti, S	Detecting Malignant Tumors Using a Network of Spiking Neurons Through a Population Based Stochastic Temporal Encoding	IEEE 21st India Council International Conference (INDICON)	DOI/ISBN: 10.1109/INDICON63790.2024.10958309 Volume: Issue No: Page No:1-6 Year:2024 Month: Presenter:CO-AUTHOR
Ghosh, Sayanti, Abhijit Bhowmick, Sanjay Dhar Roy, and Sumit Kundu.	Secrecy Outage of a RIS Aided Two Users NOMA with Hardware Impairments	IEEE 21st India Council International Conference (INDICON)	DOI/ISBN: 10.1109/INDICON63790.2024.10958357 Volume: Issue No: Page No:1-6 Year:2024 Month: Presenter:CO-AUTHOR
Priyanka Ghosh ; Sayanti Ghosh; Sanjay Dhar Roy; Sumit Kundu	Outage Analysis of an IRS Assisted Two Users NOMA with Energy Harvesting Relay Selection	2024 IEEE Region 10 Symposium (TENSYP)	DOI/ISBN: 10.1109/TENSYP61132.2024.10752282 Volume: Issue No: Page No: Year:2024 Month:Sep Presenter:SELF
Priyanka Ghosh; Harshitha Yenna; Sanjay Dhar Roy; Sumit Kundu	Outage Analysis of an EH Relay aided Network with AmbientBackscattering	IEEE CONECCT 2024	DOI/ISBN: 10.1109/CONECCT62155.2024.10677243 Volume: Issue No: Page No:1-6 Year:2024 Month: Presenter:CO-AUTHOR
Sayani Bindai, Sapana Ranwa, Rowdra Ghatak	Comparing the Absorption Characteristics of Different Fractal Shapes as Unit Cells for THz Metasurface	2024 IEEE International Conference on Communication, Computing and Signal Processing (IICCCS)	DOI/ISBN: 10.1109/IICCCS61609.2024.10763837 Volume: Issue No: Page No:1-4 Year:2024 Month: Presenter:CO-AUTHOR
Debashree Patra Karmakar, Rowdra Ghatak, Chiranjib Goswami	Enhancement of Gain of Rectangular Microstrip Antenna Through Metamaterial Inclusion	2024 IEEE International Conference on Communication, Computing and Signal Processing (IICCCS)	DOI/ISBN: 10.1109/IICCCS61609.2024.10763705 Volume: Issue No: Page No:1-4 Year:2024 Month: Presenter:CO-AUTHOR
Naveen Bhukya, Amartya Banerjee, Tapas Chakravarty, A Anil Kumar,	Metasurface Based Multi-Band Polarization Converter Using Subwavelength Stepped Impedance Resonator	2024 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	DOI/ISBN: 10.1109/MAPCON61407.2024.10923055 Volume: Issue No: Page No:1-4 Year:2024 Month: Presenter:CO-AUTHOR

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Author(s) Name	Paper Name	Conference Name	Others Info
Rowdra Ghatak			
Amartya Banerjee, Tapas Chakravarty,	Dual-Frequency, Polarization- Dependent Beam Steering With a	2024 IEEE Microwaves, Antennas, and Propagation	DOI/ISBN: 10.1109/MAPCON61407.2024 .10922982 Volume: Issue No: Page No:1-4 Year:2024 Month:
Rowdra Ghatak	Novel Phase-Profiled Metasurface	Conference (MAPCON)	Presenter:CO-AUTHOR
V. Kiran Bharadwaj, Soumya Chakravarty, Tapas Chakravarty, Rowdra Ghatak	Alford Loop Inspired Phase- Gradient Metasurface Lens for XBand Applications	2024 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	DOI/ISBN: 10.1109/MAPCON61407.2024 .10922923 Volume: Issue No: Page No:1-4 Year:2024 Month: Presenter:CO-AUTHOR
Jeet Banerjee, Manoj Sarkar, Rowdra Ghatak	Fractal Inspired Dual-Band Compact UWB MIMO Radiator with Wideband Isolation	2024 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	DOI/ISBN: 10.1109/MAPCON61407.2024 .10923251 Volume: Issue No: Page No:1-4 Year:2024 Month: Presenter:CO-AUTHOR
Sayani Bindai, Sapana Ranwa, Rowdra Ghatak	A Compact Wideband Fractal Inspired Absorber Augmented with Monolayer Graphene For THz Signal Attenuation	2024 IEEE 21st India Council International Conference (INDICON)	DOI/ISBN: 10.1109/INDICON63790.2024 .10958494 Volume: Issue No: Page No:1-5 Year:2024 Month: Presenter:CO-AUTHOR
Sameen Azhar; Saikat Biswas; Argha Paul; Rajat Mahapatra	Cycles Dependent Resistive Switching of Au/ZnO/ITO- Coated PET Flexible Resistive Memory Devices	8th IEEE Electron Devices Technology & Manufacturing Conference (EDTM)	DOI/ISBN: 10.1109/EDTM58488.2024.10 511430 Volume: Issue No: Page No: Year:2024 Month:May Presenter:CO-AUTHOR
Anisha Sengupta National Institute of Technology Durgapur, India ; Nilanjan Biswas; Ivan Stupia; Luc Vandendorpe	Joint Scheduling and Mobile Edge Computing for Inband NB- IoT Networks	IEEE International Conference on Signal Processing and Communications (SPCOM)	DOI/ISBN: 10.1109/SPCOM60851.2024.1 0631609 Volume: Issue No: Page No: Year:2024 Month:Aug Presenter:CO-AUTHOR
Shrabani Sarkar, Sujit K Mandal	Direction Finding Estimation using First-Two Significant Harmonics of Time Modulated Array With Bipolar Squared Pulse Sequence	INDICON	DOI/ISBN: DOI: 10.1109/INDICON63790.2024 .10958275 Volume: Issue No: Page No:1-5 Year:2024 Month:Dec Presenter:CO-AUTHOR



Author(s) Name	Paper Name	Conference Name	Others Info
Shrabani Sarkar, Sujit K Mandal	Time-Modulated Array for Direction of Arrival Estimation using Unipolar and Bipolar Pulse Sequences	2024 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	DOI/ISBN: DOI: 10.1109/MAPCON61407.2024.10923153 Volume: Issue No: Page No:1-5 Year:2024 Month:Dec Presenter:CO-AUTHOR
Shrabani Sarkar, Sujit K Mandal	An On-chip Fractal Antenna using Defective Ground Structure for Compact RFIC Applications	2024 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Hyderabad, India	DOI/ISBN: doi: 10.1109/MAPCON61407.2024.10923295 Volume: Issue No: Page No:1-4 Year:2024 Month:Dec Presenter:SELF
Shrabani Sarkar, Sujit K Mandal	Direction of Arrival Estimation using Positive and Negative Harmonics of Time-Modulated Array	2024 IEEE International Conference on Communication, Computing and Signal Processing (IICCCS), ASANSOL, India	DOI/ISBN: doi: 10.1109/IICCCS61609.2024.10763777 Volume: Issue No: Page No:1-4 Year:2024 Month:Sep Presenter:CO-AUTHOR
Soumen Garai, Suman Samui	Optimizing Performance of Spoken Language Identification Systems for Indian Languages Using Ensemble Deep Learning Models	IEEE Calcutta Conference (CALCON) 2024	DOI/ISBN: 10.1109/CALCON63337.2024.10914168. Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Soumen Garai, Suman Samui	Exploring tinyml frameworks for small-footprint keyword spotting: A concise overview	International Conference on Signal Processing and Communications (SPCOM)	DOI/ISBN: 10.1109/SPCOM60851.2024.10631631 Volume: Issue No: Page No: Year:2024 Month:Jul Presenter:CO-AUTHOR
Sayani Bindai, Sapana Ranwa and Rowdra Ghatak	A Compact Wideband Fractal Inspired Absorber Augmented with Monolayer Graphene For THz Signal Attenuation	2024 IEEE 21st India Council International Conference (INDICON)	DOI/ISBN: 10.1109/INDICON63790.2024.10958494 Volume: Issue No: Page No:1-5 Year:2024 Month:Dec Presenter:
Sayani Bindai, Sapana Ranwa and Rowdra Ghatak	Comparing the Absorption Characteristics of Different Fractal Shapes as Unit Cells for THz Metasurface	2024 IEEE International Conference on Communication, Computing and Signal Processing (IICCCS)	DOI/ISBN: 10.1109/IICCCS61609.2024.10763837 Volume: Issue No: Page No:1-4 Year:2024 Month:Sep Presenter:

4.6.16 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Alok Baranwal	Sanjay Dhar Roy, Sumit Kundu	5G and Beyond Wireless Communications	Full-Duplex Energy Harvesting-Based Cooperative NOMA Network	Publisher: CRC Press Publication Date: 2024-0903

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Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Priyanka Ghosh	Sanjay Dhar Roy, Sumit Kundu	5G and Beyond Wireless Communications	Cooperative NOMA with Hybrid PTS-Based Energy Harvesting Relay	Publisher: CRC Press Publication Date: 2024-0903

4.6.17 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
Faculty Development Program on Next Generation RFIC: Design, Fabrication and Characterization of Components	Department of Electronics and Communication Engineering, Amrita School of Engineering, Amrita Vishwa Vidyapeetham Coimbatore Campus Coimbatore 641112	2024-04-22	2024-04-22	India
4th International Conference on Advancement in Electronics & Communication Engineering	Department of ECE and CSE, Raj Kumar Goel Institute of Technology, Ghaziabad	2024-11-22	2024-11-23	India
Achieving Leadership in Standards: Leveraging India's Potential through Intellectual Property (IP)	Department of Telecommunications (DoT)	2024-05-08	2024-05-08	India
IEEE Future Networks World Forum (FNWF)	IEEE	2024-10-15	2024-10-17	Dubai, UAE
IC2E3	NIT Uttarakhand	2024-06-06	2024-06-07	India
2024 IEEE Region 10 Symposium (TENSYP)	IEEE	2024-09-27	2024-09-29	India
Attended East Tech 2024 in Kolkata as a representative from our institute	Eastern Commans	2024-11-05	2024-11-06	India

4.6.18 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Machine Learning-Driven Performance Assessment of On-Chip Interconnection Architectures for Many-core Systems	Ramapati Patra	Hemanta Kumar Mondal	SUBMITTED	2025-08-29
An Intelligent Framework for Automatic Critical Beat Identification for Smart Healthcare	Prasenjit Maji	Hemanta Kumar Mondal	ONGOING	null
Offline Performance Assessment of VLSI Circuits	Dipti Sakshi Srivastava	Hemanta Kumar Mondal	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
UlpFIFO: A 32nm 8-Bit 5.2- μ W Asynchronous FIFO with Hybrid Power Management for Edge Computing	Subhadeep Nag	Hemanta Kumar Mondal and Aniruddha Chandra	ONGOING	null
FPGA-based 2-phase Asynchronous Circuit Design for High Performance Computing	Suman Kalyan Porel	Hemanta Kumar Mondal	ONGOING	null
Hardware accelerator design for RISC-V Processor for Edge computing	Sadanand Singh Choudhary	Hemanta Kumar Mondal and Ashis Kumar Mal	ONGOING	null
Recurrence based nonlinear analysis of heart rate variability	Sudhangshu Sarkar	A Chandra	ONGOING	null
Millimeter wave channel measurement and modelling for beyond 5G communication	Rajeev Shukla	A Chandra	ONGOING	null
Millimeter wave based design considerations for high speed vehicle-to- everything (V2X) communication link	Ananya Chattopadhyay	A Chandra	ONGOING	null
Sub-THz propagation characterization for 5G-Advanced: Modelling, validation, and standardization	Niraj Narayan	A Chandra	ONGOING	null
VLSI implementation of advanced communication systems	Sapnil Das Choudhury	A Chandra	ONGOING	null
FinFET	Aprajita Kumari	Dr. Rajashree Das	ONGOING	null
FinFET	Subarna Mandal	Dr. Rajashree Das	ONGOING	null
Estimation of different parameters for an ARQ protocol in a fading network through various codes	Prajit Paul	A. K. Bhattacharjee	SUBMITTED	2025- 02-25
UAV-assisted Energy AwareMulti-hop D2D Networksfor Disaster Management	Sayanti Ghosh	S. Dhar Roy	DEGREE AWARDED	2024- 05-20
Energy harvesting Enabled NOMA Networks with Half/Full Duplex Cooperative Relaying for Secured Transmission	Alok Kumar Baranwal	S. Dhar Roy, S. Kundu	DEGREE AWARDED	2024- 05-21

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Topic Name	Scholar	Supervisor	Status	Status Date
Mobility Management in Integrated Heterogeneous Network	S Reddy Vamshidhar Reddy	S. Dhar Roy	DEGREE AWARDED	2024-09-30
Some Studies on Mobility Issues in Next Generation Wireless Communication System	D. K. Nayak	S. Dhar Roy	ONGOING	null
Secrecy and Reliability study of IRS enabled cognitive cooperative communication for D2D network	A. Das	S. Dhar Roy	ONGOING	null
Machine Learning Aided Radio Resource and Mobility Management in Next Generation Wireless Networks	Vandita Kumari	Dr. S. Dhar Roy	ONGOING	null
RIS enabled Energy Harvesting Relay assisted Cooperative NOMA in underlay CRN with Ambient Backscattering	Priyanka Ghosh	Prof. Sumit Kundu	ONGOING	null
Backscattered Assisted RIS enabled RSMA /NOMA based Wireless communications for Next Generation Networks	Rashmita Badhai	Prof. Sumit Kundu	ONGOING	null
Some Studies on Compact UWB MIMO Antenna Systems for Wireless Devices	Jeet Banerjee	Dr. Rowdra Ghatak NIT Durgapur	DEGREE AWARDED	2025-03-13
Studies on Metasurface Enabled Broadband and Multiband Planar Antennas for Wireless Communication Systems	Shyam Sundar Jash	Dr. Rowdra Ghatak NIT Durgapur	SUBMITTED	2025-06-23
Studies on 2D Materials Augmented Metasurface Absorbers for THz Applications	Sayani Bindai	Dr. Rowdra Ghatak NIT Durgapur	ONGOING	null
Wireless Communication Architectures	Amrita Mukherjee	Ashis Kumar Mal & Pratik Chakraborty(IITKalyani)	SUBMITTED	2025-01-31
Implementation of AI in Biomedical Applications	Anu Samanta	Ashis Kumar Mal & Indranil Hatai(Siemens)	ONGOING	null
Current Mode Circuits in Nano-CMOS	Satyam Shivam Sundram	Ashis Kumar Mal & Rishi Todani	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Low Power Comparator Architectures for SAR ADC	Debjoyoti Chakraborty	Ashis Kumar Mal	ONGOING	null
Studies on Multi-GNSS Signal Environment from India Towards Test Range Applications	Mrinal Goswami	Dr. Rowdra Ghatak NIT Durgapur, Dr. Anindya Bose BU	ONGOING	null
Studies on Multi Mode Filters and Filter Integrated Antennas for Wireless Transceivers	Riya Chakraborty	Dr. Rowdra Ghatak NIT Durgapur	ONGOING	null
The Role of Stack Layers on Switching Dynamics and Synaptic Behaviours of Flexible HfO _x Resistive Memory Devices	Saikat Biswas	Rajat Mahapatra	ONGOING	null
Resistive Switching Devices for Flexible Electronics Applications	Sameen Azhar	Rajat Mahapatra	ONGOING	null
Piezoelectric Transducer	Neha Kumari	Nilanjan Chataraj	ONGOING	null
Analog circuit testing and Machine Learning	Suman Biswas	Goutam Mohanti, Nilanjan Chattaraj	ONGOING	null
Audio Signal and Machine Learning	Al mamun Sheikh	Nilanjan Chattaraj, Suman Samui	ONGOING	null
Embedded System Air Pollutant Sensing and its Embedded Measurement System Development with Smart Interface	Debabrata Bej	Nilanjan Chattaraj	DEGREE AWARDED	2025-03-27
On Efficient Scheduling Algorithm Design for 5G Networks (Tentative)	Anisha Sengupta	Nilanjan Biswas	ONGOING	null
Tiny ML (Tentative)	Atin Mukherjee	Suman Samui and Nilanjan Biswas	ONGOING	null
VLSI Circuit Design optimization using evolutionary optimization techniques	Kanchan Baran Maji	R Kar, D. Mandal, S PGhoshal	DEGREE AWARDED	2024-04-28
Analysis and Performance Optimization of Innovative Nanowire Tunnel FET for Low Power Sensors Design	Navaneet Kumar Singh	R Kar, D Mandal	DEGREE AWARDED	2024-04-22

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Topic Name	Scholar	Supervisor	Status	Status Date
Optimal Far-Field Radiation Pattern				
Synthesis of Antenna Array Design for 5G Communications	Rajrup Saha	D Mandal, R, Kar, A Das	SUBMITTED	2024-09-09
Design of beam forming antenna array for next generation communication	SOUMITA HALDAR CHAKRABORTY (Roll No. 24EC1504)	Dr. Sujit Kumar Mandal, Dept of ECE, NIT Durgapur	ONGOING	2025-01-02
Drug Repurposing based on Time Delayed Gene Regulation Networks	Meghna Paul	Aurpan Majumder	ONGOING	null
Fluid Antenna based ISAC Systems	Angana Malik	Aurpan Majumder (Main Supervisor), Subhankar Chatterjee (outside NITDGP)	ONGOING	null
TinyML Algorithms for Small-Footprint Audio Processing Applications	Mr. Soumen Garai	Dr. Suman Samui	ONGOING	null
Real-time Speaker Diarization System for Multilingual Conversational Speech	Mr. Almamun Sheikh	Dr. Nilanjan Chattaraj and Dr. Suman Samui	ONGOING	null
EDGE AI in Biomedical Research	Mr. Atin Mukherjee	Dr. Suman and Dr. Nilanjan Biswas	ONGOING	null
Studies on 2D Metasurface Absorbers for THz Applications	Sayani Bindai	Prof. Rowdra Ghatak, Dr. Sapana Ranwa	ONGOING	2025-04-01
Studies on 2-D Transition Metal Dichalcogenides Nanostructures based environmental gas sensor	Shreerupa Biswas	Dr. Sapana Ranwa	ONGOING	null
Some Novel Approaches On Designing Of Quantum Optical Logic Systems Using The Switches Made Of Photonic Band-Gap Crystal	Paromita De	Dr. Sapana Ranwa, Prof. Sourangshu Mukhopadhyay	DEGREE AWARDED	2025-04-01

4.6.19 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Design and fabrication of fully digital MODEM and FIFO buffer for Indian long range (i-LoRa) application	H. K. Mondal (PI) and A. Chandra (Co-PI)	MeitY	9600000.0	2023



Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Capacity building for human resource development in Unmanned Aircraft System (Drone and related Technology) (Multi Institute Project)	De. Nilanjan Chattaraj, Dr. Jayati Dey, Dr. Aritro Dey, Dr. Deepak Kumar	MeitY	15091000	2022
Learning aided coexistence strategy and scheduling designing for next generation satellite internet-of-things	Nilanjan Biswas	ANRF (erstwhile SERB)	737000.0	2023
Development of Multi-Pattern Time-Modulated Array for Multi-objective Tracking Cognitive Radar	1. Dr. Sujit Kumar Mandal, NIT Durgapur, 2. Dr. Rajarshi Bhattacharya, NIT Patna, and 3. Dr. Kum KC Chandini Devi Mishra, ISRO	ISRO, RACS, NIT Patna	2167560.0	2024

4.6.20 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
Design and Implementation of Advanced Antenna Arrays for 5G and Future Generation Wireless Communication Systems	D Mandal	SERB GoI	2025

4.6.21 Testing & Consultancy Services Rendered

Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
TCS Research Kolkata with Hyderabad BDC and Bangalore	Development of Circuits and Radiating Systems for mm Wave wireless Systems	1238000.0	Ongoing (on yearly renewal of contract basis vide MoU with TCS and NIT Durgapur)

4.6.22 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Hemanta Kumar Mondal	The Journal of Supercomputing,	Springer	2025-01-27
Hemanta Kumar Mondal	The Journal of Engineering	Wiley	2024-04-12
Hemanta Kumar Mondal	IEEE Access	IEEE	2024-04-24
Hemanta Kumar Mondal	Transactions on Emerging Telecommunications Technologies	Wiley	2024-10-10
Hemanta Kumar Mondal	The Journal of Supercomputing	Springer	2024-08-02

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Reviewer	Name of the Journal	Publisher	Date of Final Review
Hemanta Kumar Mondal	Biomedical Signal Processing and Control	Elsevier	2024-12-18
Hemanta Kumar Mondal	Cluster Computing Journal	Springer	2024-10-16
Aniruddha Chandra	Scientific Reports	Nature	2024-06-28
Aniruddha Chandra	Scientific Reports	Nature	2024-11-18
Aniruddha Chandra	Scientific Reports	Nature	2025-01-08
Aniruddha Chandra	IEEE Antennas and Wireless Propagation Letters	IEEE	2025-02-17
Aniruddha Chandra	China Communications	IEEE	2024-04-09
Aniruddha Chandra	IEEE Internet of Things Journal	IEEE	2024-04-09
Aniruddha Chandra	IEEE Internet of Things Journal	IEEE	2024-06-21
Aniruddha Chandra	IEEE Open Journal of Vehicular Technology	IEEE	2024-08-01
Aniruddha Chandra	IEEE Transactions on Intelligent Vehicles	IEEE	2024-05-29
Aniruddha Chandra	IEEE Vehicular Technology Magazine	IEEE	2024-12-05
Rajashree Das	Microsystem Technologies	Springer	2025-07-21
Ashish Kumar Mal	NA	NA	2025-09-05
Rowdra Ghatak	IEEE Microwave and Wireless Technology Letters	IEEE	2025-03-28
Rowdra Ghatak	IEEE Microwave and Wireless Technology Letters	IEEE	2024-09-09
Rowdra Ghatak	IEEE Microwave and Wireless Technology Letters	IEEE	2024-08-22
Rowdra Ghatak	IEEE Microwave and Wireless Technology Letters	IEEE	2024-06-11
Rowdra Ghatak	Transactions on antennas & propagation	IEEE	2024-07-15
Sanjay Dhar Roy	IJCS	Wiley	2024-05-16
Sanjay Dhar Roy	International Journal of Electronics	Taylor and Francis	2024-04-24
Sanjay Dhar Roy	IEEE TAES	IEEE	2024-07-02
Rajat Mahapatra	Applied Surface Science	Elsevier	2024-09-24
Rajat Mahapatra	Ceramic International	Elsevier	2025-03-30
Rajat Mahapatra	Ceramic International	Elsevier	2025-02-27
Rajat Mahapatra	Materials Science in Semiconductor Processing	Elsevier	2025-03-12
Rajat Mahapatra	IEEE Trans Electron device Letter	IEEE	2024-08-26
Sujit Kumar Mandal	IEEE Access	IEEE	2024-09-16
Sujit Kumar Mandal	IETE Journal of Research	Taylor and Francis	2024-08-27
Aurpan Majumder	The Journal of Supercomputing	Springer Nature	2024-11-03
Aurpan Majumder	The Journal of Supercomputing	Springer Nature	2025-02-15
Aurpan Majumder	The Journal of Supercomputing	Springer Nature	2025-02-17
Aurpan Majumder	The Journal of Supercomputing	Springer Nature	2024-11-21
Suman Samui	IEEE Sensors Journal	IEEE	0031-10-15
Suman Samui	IEEE Sensors Letters	IEEE	0025-04-15
Suman Samui	IEEE Transactions on Medical Robotics and Bionics	IEEE	0034-01-14
Suman Samui	IEEE Transactions on Neural Networks and Learning	IEEE	0020-10-15



Reviewer	Name of the Journal	Publisher	Date of Final Review
	Systems		
Suman Samui	IEEE/ACM Transactions on Audio, Speech, and Language Processing	IEEE/ACM	0027-11-15
Suman Samui	IET Signal Processing	IET	0034-01-14
Suman Samui	Engineering Applications of Artificial Intelligence	Elsevier	0036-09-13

4.6.23 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Anup Kumar Bhattacharjee	PhD Thesis Viva Voce	NIT Manipur	2024-08-15	2024-08-18
Rajat Mahapatra	Ph D Thesis	NIT Mizoram	2024-08-26	2024-08-26
Rajat Mahapatra	Ph D Progress Review	IIIT Kalyani	2024-12-04	2024-12-04

4.6.24 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Rajat Mahapatra	Electronics and Communication Engineering	St. Thomas Engineering College, Kolkata	2024-12-06	2024-12-06
Sujit Kumar Mandal	Department of Mining Engineering	Kazi Nazrul University, Asansol	2024-08-30	2024-08-30

4.6.25 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Aniruddha Chandra	ML-aided wireless propagation prediction	5th Science, Engineering, and Technology (SET) Conference	VIT Vellore, TN	2024-04-25	2024-04-26
Aniruddha Chandra	Undergraduate research and IEEE	IEEE VSB Lecture, IEEE CS AITR	Indore, MP	2024-07-29	2024-07-29
Aniruddha Chandra	5th and 6th gen communications challenges	AICTE ATAL FDP	Hyderabad, Telangana	2024-09-10	2024-09-10

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Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Aniruddha Chandra	Millimeter wave vehicular communication: Measurement, modelling, standardization	IEEE Future Networks World Forum	Dubai, UAE	2024-10-15	2024-10-17
Sujit Kumar Mandal	Cutting Edge Antenna Technologies: Concept, Challenges and Future Perspectives	FDP on "The wireless Communication: 5G and Beyond"	Asansol Engineering College	2025-02-17	2025-02-22
Sujit Kumar Mandal	Fundamental Concept of Beamforming and Pattern Synthesis	IEEE International Conference on Communication, Computing and Signal Processing (IICCCS 2024)	Asansol Engineering College	2024-09-19	2024-09-20

4.6.26 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Aniruddha Chandra	IEEE VTC2024-Spring (Workshop)	Singapore	Mobile-to-Mobile Channel Modeling and Propagation for B5G	2024-06-24	2024-06-24
Rajat Mahapatra	International Conference on Sustainable Technologies	NIT Durgapur	Technical Session	2024-12-12	2024-12-15
Sujit Kumar Mandal	IEEE International Conference on Communication, Computing and Signal Processing (IICCCS 2024)	Asansol Engineering College	AI and Machine Learning in Communication	2024-09-19	2024-09-20

4.7 Department of Electrical Engineering

4.7.1 Department at a Glance

The Electrical Engineering department was established in the year 1960. Presently the department offers B. Tech in Electrical Engineering, with intake capacity of 100 students, M. Tech in Power Systems, Power Electronics & Machine Drives and Instrumentation & Control having intake of 20, 20 and 15 students respectively. The Department also has a PhD program. The students from different states of India and also from different countries are presently studying in the department. The department has 25 Nos. of qualified and highly motivated faculty members with various specializations; is equipped with 19 different laboratories, and among these, 8 laboratories have modern state of the art facilities for research and consultancy work. The department also has strong regional and foreign collaboration.

4.7.2 Mission & Vision

Mission:



National Institute of Technology Durgapur

- To impart quality education for producing qualified and motivated Engineers and Researchers who will contribute meaningfully to the growth and development of the country.
- To encourage the faculties and the students for research-oriented teaching-learning environment in the department with a focus on excellence and innovation.
- To pursue creative research and consultancy developing new technologies in Electrical Engineering in order to serve the needs of industry and country as a whole.
- To create congenial atmosphere for collaborative research, consultancy and other technical activities

Vision

- To impart quality education and focus on research and innovation in Electrical Sciences to cater to the need of the country.

4.7.3 Faculty

Name	Designation	Email-id
Dr. N. K. Roy	Professor-HAG	nroy.ee@nitdgp.ac.in
Dr. S. S. Thakur	Professor	ssthakur.ee@nitdgp.ac.in
Dr. S. Banerjee	Professor	sbanerjee.ee@nitdgp.ac.in
Dr. P. Acharjee	Professor	pacharjee.ee@nitdgp.ac.in
Dr. Chiranjib Koley	Professor	ckoley.ee@nitdgp.ac.in
Dr. S. N. Mahato	Professor	snmahato.ee@nitdgp.ac.in
Dr. T. K. Saha	Professor	tsaha.ee@nitdgp.ac.in
Dr. P. S. Bhowmik	Associate Professor	psbhowmik@ee.nitdgp.ac.in
Dr. (Smt.) Jayati Dey	Associate Professor	jdey.ee@nitdgp.ac.in
Sri Avinandan Das	Assistant Professor	adas.ee@nitdgp.ac.in
Dr. Supriya Sarkar	Assistant Professor	ssarkar.ee@nitdgp.ac.in
Sri J. C. Barman	Assistant Professor	jcbarmen.ee@nitdgp.ac.in
Dr. Suman Halder	Assistant Professor	shalder.ee@nitdgp.ac.in
Dr. Tushar Kanti Bera	Assistant Professor	tkbera.ee@nitdgp.ac.in
Dr. Biman Kumar Saha Roy	Assistant Professor	bksroy.ee@nitdgp.ac.in
Dr. A. Bhattacharya	Assistant Professor	abhattacharya.ee@nitdgp.ac.in
Dr. Aritro Dey	Assistant Professor	adey.ee@nitdgp.ac.in
Dr. Ashis Kumar Dhara	Assistant Professor	akdhara.ee@nitdgp.ac.in
Dr. Irfan Ahmed	Assistant Professor	airfan.ee@nitdgp.ac.in
Dr. Aashish Kumar Bohre	Assistant Professor	akbohre.ee@nitdgp.ac.in
Dr. Manika Saha	Assistant Professor	msaha.ee@nitdgp.ac.in
Dr. Soumya Chatterjee	Assistant Professor	schatterjee.ee@nitdgp.ac.in
Dr. Santanu Paul	Assistant Professor	spaul.ee@nitdgp.ac.in
Dr. Omkar Yadav	Assistant Professor	oyadav.ee@nitdgp.ac.in
Dr. Rajdip Dey	Assistant Professor	rdey.ee@nitdgp.ac.in

4.7.4 Equipments

Sl. No.	Name of the equipment	Date of Purchase	Amount
1	Drone Camera	14-06-2024	13,72,000.00
2	PSIM Software	21-06-2024	7,62,280.00
3	FLUKE Non-Contact volt Meter	19-07-2024	3,119.84
4	BOSCH cordless brushless Electric Drill 1000 Watt	30-07-2024	11,358.97
5	HP Inkjet color computer printer	19-08-2024	9,999.00
6	Regulated Lead Acid Batteries of 12 V 26 Ah	19-08-2024	18,000.00
7	RIGOL Analog 200 Megahertz Non-Windows Digital Storage Oscilloscope	28-08-2024	18,30,000.00
8	RF Cable & Connectors upto 5 Ghz. (Synergy)	03-09-2024	85,000.00
9	Numerical Distance Protection Relay Model: ADR239B	11-09-2024	1,58,592.00
10	Two Channel DAQ	24-09-2024	9,97,100.00
11	EEG Machine	24-09-2024	17,93,600.00
12	Twin Rotor MIMO System with Matlab S/W	14-10-2024	17,45,255.00
13	Portable Voltmeter MI, 0-250/500V AC, Analog	07-11-2024	7,250.00
14	Portable Voltmeter.	07-11-2024	7,250.00

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Sl. No.	Name of the equipment	Date of Purchase	Amount
15	MI, 0-150/300V AC Analog Portable Voltmeter.	07-11-2024	7,500.00
16	MC-0-150/300V DC, Analog Portable Voltmeter.	07-11-2024	7,500.00
17	MC, 0-30/60V DC, Analog Portable Wattmeter	07-11-2024	36,000.00
18	300/600V, 5/10 Amp, Analog Portable WattmeterLPF 300/600V, 5/10Amp Analog	07-11-2024	14,000.00
19	Portable WattmeterLPF 150/300V, 1/2 Amp Analog	07-11-2024	15,600.00
20	Portable Wattmeter UPF 75/150V, 5/10 Amp Analog	07-11-2024	28,000.00
21	Rheostat 0-210 Ohm, 0-5Amp	07-11-2024	9,500.00
22	Rheostat0-500hm, 0-5Amp	07-11-2024	13,300.00
23	Auto Transformer (Varlac) Single Phase, 8Amp, Close	07-11-2024	13,000.00
24	Point Starter	07-11-2024	32,000.00
25	Digital Tachometer	07-11-2024	18,500.00
26	Portable Voltmeter MC, 0-30V DC, Analog	07-11-2024	6,600.00
27	Portable Ammeter MC, 0-1 Amp, Analog	07-11-2024	6,600.00
28	Portable Voltmeter MI 0-150/300/600V AC, Analog	07-11-2024	7,200.00
29	Rheostat 0-50 Ohm, 5 Amp	07-11-2024	12,000.00
30	Auto Transformer (Variac) Single Phase, 8 Amp Close	07-11-2024	32,500.00
31	Single Board Computer, based on x64, 8GB/64GB eMMC,	19-11-2024	6,65,280.00
32	Raspberry Pi 5 Model 8GB	19-11-2024	2,26,695.00
33	ZilinxZynq	19-11-2024	3,49,020.00
34	Atmega16U2 Mega 2560 R3 Improved Version CH340G	19-11-2024	25,389.00
35	Arduino Uno R3 with Cable	19-11-2024	5,775.00
36	12V 2A Power Adapter with 5.5 X 2.5mm DC Plug	19-11-2024	6,720.00
37	37 in 1 Sensors Kit compatible with Arduino	19-11-2024	20,979.00
38	UNO Smart Robot Car Bundle	19-11-2024	99,603.00
39	1.3 Inch I2C OLED Display Module 4pin- WHITE	19-11-2024	7,539.00
40	Arduino UNO R4 WiFi	19-11-2024	51,429.00
41	Official Raspberry Pi Global Shutter Camera with Official Raspberry Pi 6 mm Wide Angle Lens for Pi High Quality Camera	19-11-2024	1,69,575.00
42	STMICROELECTRONICS Discovery Kit	19-11-2024	2,09,790.00
43	WCS1700 Hall Current Sensor with Over Current Protection	19-11-2024	15,015.00
44	Jumper Wire	19-11-2024	2,353.68
45	STMICROELECTRONICS Development Board	19-11-2024	39,900.00
46	Dys D2225-19 1350KV BLDC Motor	19-11-2024	21,420.00
47	MLX90614 ESF Non-Contact Human Body Infrared Temperature Measurement Module	19-11-2024	35,700.00
48	NVIDIA Jetson AGX Orin 64GB Developer Kit with Networking RJ45 connector with up to 10 GbE	19-11-2024	2,22,120.00
49	FPGA Board	12-12-2024	4,32,000.00
50	Color 3D Printer	12-12-2024	4,80,000.00
51	Acoustic Imagine Camera	12-12-2024	11,91,000.00
52	UHF HF Partial Discharge Calibrator	30-12-2024	3,92,000.000
53	Multichannel High Speed Data Acquisition System	30-12-2024	14,92,000.00
54	PD Analyzer Calibration & Test System	30-12-2024	18,19,000.00
55	Oscilloscope Analog & Digital (Mixed Signal) 100 Mega Hertz DS1104Z Plus Rigol	22-01-2025	3,77,836.00
56	Crucial RAM Card 32 GB	07-02-2025	4,967.99
57	HP Desktop Computer HP 800 G9 MT i9	12-03-2025	3,47,074.00
58	HP Desktop 800 G9 i9	13-03-2025	17,35,370.00



Sl. No.	Name of the equipment	Date of Purchase	Amount
59	Seagate Barracuda 2TB Internal Hard Drive	20-03-2025	20,528.00
60	Microprocessor Based Single Phase Firing Circuit (IPHSCR-FW)	28-03-2025	53,524.00
61	Single Phase Bridge Converter Using IGBT (IPH-IGBT-PWM)	28-03-2025	1,07,050.00
62	Three Phase SCR Module (3PH-SCR-PM)	28-03-2025	1,60,574.00
63	Three Phase Bridge Converter Using IGBT (3PH-IGBT-PWM)	28-03-2025	1,60,574.00
64	Speed Control of DC Motor by using Single Phase SCR Module (1PHSCR-SCDCM)	28-03-2025	1,60,574.00
65	Microprocessor Based Three Phase Firing Circuit (3-Ø-SCR-FW)	28-03-2025	1,07,050.00
66	Step-up/Step-down Cycloconverter (1-PH-CYCLCONV-FC)	28-03-2025	1,07,050.00
67	Four Quadrant Operation of DC-DC Chopper with Motor (DC-DC FQ-DCM)	28-03-2025	3,74,674.00
68	3 Phase AC Induction Motor Using IPM and Micro 2407 (3-PH-IPM-1M)	28-03-2025	3,74,674.00
69	Complete Setup For Speed Control of Induction Motor using Intelligent Power Module		1,49,860.00
70	Complete Setup For Speed Control of BLDC Motor using Intelligent Power Module		1,67,560.00

4.7.5 Laboratories Available

Sl. No.	Name of Laboratory	Major equipment
1.	Electrical Technology Laboratory	Setup for Open Circuit and Short Circuit Test of Single Phase Transformer, Three Phase Wattmeter for power measurement in three phase circuit Setup, Test Energy Meter and Standard Energy Meter for Energy Meter Calibration Setup, Setup for RL, RC, RLC analysis, Set up for determining characteristics of Fluorescent Lamp, Set up for determining Characteristics of Incandescent Lamp, Setup ups for verification of Superposition Theorem, Thevenin's Theorem, Norton Theorem and Maximum Power Transfer Theorem
2.	Electrical Networks Laboratory	Setups of RL, RC and RLC transient set Low Pass, High Pass Filter, Frequency response each comprising of Function Generators and Digital Storage Oscilloscopes, Setup for understanding the basics of Magnetic Coupling, Set up for Two port Network
3.	Electrical Measurements Laboratory	Setup for Power measurement by three Voltmeter and three ammeter, Setup for DC Crompton Potentiometer, Setup for Power measurement by Instrument Transformer, Setup for Kelvin Double Bridge, Set up for Linear Variable Differential Transformer, Digital Earth Resistance Meter, Setups for Anderson Bridge, Schering Bridge and Wien Bridge, Set up for calibration of Digital Energy Meter
4.	Electrical Machines Laboratory	Single-phase transformer, Three-phase transformer, DC shunt machine, DC series machine, DC compound machine, Three-phase induction motor, Single-phase induction motor, Three-phase alternator, Three-phase synchronous motor, Single-phase variac, Three-phase auto-transformer, Resistive load box.
5.	Control Laboratory	DC Servo Position Control System, DC Servo Speed Control System, AC Servomotor Speed Control System, Linear System Simulator, Temperature Control System, Lead-Lag Network, DC Machine Set-up for Identification of Transfer Function for DC Motor, Two Phase AC Servomotor Set-up for Determination of Transfer Function, P-I-D Controller Set-up for Control of LTI Systems
6.	Embedded System	Microcontroller kit, Computer, Function Generator, Interfaces, PCB

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Sl. No.	Name of Laboratory		Major equipment
	Laboratory		Prototyping Machine, Kieil C Compiler
7.	Power Electronics Laboratory		Single Phase Bridge Inverter (IGBT), Three Phase SCR module, 3-phase 5-level Cascaded H-bridge inverter power module, Speed Control of 3-phase induction motor with IPM and Micro-2407, Four-quadrant operation of DC-DC chopper with IGBT, Speed Control of DC motor with single phase triggering and device module, DC-DC SEPIC Converter, DC-DC FORWARD Converter, DC-DC Flyback Converter Trainer, Single phase step-down cycloconverter.
8.	Power Electronics Laboratory	Systems	IDMT over-current relay experiment setup, Directional over-current relay (inverse) type CDD experiment setup, Numerical Distance Protection Relay MiCOM P442 experiment setup, Parallel Feeder Protection experiment setup, Negative sequence protection of three-phase induction motor experiment setup, Study of over-voltage relay experiment setup, Biased Differential Relay experiment setup, Biased Differential Protection of a single phase Transformer experiment setup, Restricted E/F Protection of 3-phase Transformer experiment setup, Over-current and Earth fault protection scheme for three phase system experiment setup, Cable Fault Locator, Power Quality Analyzer
9.	Power Electronics Laboratory II	Systems	IDMT over-current relay experiment setup, Directional over-current relay (inverse) type CDD experiment setup, Numerical Distance Protection Relay MiCOM P442 experiment setup, Parallel Feeder Protection experiment setup, Negative sequence protection of three-phase induction motor experiment setup, Study of over-voltage relay experiment setup, Biased Differential Relay experiment setup, Biased Differential Protection of a single phase Transformer experiment setup, Restricted E/F Protection of 3-phase Transformer experiment setup, Over-current and Earth fault protection scheme for three phase system experiment setup, Cable Fault Locator, Power Quality Analyzer
10.	Advanced Power System Laboratory		Relay Test Set, Directional Overcurrent relay, Cable fault locator, Oscilloscope, Function Generator, Power Quality Analyzer, Parallel Feeder Protection Test Kit, Directional overcurrent relay, Non-directional over current relay, Test Bench for ratio, polarity, magnetizing characteristic of CT and PT, Numerical Distance protection kit, Ferranti Effect and Parameter Measurement Kit, Transmission line simulation kit, Solar Photovoltaic Training and Research Kit
11.	Power Simulation Laboratory	System	Computers, MATLAB, MiPower software.
12.	Computational Laboratory		Computers, MATLAB, MiPower software, PSIM software, OrCAD PSPICE software, PSCAD
13.	High Voltage and Liquid Insulation Laboratory		AC High Voltage Test System, Impulse Voltage Test System, Partial Discharge Test System, 100 kV oil BDV Tester, C and Tan Delta test set up, 100 kV AC Test set up, Kinematic Viscometer bath, Digital C, tan Delta and resistivity test set, Pen-sky martens closed cup flash point tester
14.	Machine Laboratory	Drives	TMS 320F2812 DSP Processor, TMS 320F28335 DSP Processor, Multilevel Inverter, Intelligent Power Module, Three phase induction motor, Brushless DC Motor, Permanent Magnet Synchronous Machine with Spring Balance Loading Arrangement
15.	Advanced System Laboratory	Control	Digital Pendulum Control System with Personal Computer, Magnetic Levitation System with Personal Computer, Twin Rotor MIMO System with Personal Computer, Precision Modular Servo Workshop with Personal Computer
16.	Advanced Electronics Laboratory	Power	Single Phase Bridge Inverter (IGBT), Three Phase SCR module, 3-phase 5-level Cascaded H-bridge Inverter power module, Speed Control of 3-phase induction motor with IPM and Micro-2407, Four-quadrant operation of DC-DC chopper with IGBT, Speed Control of DC motor with single phase triggering and device module, DC-DC SEPIC Converter, DC-DC FORWARD Converter, DC-DC Flyback Converter Trainer, Single phase step-down cycloconverter
17.	Instrumentation Laboratory		SOLAR PANEL SETUP comprising of crystalline solar cell; LIQUID LEVEL MEASUREMENT SETUP comprising of Ultrasonic level sensor, Sump tank, Solenoid valve, Water pump, Overhead tank , DCS (HC900



Sl. No.	Name of Laboratory	Major equipment
		hardware) DCS (SCADA Software); FLOW MEASUREMENT SETUP comprising of Electrical actuator, control valve , Differential pressure transmitter, Solenoid valve, DCS (HC900 hardware) DCS (SCADA Software); TEMPERATURE MEASUREMENT SETUP comprising of RTD, Thermocouple & Thermistor; SPEED MEASUREMENT SETUP COMPRISING OF TACHOMETER & STROBOSCOPE ; 3 PHASE POWER MEASUREMENT SETUP
18.	Biomedical Instrumentation Laboratory	Two Channel MP45 BIOPAC Signal Acquisition System Comprising of ECG Electrodes, Respiration Sensor, GSR Sensor, SPO2 Sensor, Computers, MATLAB
19.	Intelligent System Laboratory	Computers, MATLAB

4.7.6 PhD degree awarded till 2024-25

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4.7.7 Specialization

- Electrical Machines and Drives
- Power Systems
- Electrical Measurement
- Power System
- Electrical Engineering
- Power electronics application in power system
- Measurement and Instrumentation
- Machines Drives
- Power Electronics and Machine Drives
- Power Systems
- Control System
- State Estimation of Nonlinear Dynamic Systems
- High Voltage Engineering
- Power System
- Electrical Power System
- Power System
- Power Electronics
- Electrical Engineering
- High Voltage Engineering, ICT, IoT and e Governance
- Control System

4.7.8 Proposed Plan for Research

- To carry out research work on the mitigation of low-frequency oscillations in the railway traction system. To execute necessary tasks related to ongoing sponsored projects. To write additional research project proposals for funding. To continue discharging academic responsibilities sincerely.
- Feature Extraction from Bio-Signals
- Development of decision support tool for power system using synchrophasor measurements
- Verification of the concept of multifrequency microgrid, charger design for electric vehicle, application of AI and IOT in microgrid.
- The research aims to develop advanced sensing and signal processing solutions for real-time monitoring of high-voltage power apparatus. The focus will be on designing novel UHF and optical sensors, integrating fiber Bragg gratings and wideband antenna structures for precise partial discharge detection. Experimental validation will be carried out using GTEM cells, transformers, and GIS systems to benchmark sensor performance. Advanced algorithms, including AI-assisted classification, will enhance detection accuracy and reliability. The outcomes are expected to deliver scalable, indigenous, and industry-ready technologies, improving grid reliability, reducing downtime, and enabling predictive maintenance for sustainable and resilient power systems.
- Development of Control Scheme for Fast Charging System in Electric Vehicle with Renewable Energy Integration

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- Started high value project funded by ANRF in collaboration with IIT Kgp, IIT Bhubaneswar, NIT Hamirpur, VNIT Nagpur, and BIT Mesra
- Worldwide automotive industry is quickly shifting from traditional fuel based technologies to eco-friendly technologies such as battery based drive train for development of Electric Vehicles (EVs) due to fast depletion of fossil fuel and to reduce impact of transportation on environment and climate change. Keeping in view the technological requirements of EVs and to increase the local manufacturing of the subsystem of EVs in India, a short term R&D programme may be initiated for the technology/product development for EVs in the areas such as motor, controller, converters, chargers etc. This initiative is expected to deliver indigenous EV subsystems at an affordable cost following the standards with quality. Objectives: To develop the Electric Vehicle sub-systems in the areas of Electric motor, controller, converters Chargers etc, ranging from small to Large vehicles etc., indigenously. The expected outcome i.e. technology/product has to be cost effective, quality competitive and ready for commercialisation
- Design of Robust Bayesian filters for nonlinear state estimation, Design of Robust Control Law for Nonlinear systems
- 1. Design of HFCT Sensor for Partial Discharge Measurement
- Quality Research Development
- I will try to get project funding, Patent and journal publications in high impact journals
- Operation, Control and Protection of Microgrid; Clustering of Microgrids and Evaluating its Performance; Role of Smart Grid in Future Power Systems.
- 1) Simplified space vector modulation of a modular multilevel converter. 2) Minimization of backflow power while ensuring ZVS for a dual active bridge dc-dc converter
- My research area is power system operation and control. Presently, I am working on the advancement in the operation and control of Voltage Source Converter-based Multi-Terminal DC (VSC-MTDC) systems to enable reliable and flexible integration of renewable energy sources into future smart grids. My work aims to develop robust, adaptive control strategies, particularly in the area of droop control, that enhance system stability, ensure optimal power sharing, and maintain DC voltage regulation under dynamic and uncertain conditions such as converter outages, renewable variability, and AC-DC interactions. Future research will explore coordinated control with AC grids, integration of energy storage systems, and the use of intelligent algorithms such as data-driven optimization and predictive control to enhance the autonomy and resilience of MTDC networks. Emphasis will also be placed on practical implementation through real-time simulation and hardware-in-the-loop validation to bridge the gap between theory and field deployment.
- Extension of HV laboratory facilities and inclusion of IoT-enabled HV laboratory facilities

4.7.9 Area of Research Interest

- Electrical Machines, Small hydro and Wind energy systems •
- 1) Impact analysis of Electric Vehicle Charging Station on Power System. 2) To carry out research work on the mitigation of low-frequency oscillations in the railway traction system. 3) Detection of Cyber-attack in Power Distribution Network.
- Biomedical Instrumentation
- PMU placement, fault analysis, Power system analysis, cyber security
- Modeling & Control of Switch-mode converters and Inverters, Multilevel Inverters & Different Modulation techniques, Electromagnetic Levitation, Active Magnetic Bearing, controller design, soft-computing techniques, Intelligent control, Power Electronics & Machine Drives, Power Systems
- Microgrid Architecture, Microgrid control, Converters of microgrid, Power electronics applications in a microgrid, Energy storage systems of microgrid, DC microgrid, Hybrid Microgrid, Multifrequency Microgrid, Power market, Different power electronics converters, DC machine drive system, Induction machine drive system, Multifrequency systems, Electric vehicles.
- Partial Discharge, Condition Monitoring, High Voltage, Sensors, Antennas, Signal Processing, Artificial Intelligence, Power Systems, Digital Twin, Reliability
- special Electrical Machines
- Power Electronics and Machine Drives for Modern Renewable Energy Sources
- Power Systems, Renewable Energy, Electric Vehicle, Bio Medical Engineering, Electrical and Electronics Measurement
- Robust Control, Control of Converters, Energy Management System for Electric Vehicles
- Bayesian filtering, Control Systems
- High voltage engineering, condition monitoring.
- Power system, Renewable energy, Electric vehicle, DG
- Power System Stability, Renewable Energy, Power System Optimization, Distribution System Planning, Microgrid Planning, Electric Vehicle, Planning of FACTS Devices, Power System Deregulation & Restructuring, Distributed Generation, Optimization Techniques, Renewable Energy Systems, Electrical Vehicle, Application of Soft Computing Techniques in power system dynamics and control. Etc.
- Electric Power Distribution System and Microgrid
- Modular multilevel converter, dual-active-bridge converter



- Power System Operation and Control
- High Voltage Engineering, ICT, IoT and e-Governance
- Stochastic Signal Processing, Nonlinear Estimation

4.7.10 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
NHPC LTD.	Power System	Condition monitoring of Power Apparatus
NHPC	High Voltage Engineering	Online Condition Monitoring solution for Transformer Bushings and Coupling Capacitors for online Partial Discharge Monitoring of Generators
Megger Instruments India Limited	Device Development for HV transmission line.	Consultancy

4.7.11 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Indian Institute of Technology Kanpur	Impact analysis of Electric Vehicle Charging Station on Power System	Prof. Subrata Banerjee, NIT Durgapur and Prof. Saikat Chakraborti, IIT Kanpur	Written a ANRF-sponsored MultiInstitute Research Project in collaboration with IIT Kanpur, titled "Grid Readiness for Electrical Vehicle (EV): Enablers and Technological Developments (GREET)"
IIT Kanpur	Electrical Vehicle	Prof. Saikat Chatterjee	ANRF MAHA-EV Research Project
CSIR-CMERI	Power Electronics Converter	Dr. Santu Kumar Giri	Joint PhD guidance
IIT Kharagpur	Project under ANRF	Professor D. Kastha, Dr. A. R. Hota, Dr. D. Pullaguram, and Dr. Suman Maiti	Developing EV charger with integrated renewable Sources
IIT Bhubaneswar	Project under ANRF	Dr. D. De, Dr. N. Hussain, and Dr. R. Nair	Developing EV charger with integrated renewable Sources
NIT Hamirpur	Project under ANRF	Dr. J. Singh, Dr. U. Sarma, and Dr. R. Jarial	Developing EV charger with integrated renewable Sources
VNIT Nagpur	Project under ANRF	Dr. P. Chaturvedi, and Dr. M. Alam	Developing EV charger with integrated renewable Sources
BIT Mesra	Project under ANRF	Dr. S. Shiva Kumar, and Dr. A. Alam	Developing EV charger with integrated renewable Sources
Indian Institute of Technology Kharagpur	Development of High-Power Grid-Friendly Conductive and	Prof. Debaprasad Kastha, Department of Electrical Engineering, IIT Kharagpur	Implementation of a R&D project sponsored by ANRF Under MAHA-EV Program

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Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
	Static Wireless Chargers for Electric Vehicles		for development of High Power Charging Infrastructure @ IIT Kharagpur
IIT-BHU	Research	Dr. Arup Kumar Das	Joint research
KIIT Bhubaneswar	Research	Parimal Acharjee	PhD Guidance

4.7.12 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Prof. Krishanu Biswas	Invitee Talk	2024-11-14
Mr. Rishi Agarwal	Invitee Talk	2024-05-17
Mr. Naveen Srivastava	Invitee Talk	2024-12-03
Mr. Susanta Roy	Invitee Talk	2025-01-10
Dr. Suvasish Mukhopadhyay	Invitee Talk	2025-02-07

4.7.13 Innovations and Technology Transfer (Patents filed during)

Title	Inventors	Application Nos	Date of Filling
A non-isolated high Voltage gain dc-dc Converter with reduced switch voltage stress	1. Ananthammagari Bharathsimha Reddy 2. Sankar Narayan Mahato 3. Nilanjan Tewari	202441083947	2024-11-04
Circuit schematics and pcb layouts of 1kw single-phase grid-connected Transformerless solar inverter	Sumit Kumar, Hanumath Prasad Ikkurti, Mohd. Afroz Akhtar, Santu Kumar Giri, Subrata Banerjee	L-158712/2024	2024-12-30
Double input dc-dc Converter to utilize multiple renewable Sources with different output voltages	Dibyendu Sen, Tapas Kumar Saha, and Jayati Dey	202431030364 A	2024-09-27
Maximum utilization of Two renewable sources with unequal voltage Levels through single converter	DIBYENDU SEN, TAPAS KUMAR SAHA, JAYATI DEY	202431030364	2024-04-15
An Optimized Renewable Energy Consumption System in Hydrofoilers	Aashish K. Bohre, Aparesh Dutta, Omkar Yadav, Manisha Dubey	202431064123 A	2024-10-24



4.7.14 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
K Adhikari, C Koley, NK Roy	Development of Intensity Modulated Optical Fiber Based Partial Discharge Sensor for High Voltage Power Apparatus	IEEE Transactions on Dielectrics and Electrical Insulation,	Volume: Issue No: Page No: Year:2024 Month:
H. S. Chatterjee and S. N. Mahato	Modified Perturb and Observe-based MPPT control of MHPCS for singlephase power distribution positioned in remote locations	Electrical Engineering	Volume:106 Issue No: Page No:6893–6909 Year:2024 Month:May
Rana Das, Irfan Ahmed, Tushar Kanti Bera and Sankar Narayan Mahato	A hybrid pulse-width modulation technique for a modular multilevel converter with embedded energy sources	Electrical Engineering	Volume:107 Issue No: Page No:4125–4135 Year:2024 Month:Sep
Biswajit Mandal, Partha Sarathee Bhowmik	dssCLATT: A tkinter based software tool to learn and analyze for advancement of dye-sensitized solar cell technology	Computers and Electrical Engineering, Elsevier	Volume:119 Issue No: Page No:1-10 Year:2024 Month:Oct
Sannistha Banerjee, Partha Sarathee Bhowmik	Machine learning based classifiers for dynamic and transient disturbance classification in smart microgrid system	Measurement, Elsevier	Volume:240 Issue No: Page No:1-12 Year:2024 Month:Aug
Bikash Kumar Saw, Aashish Kumar Bohre	Sustainable Deployment of EV Charging Stations in Distribution Network Supported With Hybrid Solar-DG Integrated DSTACOM	IEEE Transactions on Industry Applications	Volume:61 Issue No:5 Page No:1-16 Year:2025 Month:Mar
Kumar, P., Kumar, K., Aashish Kumar Bohre & Adhikary, N.	Estimating Wind Turbine's Pitch Angle for Smart Control in hybrid energy network under Random Loading Conditions	IEEE Transactions on Industry Applications	Volume:61 Issue No:4 Page No:1-14 Year:2025 Month:Mar
Shukla Karmakar, Aashish Kumar Bohre Tushar Kanti Bera,	Recent Advancements in Cell Balancing Techniques of BMS for EVs: A Critical Review	IEEE Transactions on Industry Applications	Volume:61 Issue No:2 Page No:1-17 Year:2025 Month:Jan
Rani, N., Aashish Kumar Bohre & Bhattacharya, A.	VO ₂ -driven Polarization-Insensitive Conformal Meta-structure Unlocking the Reconfigurability in Terahertz Regime	Springer Plasmonics	Volume:20 Issue No:2025 Page No:2433–2441 Year:2025 Month:Aug
Kunal Kumar, Prince Kumar, Susmita Kar, Aashish Kumar Bohre	Anomaly detection technique for securing microgrid against false data attacks	ISA Transactions	Volume:153 Issue No:2024 Page No:13-27 Year:2024 Month:Aug
Brahmachary, R., Bhattacharya, A. & Ahmed, I.	Simultaneous Allocation of Electric Vehicle Charging Station and Power Filters in Power Distribution Network Using Marine Predators Algorithm	SN Computer Science	Volume:5 Issue No: Page No:938 Year:2024 Month:Oct
R. Brahmachary, A. Bhattacharya, A. Pal and I. Ahmed	Port Optimization and Charging Station Allocation Considering EV User Comfort With Utility Benefits	IEEE Transactions on Industry Applications	Volume:60 Issue No:6 Page No:8239-8253 Year:2024 Month:Nov
P. Kumar, S. Paul, A. Kumar Saha, and O. Yadav	Recent Advancements in Planning and Reliability Aspects of Large-Scale Deep Sea Offshore Wind Power Plants: A Review	IEEE Access	Volume:13 Issue No: Page No:pp. 3738-3767 Year:2025 Month:

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Author(s) Name	Paper Name	Journal Name	Others Info
1. A. Bharathsimha Reddy 2. S. N. Mahato 3. Nilanjan Tewari	High-Voltage Lift DC–DC Converter With Reduced Switch Stress	IEEE JOURNAL OF EMERGING AND SELECTED TOPICS IN POWER ELECTRONICS	Volume:12 Issue No:2 Page No:1730-1741 Year:2024 Month:Apr
Modak, S. , Samanta, K. , Halder, S. , Chatterjee, S.	Article EEG Rhythm-Based Functional Brain Connectivity for Automated Detection of Schizophrenia Employing Deep Learning	IEEE Transactions on Instrumentation and MeasurementOpen source preview	Volume:74 Issue No: Page No: Year:2025 Month:Apr
Manoj Saha, Sidhartha Sankar Thakur, and Aniruddha Bhattacharya	Bilevel planning of electric vehicle charging station and battery swapping station considering real-time uncertainty	International Journal of Green Energy	Volume:21 Issue No:12 Page No:2724-2752 Year:2024 Month:Sep
Rupali Brahmachary, Aniruddha Bhattacharya, Arnab Pal, and Irfan Ahmed	Port Optimization and Charging Station Allocation Considering EV User Comfort with Utility Benefits.	IEEE Transactions on Industry Applications	Volume:60 Issue No:6 Page No:8239 - 8253 Year:2024 Month:Aug
Sayak Mondal, Parimal Acharjee, and Aniruddha Bhattacharya	Deterministic approach to find the maximum loadability limits of multiple nodes of RDS considering voltage security constraint	Electrical Engineering	Volume:107 Issue No:2 Page No:1347-1370 Year:2025 Month:Feb
Manoj Saha, Siddhartha Sankar Thakur, and Aniruddha Bhattacharya	Hybrid differential evolution-prairie dog optimization algorithm approach for optimal scheduling of battery swapping charging station considering uncertainty	Journal of Energy Storage	Volume:112 Issue No: Page No:129 Year:2025 Month:Mar
S Dey S Banerjee & J Dey	Frequency-Domain Tuning of a Robust Optimal 2-DOF Fractional Order PID Controller for a Maglev System	IEEE Transactions on Industrial Informatics	Volume:20 Issue No:9 Page No:11348-11361 Year:2024 Month:Sep
Aniket Karan Chaudhary, Satyabrata Roy, Dipayan Guha, Richa Negi, Subrata Banerjee	Adaptive Cyber-tolerant Finite-time Frequency Control Framework for Renewable-integrated Power System under Deception and Periodic Denial-of-Service Attacks	Energy	Volume: Issue No: Page No: Year:2024 Month:May
Subhapiyo Joarder, Arnab Ghosh, Subrata Banerjee, Chiranjit Sain, Furkan Ahmad	Harmonic modelling and control of dual active bridge converter for DC microgrid applications	Energy Reports	Volume:12 Issue No: Page No:52-74 Year:2024 Month:Dec
Sumit Kumar, Hanumath Prasad Ikkurti, Santu Kumar Giri, and Subrata Banerjee	A modified perturb and observe MPPT algorithm with zero steady state oscillation for single-phase grid-connected transformerless solar inverter	International Journal of Electronics	Volume: Issue No: Page No:1-24 Year:2024 Month:Nov
H Tiwari, A Ghosh, S Banerjee, D Mazumdar, C Sain	Design of a Triple Port Integrated Topology for Gridintegrated EV Charging stations for Three-way Power Flow	Frontiers in Energy Research	Volume:12 Issue No: Page No: Year:2024 Month:



Author(s) Name	Paper Name	Journal Name	Others Info
K. Adhikari, C. Koley and N. K. Roy	Development of Intensity Modulated Optical Fiber Based Partial Discharge Sensor for High Voltage Power Apparatus	IEEE Transactions on Dielectrics and Electrical Insulation	Volume:31 Issue No:6 Page No:2905-2914 Year:2024 Month:Dec
S. Karmakar, S. Kamilya, C. Koley and T. Pal	A Deep Learning Technique for Real-Time Detection of Cognitive Load Using Optimal Number of EEG Electrodes	IEEE Transactions on Instrumentation and Measurement	Volume:74 Issue No:1 Page No:302-311 Year:2025 Month:Jan
S. Dhara, C. Koley and S. Chakravorti	An Ultrawideband Partial Discharge Sensor for High-Voltage Power Transformers	IEEE Sensors Journal	Volume:24 Issue No:10 Page No:16261-16269 Year:2024 Month:Dec
P. Das, S. Chatterjee and C. Koley	Recurrence Plot Aided Partial Discharge Detection Framework Employing HFCT Sensor and Customized Convolutional Neural Network	IEEE Transactions on Dielectrics and Electrical Insulation	Volume:31 Issue No:6 Page No:2947-2955 Year:2024 Month:Sep
S. Mitra and C. Koley	Multisensor-Based Bearing Fault Diagnosis Using Bag-of-Correlated-Time-Frequency Features Under Harsh Industrial Background	IEEE Sensors Letters	Volume:8 Issue No:3 Page No:1-4 Year:2024 Month:Jul
Rupa Mishra a , Tapas Kumar Saha	Robust predictive control strategy of SCIG-based drive system	ISA Transactions	Volume:150 Issue No: Page No:198-207 Year:2024 Month:Jul
Reddi Ganesh a , Tapas Kumar Saha a, M.L.S. Sai Kumar	Implementation of optimized extreme learning machine-based energy storage scheme for grid connected photovoltaic system	Journal of Energy Storage	Volume:88 Issue No: Page No:111611 Year:2024 Month:May
Subhajit Mukherjee, Soumya Chatterjee, Ratan Mandal	Deep learning aided power quality disturbance detection with improved time-frequency resolution employing adaptive superlet transform	Electrical Engineering	Volume:107 Issue No: Page No:1-13 Year:2025 Month:Jan
Piklu Das, Soumya Chatterjee, Chiranjib Koley	Recurrence Plot-Aided Partial Discharge Detection Framework Employing HFCT Sensor and Customized Convolutional Neural Network	IEEE Transactions on Dielectrics and Electrical Insulation	Volume:31 Issue No:6 Page No:2947-2955 Year:2024 Month:Dec
Suchandan Das, Ashish Paramane, Soumya Chatterjee, Mrutyunjay Maharana	Quantification of Aging State of Insulating Oils Using FTIR Spectra and Deep Learning	IEEE Transactions on Dielectrics and Electrical Insulation	Volume:31 Issue No:4 Page No:1936-1943 Year:2024 Month:Aug
Suchandan Das, Ashish Paramane, Soumya Chatterjee and Palash Mishra	Recurrence Plot-Aided Deep Learning Framework for Condition Monitoring of Transformer Insulation Using Fourier Transform Infrared Spectroscopy	IEEE Transactions on Industry Applications	Volume:60 Issue No:6 Page No:8393-8402 Year:2024 Month:Dec
S. Nandi, S. R. Ghatak, P. Acharjee, and F. Lopes	Multi-Scenario-Based Strategic Deployment of Electric Vehicle Ultra-Fast Charging Stations in a Radial Distribution Network	Energies	Volume:17 Issue No:17 Page No:4204-4212 Year:2024 Month:Aug
S. Nandi, S. R. Ghatak, S. Sannigrahi, and P. Acharjee	Coordinated planning and operation of PV- hydrogen integrated distribution network incorporating daily-seasonal green hydrogen storage and EV charging	Int. J. Hydrog. Energy	Volume:90 Issue No:2 Page No:134-158 Year:2024 Month:Nov

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Author(s) Name	Paper Name	Journal Name	Others Info
	station		
Mondal, S., Acharjee, P., & Bhattacharya, A.	Deterministic approach to find the maximum loadability limits of multiple nodes of RDS considering voltage security constraint	Electrical Engineering	Volume:107 Issue No:3 Page No:1347-1370 Year:2025 Month:Jan
R. Bonela, S. R. Ghatak, S. C. Swain, F. Lopes, S. Nandi, S. Sannigrahi, P. Acharjee	Analysis of Techno– Economic and Social Impacts of Electric Vehicle Charging Ecosystem in the Distribution Network Integrated with Solar DG and DSTATCOM	Energies, vol. 18, no. 2, p. 363, Jan. 2025	Volume:18 Issue No:2 Page No:363-375 Year:2025 Month:Jan
Biswajit Mandal, Partha Sarathee Bhowmik	A Deep Neural Network Based Highly Simplified Intelligent Approach for Maximum Power Point Tracking of DyeSensitized Solar Panel System	IEEE Journal of Emerging and Selected Topics in Industrial Electronics	Volume:6 Issue No:1 Page No:196 - 203 Year:2024 Month:Jul
Himadri Sekhar Chatterjee and Sankar Narayan Mahato	Simplified P &O MPPT Algorithm Based Performance Analysis and Control of Three-Phase IIG-Based MHPCS for Remote Single-Phase Household Applications	Journal of Control, Automation and Electrical Systems	Volume:36 Issue No: Page No:181- 191 Year:2024 Month:Nov
Niti Rani, Aashish Kumar Bohre & Aniruddha Bhattacharya	VO2-based multi-functional ultrawideband terahertz meta-absorber for EMI shielding application	Taylor and Francis, Smart Science	Volume:12 Issue No:3 Page No:484-494 Year:2024 Month:Aug
Das, A.K. , Kumar, P. , Halder, S	Investigation of Fatigue and Drowsiness of Welders and Goldsmiths Based on Entropies and Complexity Parameters of EOGs: A Statistical Approach	Journal of The Institution of Engineers (India): Series B	Volume:106 Issue No:2 Page No:539-556 Year:2025 Month:Apr
Nidhi R, Biman Kumar Saha Roy, Debasree Saha and Manas Mukherjee	Performance Comparison of PSO, HGSO, and DE Optimization Techniques for Computation of Directional Overcurrent Relay Coordination in Power Systems	Engineering Review	Volume:44 Issue No:2 Page No:69- 86 Year:2024 Month:Nov
Sumit Kumar Pandey, Jayati Dey, Subrata Banerjee	Modified discrete internal model control (D-IMC) for cart inverted pendulum system	International Journal of Automation and Control	Volume: Issue No:DOI: 10.1504/IJAAC.2026.100 71636 Page No: Year:2025 Month:
Biswapratim Roy, Mehul Menon, Aritro Dey, Jayati Dey	Adaptive sliding mode control law based on super twisting algorithm for trajectory tracking of quadrotors	International Journal of Automation and Control	Volume: Issue No:10.1504/IJAAC.2025. 10066500 Page No: Year:2025 Month:
Rupali Brahmachary, Aniruddha Bhattacharya, and Irfan Ahmed	Simultaneous Allocation of Electric Vehicle Charging Station and Power Filters in Power Distribution Network Using Marine Predators Algorithm	SN Computer Science	Volume:5 Issue No:7 Page No:1-22 Year:2024 Month:Oct
Biswajit Mandal, Partha Sarathee Bhowmik	Generated Power Forecast of Dye-Sensitized Solar Plant with Deep Neural Network	Smart Science, Taylor & Francis	Volume:12 Issue No:4 Page No:715-726 Year:20247 Month:Oct
Sannistha Banerjee, Partha Sarathee Bhowmik	A comparative study of decision treebased learners to classify the switching transient disturbances in real microgrid network	Smart Science ,Taylor & Francis	Volume:13 Issue No:1 Page No:109-119 Year:2025 Month:Jan



Author(s) Name	Paper Name	Journal Name	Others Info
Debsundar Dey, Suchandan Das, Anik Pal, Santanu Dey, Chandan Kumar Raul, Pritam Mandal, Arghya Chatterjee, Soumya Chatterjee, Manojit Ghosh	Improved machine learning framework for prediction of phases and crystal structures of high entropy alloys	Journal of Alloys and Metallurgical Systems	Volume:9 Issue No: Page No:1-8 Year:2024 Month:Dec
Ananya Chakraborty, Ratan Mandal, Soumya Chatterjee	Time-Frequency Image Representation Aided Deep Feature Extraction-Based Grid Connected Solar PV Fault Classification Framework	Applied Solar Energy	Volume:60 Issue No:2 Page No:242-254 Year:2024 Month:Apr

4.7.15 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s)Name	PaperName	JournalName	OthersInfo
Biman Kumar Saha Roy, Shubhrajyoti Kundu, Mehebab Alam, , Siddhartha Sankar Thakur	An Advanced Heuristic Based Framework for Optimal PMU Placements in Power Systems	SADHANA	Volume:50 Issue No: Page No: Year:2025 Month:Feb
Shubhrajyoti Kundu, Mehebab Alam, Biman Kumar Saha Roy, Siddhartha Sankar Thakur	An Improved FDIA Approach for PMU- Assisted Linear Power System State Estimation	Scientia Iranica	Volume: Issue No: Page No: Year:2024 Month:Apr
R Ganesh, TK Saha, MLSS Kumar	Extremum seeking technique for the optimal energy storage integration to standalone PV based microgrid	Electric Power Systems Research	Volume:248 Issue No: Page No:111968 Year:2025 Month:Nov
Parinita Mondal, Jayati Dey, Tapas Kumar Saha	Implementation of a Power Management Scheme for PV and Battery fed Single Capacitor-based Multi-Input Converter	International Journal of Power Electronics	Volume: Issue No: Page No: Year:2025 Month:
Biswapratim Roy, Mehul Menon, Aritro Dey, Jayati Dey	Adaptive sliding mode control law based on super twisting algorithm for trajectory tracking of quadrotors	Int. J. Automation and Control	Volume:19 Issue No:5 Page No:547-567 Year:2024 Month:Aug

4.7.16 Conference: Published in 2024-2025 DOI/ISBN

Author(s)Name	PaperName	ConferenceName	OthersInfo
Sayak Mondal, Parimal Acharjee, and Aniruddha Bhattacharya	Determination of Maximum Load Handling Capacity with and Without DG Considering the Voltage Security	2025 8th International Conference on Electronics, Materials Engineering & Nano- Technology (IEMENTech)	DOI/ISBN: 10.1109/IEMENTech65115.2025.10959664 Volume: Issue No: Page No:1-6 Year:2025 Month:Jan Presenter:CO-AUTHOR

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Author(s)Name	PaperName	ConferenceName	OthersInfo
Sourav Das, Aniruddha Bhattacharya, and Parimal Acharjee	Intelligent Charging Scheduling Management System for Optimal Electric Vehicle Allocation in an Uncertain Spatiotemporal Environment.	2024 IEEE Silchar Subsection Conference (SILCON 2024)	DOI/ISBN: 10.1109/SILCON63976.2024.10910722 Volume: Issue No: Page No:1-6 Year:2024 Month:Nov Presenter:CO-AUTHOR
Baidurya Dey, Rajdip Dey	A Novel Variable Droop Control Technique for DC Microgrid	2024 4th International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET)	DOI/ISBN: 10.1109/ICEFEET64463.2024.10867103 Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:CO-AUTHOR
Siddheswar Sen, Pratim Bhattacharyya, Santu Kumar Giri, Subrata Banerjee, and Hanumath Prasad Ikkurtti	A Non-Isolated Multiport Converter with Wide Input Voltage Range to Enhance Ultracapacitor Utilization for Electrified Vehicles	11th IEEE International Conference on Power Electronics, Drives and Energy Systems	DOI/ISBN: 10.1109/PEDES61459.2024.10961371 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:
Kundan Kumar, Rajkumar Daniel, Vikram Kumar Saxena, Raja Ram Kumar, and Subrata Banerjee	Innovative Glove Design and Advanced PWM Techniques for Enhanced Robotic Hand Control	1st IEEE International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST-2024)	DOI/ISBN: 10.1109/GIEST62955.2024.10959879 Volume: Issue No: Page No: Year:2024 Month:Oct Presenter:
Kundan Kumar, Wairokpam Dhanraj, Sanjeet K Dwivedi, Vima P Mali, and Subrata Banerjee	Modelling and Simulation Analysis of Innovative Offshore Wind Energy Plant	11th IEEE International Conference on Power Electronics, Drives and Energy Systems	DOI/ISBN: 10.1109/PEDES61459.2024.10961330 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:
Singh, R. , Ranjan, V. , Kumar, P. , Halder, S.	Efficient ECG Signal Reconstruction Using Chebyshev Polynomials and Signal Processing	Lecture Notes in Electrical Engineering	DOI/ISBN: 10.1007/978-981-96-0476-0_12 Volume: Issue No: Page No:157-166 Year:2025 Month:Jun Presenter:CO-AUTHOR
Modak, S. , Roy, S.S. , Chatterjee, S. , Halder, S.	Autocorrelation Aided Rhythm- Based Healthy and Epileptic Electroencephalogram Signals Detection Framework	Lecture Notes in Electrical Engineering	DOI/ISBN: 10.1007/978-981-96-0476-0_18 Volume: Issue No: Page No:233-245 Year:2025 Month:Jun Presenter:CO-AUTHOR
Singh, R. , Ranjan, V. , Ganguly, A. , Halder, S.	Stress Classification Using Heart Rate Variability and	Procedia Computer Science	DOI/ISBN: 10.1016/j.procs.2025.04.674 Volume: Issue No: Page No:4248-4256 Year:2025 Month:Apr Presenter:CO-AUTHOR



Author(s)Name	PaperName	ConferenceName	OthersInfo
	Machine Learning Models		
Banerjee, A. , Basu, A. , Jadav, C., Dutta, I, Halder, S. , Sen, B.	Exploring the Distinguishable Characteristics of EEG Signals of Visually impaired Persons (VIPs): Cognitive Load Perspective	International Conference on Trends in Engineering Systems and Technologies Ictest 2025 ProceedingsOpen source preview, 2025	DOI/ISBN: 10.1109/ICTEST64710.2025.11042339 Volume: Issue No: Page No: Year:2025 Month:Apr Presenter:CO-AUTHOR
Parinita Mondal, Jayati Dey, Tapas Kumar Saha	Design and Performance of an EMS with Frequency Separation for a Single-capacitor-based Multi-Input DC-DC Converter	CALCON 2024	DOI/ISBN: 10.1109/CALCON63337.2024.10914115 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Lenkala Thirumal Reddy, Pragada Venkata Prabhas, Manish Kumar, Biswapratim Roy, Aritro Dey, Jayati Dey	Design of Chattering Free Sliding Mode Control Law for Trajectory Tracking of Quadcopters	2025 8th International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech)	DOI/ISBN: 10.1109/IEMENTech65115.2025.10959450 Volume: Issue No: Page No: Year:2025 Month:Feb Presenter:CO-AUTHOR
Parinita Mondal, Jayati Dey, and Tapas Kumar Saha	Design and Performance of an EMS with Frequency Separation for a Single-capacitor-based Multi-Input DC-DC Converter	IEEE Calcutta Conference (CALCON)	DOI/ISBN: 10.1109/CALCON63337.2024.10914115 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Mahapatra, M.D., Mahata, S. and Roy, B.K.S	Improved tuning of fractionalorder PID controller for an AVR system using geometric mean optimizer.	IEEE Pune Section International Conference (PuneCon)	DOI/ISBN: 10.1109/PuneCon63413.2024.10895059 Volume: Issue No: Page No:1-6 Year:2024 Month:Dec Presenter:CO-AUTHOR
K. Mandal, M.Mukherjee and	μ PMU Placement in Active Distribution Network	IEEE 4th International Conference on Sustainable	DOI/ISBN: 10.1109/SEFET61574.2024.10718147 Volume: Issue No: Page No:1-6 Year:2024 Month:Aug
B.K.Saha Roy	Considering Risk of Failure of Branch & and EV Load	Energy and Future Electric Transportation (SEFET)	Presenter:CO-AUTHOR
Lenkala Thirumal Reddy, Pragada Venkata Prabhas, Manish Kumar, Biswapratim Roy,	Design of Chattering Free Sliding Mode Control Law for Trajectory Tracking	8th International Conference on Electronics, Materials Engineering & Nano-Technology	DOI/ISBN: Electronic ISBN:979-8-3315-2076-2 Volume: Issue No: Page No:1-6 Year:2025 Month:Jan Presenter:

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Author(s)Name	PaperName	ConferenceName	OthersInfo
Aritro Dey, Jayati Dey	of Quadcopters	(IEMENTech)	
Aadil Jamshed, Nasirul Haque, Soumya Chatterjee	Modeling of the Dielectric Response of XLPE Cable Insulation: Insights from Accelerated Water Tree Aging Experiments	IEEE 7th International Conference on Condition Assessment Techniques in Electrical Systems (CATCON)	DOI/ISBN: 979-8-3315-3066-2 Volume: Issue No: Page No:1-4 Year:2025 Month:Jan Presenter:CO-AUTHOR
Soumya Chatterjee, Suchandan Das, Arup Kumar Das	Investigations on PhysicoChemical Properties of Natural Ester Oil-Impregnated paper Insulation Under Accelerated Thermal Ageing	IEEE 7th International Conference on Condition Assessment Techniques in Electrical Systems (CATCON)	DOI/ISBN: 979-8-3315-3066-2 Volume: Issue No: Page No:102-105 Year:2025 Month:Jan Presenter:SELF
Soumya Chatterjee, Suchandan Das, Arup Kumar Das	Investigations on the Dielectric Properties of Mineral Oil and Natural Ester Mixed Liquid Insulation for Power Transformers	IEEE 7th International Conference on Condition Assessment Techniques in Electrical Systems (CATCON)	DOI/ISBN: 979-8-3315-3066-2 Volume: Issue No: Page No:102-105 Year:2025 Month:Feb Presenter:SELF
Sayak Mondal, Parimal Acharjee, Aniruddha Bhattacharya	Determination of Maximum Load Handling Capacity with and without DG Considering the Voltage Security	International IEEE Conference on Electronics, Materials Engineering and Nano-Technology (IEMENTech 2024)	DOI/ISBN: https://doi.org/10.1109/IEMENTech65115.2025.10959664 Volume: Issue No: Page No: Year:2025 Month:Feb Presenter:
Das, S., Bhattacharya, A., Acharjee, P.	Smart Charging Scheduling Management for Suitable Allocation of EV Under Uncertain Spatiotemporal Environment	Intelligent Electrical Systems and Industrial Automation, IESIA 2024	DOI/ISBN: https://doi.org/10.1007/978-981-97-68066_25 Volume: Issue No: Page No: Year:2024 Month:May Presenter:
Surajit Sannigrahi, Sriparna Roy Ghatak, and Parimal Acharjee	Analysis of Battery Degradation Impact on Planning and Operation of Grid-Connected Home Energy system	IEEE Silchar Subsection Conference (IEEE SILCON 2024)	DOI/ISBN: https://doi.org/10.1109/SILCON63976.2024.10910606 Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:



Author(s)Name	PaperName	ConferenceName	OthersInfo
S. Das, A. Bhattacharya, and P. Acharjee	Intelligent Charging Scheduling Management System for Optimal Electric Vehicle Allocation in an Uncertain Spatiotemporal Environment	IEEE SILCON 2024	DOI/ISBN: https://doi.org/10.1109/SILCON63976.2024.10910722 Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:
Surajit Sannigrahi, Sriparna Roy Ghatak, and Parimal Acharjee	Performance Evaluation of a Hybrid Renewable Energy System with Different Storage Technologies for an off-grid Rural Household	11th IEEE International Conference on Power Electronics Drives and Energy Systems (IEEE PEDES 2024)	DOI/ISBN: https://doi.org/10.1109/PEDES61459.2024.10961067 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:
S. Adhvaryyu, P. Acharjee and K. K. Mistry	Design and Study of the Thermoelectric Performance of Mini Cooler Box Using TEC	IEEE International Conference of Electron Devices Society Kolkata Chapter (EDKCON)	DOI/ISBN: doi: 10.1109/EDKCON62339.2024.10870753 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:
S. Nandi, S. R. Ghatak, and P. Acharjee	Multi-Scenario Based Optimal Planning of Distribution Network Considering Fast Electric Vehicle Charging Station	IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SeFet 2024)	DOI/ISBN: https://doi.org/10.1109/SEFET61574.2024.10717944 Volume: Issue No: Page No: Year:2024 Month:Aug Presenter:
S. Bhattacharyya, P.S. Bhowmik, Aashish Kumar Bohre,”	Application of Artificial Intelligence for Energy Audit in Industry to Improve the Performance and Energy Efficiency.	1st IEEE International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST-2024),	DOI/ISBN: 979-8-3315-4014-2 Volume: Issue No: Page No:1-6 Year:2024 Month:Oct Presenter:CO-AUTHOR
Pritam Chakraborty, Sandeep Kumar Das and Supriya Sarkar	Optimal Droop Coefficients of Distributed Generations in Islanded Microgrids for Different Load Models	International Conference on Sustainable Power and Energy Research, ICSPER 2024	DOI/ISBN: https://doi.org/10.1007/978-981-96-08249_43 Volume: Issue No: Page No:pp 545–558 Year:2024 Month:May Presenter:CO-AUTHOR
P. Kumar, S. Paul and O. Yadav	Efficient Offshore Wind Farm Cabling Using Constraint KMean Algorithm	IEEE 15th International Conference on Power Electronics and Drive Systems (PEDS)	DOI/ISBN: 10.1109/PEDS63958.2025.11144821 Volume: Issue No: Page No:1-5 Year:2025 Month:Jul Presenter:CO-AUTHOR

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4.7.17 Conference: Accepted in 2024-2025 DOI/ISBN

Author(s)Name	PaperName	ConferenceName	OthersInfo
S. Bhattacharyya, P.S. Bhowmik Aashish Kumar Bohre,”	Enhancement of Sustainability and Energy Efficiency of Industry by AI based Energy Audit.	4th International Conference on Recent Innovations in Energy Management and Renewable Energy (IEMRE 2024)	DOI/ISBN: na Volume: Issue No: Page No:1-6 Year:2024 Month:Sep Presenter:CO-AUTHOR
Sk Mahammad Sorif; Sandeep Kumar Das; Supriya Sarkar	Optimal Allocation and Droop Setting of Droop- Controlled Distributed Generations for Effective Operation of Islanded Microgrid with Solar PV and Wind Generator	2025 Fourth International Conference on Power, Control and Computing Technologies (ICPC2T)	DOI/ISBN: DOI: 10.1109/ICPC2T63847.2025.10958590 Volume: Issue No: Page No:pp 68-73 Year:2025 Month:Jan Presenter:CO- AUTHOR

4.7.18 Conference: Published in Others in 2024-2025

Author(s)Name	PaperName	ConferenceName	OthersInfo
S. Banerjee, O. Yadav and N. Kishor	Flexible Droop Control Scheme of VSC-MTDC System	IEEE 11th Power India International Conference (PIICON)	DOI/ISBN: 10.1109/PIICON63519.2024.10995019 Volume: Issue No: Page No:1-6 Year:2024 Month:Dec Presenter:SELF

4.7.19 Conference: Accepted in Others in 2024-2025

Author(s)Name	PaperName	ConferenceName	OthersInfo
Sayak Mondal, Parimal Acharjee, and Aniruddha Bhattacharya	Determination of Maximum Capacity of Multiple EV charging stations in Radial Distribution System with and without DG Considering the Security Limits.	Innovation in Energy Management and Renewable Resources (IEMRE- 2024)	DOI/ISBN: Others Volume: Issue No: Page No:1-10 Year:2024 Month:Sep Presenter:CO-AUTHOR
Rupali Brahmachary, Aniruddha Bhattacharya, and Sourav Das	Optimal Allocation of Distributed Generators in Presence of Nonlinear Loads in a Practical Distribution Network	Innovation in Energy Management and Renewable Resources (IEMRE- 2024)	DOI/ISBN: Others Volume: Issue No: Page No:1-10 Year:2024 Month:Sep Presenter:CO-AUTHOR
Hemant Patel, Aashish Kumar Bohre, Omkar Yadav,	Review on Factors Affecting for Planning Station Infrastructure in Electric Vehicle Adoption.	In 4th International Conference on Innovations in Energy Management and Renewable Resources (IEMRE 2024), IEM Kolkata	DOI/ISBN: na Volume: Issue No: Page No:1-6 Year:2024 Month:Sep Presenter:CO-AUTHOR

4.7.20 Books Authored

AuthorName	Co-Author	TitleoftheBook	TitleoftheChapter	PublicationDetails
Biswapratim Roy	Aritro Dey, Jayati Dey	AI and Blockchain Optimization Techniques in Aerospace Engineering	Design of Sliding Mode Control Law for Quadrotor With Adaptive Super Twisting Algorithm	Publisher: IGI Global Publication Date: 2024- 1218



AuthorName	Co-Author	TitleoftheBook	TitleoftheChapter	PublicationDetails
Partha Sarathee Bhowmik,	Sannistha Banerjee, Manika Saha, and Aashish Kumar Bohre	Application of Smart Technologies in Power System and Smart Grid	Reliable Protection Scheme for Distributed Generator-Based Network Using KNN and Ensemble Bagged Tree Classifier	Publisher: Elsevier Publication Date: 2025-0101
Partha Sarathee Bhowmik	Tushar K. Bera	Application of Smart Technologies in Power System and Smart Grid	Battery Equalization Method of EV for Parallel Configuration Using Variable Resistance Technique	Publisher: Elsevier Publication Date: 2025-0101
Partha Sarathee Bhowmik	Manika Saha	Application of Smart Technologies in Power System and Smart Grid	Estimation of Glucose: A Guideline for Selection of Suitable Tuning Parameters	Publisher: Elsevier Publication Date: 2025-0101
Partha Sarathee Bhowmik	Shubhojit Chattopadhyay, Manika Saha, and Aashish Kumar Bohre	Application of Smart Technologies in Power System and Smart Grid	Machine Learning Approach to Measure Terminal Voltage of Lithium-Ion Batteries	Publisher: Elsevier Publication Date: 2025-0101
Pawan Kumar, Santanu Paul, Omkar Yadav	Pawan Kumar, Santanu Paul,	Application of Smart Technologies in Power System and Smart Grid	Reliability Aspects of VSCHVDC-Connected Offshore Wind Plants: A Technical Perspective	Publisher: Springer Nature Publication Date: 2025-0329
Guru Govind Prasad, Omkar Yadav	Guru Govind Prasad	Application of Advance Techniques in Power and Energy Systems	Optimal Load Frequency Control of Two-Area System Integrated with Offshore Wind Farm Through HVDC	Publisher: Springer Nature Publication Date: 2025-0420
Hemant Patel, Aashish Kumar Bohre, Omkar Yadav, Mohan Lal Kolhe, M. Deva Brinda	Hemant Patel, Aashish Kumar Bohre, Mohan Lal Kolhe, M. Deva Brinda	Application of Smart Technologies in Power System and Smart Grid	Short Circuit and Harmonics Analysis of IEEE 8 Bus Transmission Systems Using DlgSILENT Power Factory	Publisher: Springer Nature Publication Date: 2025-0329
Vivek Ranjan	Raghuwansh Singh, Anindita Ganguly, Suman Halder	Intelligent Technologies and Robotics, Intelligent Technologies and Robotics (R0)	Detecting Meditative States Through Heart Rate Variability and Machine Learning Techniques	Publisher: Springer Singapore

4.7.21 Seminars, Summer/Winter Schools, Short Term Courses Attended

NameoftheProgramme	OrganizedBy	FromDate	ToDate	OrganizingCountry
11th IEEE International Conference on Power Electronics, Drives and Energy Systems	NITK	2024-12-18	2024-12-21	India
2024 IEEE 7th International Conference on Condition Assessment Techniques in Electrical Systems (CATCON)	Jadavpur University	2024-11-22	2024-11-24	India
FDP on Intelligent Computing Techniques and Its Engineering Applications	College of Engineering and Management Kolaghat	2025-01-06	2025-01-10	India
FDP on Advanced Nanoscale Materials for Sustainable Electronics & Energy	Electronics & ICT Academy (Hub), NIT	2025-02-17	2025-02-26	India

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NameoftheProgramme	OrganizedBy	FromDate	ToDate	OrganizingCountry
Devices	Warangal, and E&ICT Academy (Spoke), IIITDM Kurnool, Andhra Pradesh			
FDP on “Leveraging Advanced Power Conversion Systems and Artificial Intelligence for Electric Vehicles	Ministry of Electronics and Information Technology (MeitY), Government of India	2025-05-08	2025-05-21	India
Workshop on "Empowering a Sustainable Future: Resilient Renewable Energy and Electric Mobility"	IEEE PES Student Branch Chapter IIT Kanpur	2024-11-29	2024-12-01	India
One Week Short Term Course on "Recent Industrial Trends in Control and Optimization (RICO 2024)"	Department of Instrumentation and Control Engineering, Dr. B. R. Ambedkar National Institute of Technology Jalandhar , Punjab	2024-06-05	2024-06-09	India
One Week Short Term Course on "Multi-Agent System and Distributed Control (MAS 2024)"	Electrical Engineering Department, MNNIT Allahabad, Prayagraj	2024-09-27	2024-10-01	India

4.7.22 Ph.D. Supervision

TopicName	Scholar	Supervisor	Status	StatusDate
Design and Analysis of Polarization-Insensitive Metamaterial Absorber for Different Applications	Niti Rani	Aashish Kumar Bohre, Aniruddha Bhattacharya	SUBMITTED	2025-01-06
Performance Analysis of Power System Distribution Network in Presence of Electric Vehicle Loads	Rupali Brahmachary	Aniruddha Bhattacharya	ONGOING	null
Performance and Security analysis of Power distribution network with optimally allocated EV charging station and Battery swapping station	Manoj Saha	Prof. S.S. Thakur, Dr. Aniruddha Bhattacharya	ONGOING	null
Performance analysis of power distribution network with EV and DG considering the effect of cyber attack	Sayak Mondal	Prof. Parimal Acharjee, Aniruddha Bhattacharya	ONGOING	null
On Some Aspects of Controller Design for Electromagnetic Levitation System	Soham Dey	Prof. Subrata Banerjee, Dr. Jayati Dey	DEGREE AWARDED	2024-09-28
Different converters and control technique for Multi frequency Microgrid with energy storage system	Sudeshna Mukherjee	Rajdip Dey, Tapas Kumar Saha	ONGOING	null
Multi carrier energy storage application for RE integrated DC micrgrid	Brajesh Kumar ravi	Santanu Paul, Rajdip Dey	ONGOING	null
Some Studies on Low Frequency Based Modulation Schemes and Their Applications to Cascaded H-Bridge Multilevel Inverter	Samudra Panda	Prof. Subrata Banerjee	ONGOING	null
Investigation on Grid Connected Transformerless Solar Inverter	Sumit Kumar	Prof. Subrata Banerjee & Dr. Santu Giri	ONGOING	null



TopicName	Scholar	Supervisor	Status	StatusDate
Multiport DC-DC converters for EV applications	Siddheswar Sen	Dr. Santu Giri & Prof. Subrata Banerjee	ONGOING	null
Hybridization of multiple energy sources for E-Vehicle applications	Hanumath Prasad Ikkurti	Dr. Santu Giri & Prof. Subrata Banerjee	ONGOING	null
Study & Application of FACTS Controller in Power System integrated with EV loads	Dhiraj Ray	Prof. Subrata Banerjee	ONGOING	null
Renewable Energy Systems	Tapas Nandi	Prof. Subrata Banerjee & Dr. Kingsuk Mazumdar	ONGOING	null
Detection of Partial Discharge using HFCT sensor	Piklu Das	S. Chatterjee and C. Koley	ONGOING	null
Assessment of Fatigue Derived from Electrooculogram Signal Utilizing Advanced Measurement Techniques	Ashis Kumar Das	Dr. Suman Halder	DEGREE AWARDED	2024-12-03
Design and Development of Adaptive Sliding Mode Control Law for Nonlinear Dynamic Systems	Biswapratim Roy	Aritro Dey, Jayati Dey	ONGOING	null
Development and Analysis of Multi Input Converter based Energy Management Scheme	Parinita Mondal	Jayati Dey, Tapas Kumar Saha	ONGOING	null
Robust Compensation for Switching Power Converters	Rajeev Kumar	Jayati Dey, Tapas Kumar Saha	ONGOING	null
Strategic Deployment of μ PMUs, Communication Links, and PDCs for Distribution Network Monitoring	Manas Mukherjee	Biman Kumar Saha Roy	DEGREE AWARDED	2024-12-18
Optimal PMU Placement and Power Systems State Estimation Including False Data Injection Detection	ShubhrajyotiKundu	Prof. S.S. Thakur and Dr. Biman Kumar Saha Roy	DEGREE AWARDED	2025-03-11
PMU placement in Distribution networks	Koushik Mandal	Dr. B.K. Saha Roy	ONGOING	null
Tuning of parameter of Automatic voltage regulator	Mou Das Mahapatra	B.K. saha Roy and S. Mahata	ONGOING	null
Application of FACTS devices in power system	Krishnendu Maitra	B.K. Saha Roy and R. dey	ONGOING	null
Cyberattack Detection for electric vehicles using machine learning	Anshu Choudhary	Partha Sarathee Bhowmik,	ONGOING	null
Study of SIW components for Microwave and mm wave applications	Jhuma Kundu Paul	Partha Sarathee Bhowmik, Sourav Moitra	ONGOING	null
Smart Electrical Energy Audit and Management	Subir Bhattacharyya	Partha Sarathee Bhowmik, Aashish Kumar Bohre	ONGOING	null
Islanding Detection Techniques in Power System	Mahesh Kumar Shaw	Partha Sarathee Bhowmik, Nirmal Kumar Roy	ONGOING	null

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TopicName	Scholar	Supervisor	Status	StatusDate
Artificial Pancreas Control System for Blood Glucose Regulation in Patients with Type-I Diabetes	Subrata Panday	Partha Sarathee Bhowmik, Manika Saha	ONGOING	null
STATE ESTIMATION FOR DYNAMIC SYSTEMS USING ADAPTIVE NONLINEAR FILTERS	Poluri Sri Mannarayana	Aritro Dey	DEGREE AWARDED	2025-03-25
Design & Development of Adaptive Sliding Mode Control Law for Nonlinear Dynamic Systems	Biswapratim Roy	Aritro Dey, Jayati Dey	ONGOING	null
Detection and Classification of Transient Disturbances in Power System using Advanced Signal processing and Machine Learning Techniques	Mrs. Ananya Chakraborty	Prof. Ratan Mondal and Dr. Soumya Chatterjee	DEGREE AWARDED	2024-09-10
An Intelligent Partial Discharge Monitoring System for Condition Monitoring of High Voltage Power Apparatus	Mr. Piklu Das	Prof. Chiranjib Koley and Dr. Soumya Chatterjee	ONGOING	null
Impact on the Power System with a Large Penetration of Renewable Energy Generation	Mr. Subhajit Mukherjee	Prof. Ratan Mondal and Dr. Soumya Chatterjee	ONGOING	null
Investigations on dielectric properties of Natural Ester Mineral Oil Blended Oil-paper Insulation for Power Transformers	Mr. Brahma Swarup Laha	Dr. Soumya Chatterjee	ONGOING	null
Techno-Enviro-Economic Analysis of Distribution Network with Impacts of DG, DSTATCOM and Reconfiguration Considering Different Loads	22REE002	Dr. Aashish Kumar Bohre	DEGREE AWARDED	2024-12-23
Performance Analysis of Power Distribution Network with EV and DG Considering the Effect of Cyber-Attack	Sayak Mondal	P. Acharjee, A. Bhattacharya	ONGOING	null
Modern Power System Operation and Control with Very Large-Scale RE Penetration	Kamlesh Chandra Sharma	P. Acharjee, S. Paul	ONGOING	null
Performance analysis of ALFC model integrating renewable energy and EV with security constraints	Souvik Dutta	P. Acharjee, Aashish Bohre	ONGOING	null
LFC analysis for Hybrid Power System using Soft Computing Techniques	Alpana Barman	P. Acharjee, Omkar YadaV	ONGOING	null
Some Studies on a Battery Management System for Electric Vehicle Applications using an Embedded Source Modular Multilevel Converter	Rana Das	Dr. Irfan Ahmed	ONGOING	null
Simplification of Space Vector Modulation Techniques for Multilevel Inverters	Anuj Kumar Pandey	Dr. Irfan Ahmed	ONGOING	null
Minimization of backflow power for a dualactive-bridge converter	Imran Ahmad	Dr. Irfan Ahmed	ONGOING	null
Designing and Development of an IoT-Based battery management system (BME) for electric vehicle (EV) applications	Bimlesh Tiwari	Dr. Tushar Kanti Bera and Dr. Irfan Ahmed	ONGOING	null



Economic operation of islanded microgrid considering renewable energy resources	Mr. SK Mahammad Sorif (Roll No.: 23EE1101)	DR. SUPRIYA SARKAR	ONGOING	null
Planning, Operation, and Reliability Analysis of Large-Scale Offshore Wind Power Plants	Pawan Kumar	Omkar Yadav, Santanu Paul	ONGOING	null
SOP-DG and Reconfiguration Supported Performance Enhancement of Distribution Network Considering Different Scenarios	Hemant Patel	A. K. Bohre, Omkar Yadav	ONGOING	null
LFC Analysis for Hybrid Power System using Soft Computing Techniques	Alpana Barman	Dr. Parimal Acharjee & Dr. Omkar Yadav	ONGOING	null
STUDY OF PARTIAL DISCHARGE SENSORS FOR CONDITION MONITORING OF HIGH VOLTAGE POWER APPARATUS	Sri Krishanlal Adhikari	N K Roy, C Koley	ONGOING	null
STUDY OF CRITICAL INSULATING PROPERTIES OF EDIBLE OILS AND NANOFLUIDS FOR POWER TRANSFORMER APPLICATION	S KHANDAI	N K Roy	ONGOING	null
Study of SoC and SoH for Li Ion Battery Management System	ABHISEK KUMAR	N K Roy, A K BOHRE	ONGOING	null
Design of Controllers for Pacemaker Systems	Subrata Pandey	Dr. Manika Saha & Dr. P.S. Bhowmik	ONGOING	null
Investigation on influence of autonomic nervous system on heart rate variability	Vivek Ranjan	Dr. Suman Halder	ONGOING	null
Multifaceted Approach on Biosignal Analysis for Cardiovascular Health Assessment and Management	Raghuwansh Singh	Dr. Suman Halder & Dr. Anindita Ganguly	ONGOING	null

4.7.23 Ongoing Sponsored Projects Details

TitleoftheProject	Investigator	SponsorAuthority	Amount(inRs.)	StartingYear
Online condition monitoring solution for Transformer bushings and coupling capacitors for online discharge monitoring of Generators.	Prof. N.K. Roy, Prof. C. Koley, Dr. P.S. Bhowmik, Dr. Aniruddha Bhattacharya, Dr. S. Chatterjee	NHPC Limited	35326000	2024
Grid Readiness for EV: Enablers and Technological developments (GREET)	Prof. Subrata Banerjee & Dr. Aniruddha Bhattacharya	ANRF	8002032.0	2025

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TitleoftheProject	Investigator	SponsorAuthority	Amount(inRs.)	StartingYear
Capacity building for human resource development in Unmanned Aircraft System (Drone and related Technology)	Nilanjan Chattaraj, Jayati Dey, Aritro Dey, Deepak Kumar	MeitY	15000000	2022
Development of High-Power Grid-Friendly Conductive and Static Wireless Chargers for Electric Vehicles	Prof. T. K. Saha, Dr. J. Dey, Dr. I. Ahmed	ANRF	19825268	2025
Online Condition Monitoring solution for Transformer Bushings and Coupling Capacitors for online Partial Discharge Monitoring of Generators	C. Kolay, N. K. Roy, P. S. Bhowmik, A. Bhattacharyya, S Chatterjee	National Hydroelectric Power Corporation Limited (NHPC)	35326000	2024
Development of Online Partial Discharge Monitoring Solution for High Voltage Power Apparatus	C. Kolay, P. S. Bhowmik, A. Bhattacharya	National Hydroelectric Power Corporation Limited (NHPC)	21998000	2021
Capacity Building for Human Resource Development in Unmanned Aircraft System (Drone and Related Technology)	Dr. Nilanjan Chattaraj, Dr. Jayati Dey, Dr. Aritro Dey, Dr. Deepak Kumar	Ministry of Electronics and Information Technology (MeitY)	15000000	2022
Air Data Estimation from Fusion Data of Flush Airdata Systems (FADS) & Inertial Navigation System (INS)	C Kamali, Aritro Dey, Dushyant Kaliyari	AR&DB	3276218.0	2024
Online condition monitoring solution for transformer bushings and coupling capacitors for online partial discharge monitoring of generators.	Prof. C. Koley, Dr. S. Chatterjee, Dr. P.S. Bhowmik, Dr. A. Bhattacharyaa	NHPC Limited	35326000	2024
Cost Minimization-Based Multi-Stage PMU Installation Strategy Considering Energy Industries' Perspective.	P. A charjee, T. Majhi	CSIR EMR-II	1821000.0	2022

4.7.24 Completed Sponsored Projects Details

TitleoftheProject	Investigator	SponsorAuthority	CompleteYear
Optimal allocation of FACTS Devices and their coordinated operation for power flow control and enhancement of voltage stability using soft computing technique	P. acharjee	Department of Science & Technology, New Delhi	2013
Developing e-learning materials on Advanced Power System	P. Acharjee, S. Ghosh	NMPE-ICT, Gov. of India	2017



4.7.25 Testing and Consultancy Services Rendered

Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
Megger Instruments India Limited	Design of non-contact voltage detector for overhead transmission Lines up to 765 kV	808000.0	Completed
Megger Instruments India Limited	Development of lightning arrester leakage current tester	1780000.0	Ongoing
Gaja Engineering Pvt. Ltd., Asansol	Consultancy of electro- mechanical & SCADA works at Intakejetty, 98 MLD WTP and 6 No of GLSR's	591180.0	Completed
M/s Eastern Consortium, Kolkata	Vetting of Electric Load List & SLD of Ligripukhuri Plant	118000.0	Completed

4.7.26 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Aniruddha Bhattacharya	IEEE Transaction on Industry Applications	IEEE	2025-03-04
Subrata Banerjee	IEEE Transactions on Power Electronics	IEEE	2025-01-11
Biman Kumar Saha Roy	Electric Power Systems Research	Elsevier	2024-05-24
Soumya Chatterjee	IEEE Transactions on Dielectrics and Electrical Insulation	IEEE	2025-03-25
Partha Sarathee Bhowmik	International Journal of Electrical Power and Energy Systems	Elsevier	2024-10-12
Partha Sarathee Bhowmik	International Journal of Electrical Power and Energy Systems	Elsevier	2024-09-13
Partha Sarathee Bhowmik	IEEE Transactions on Industry Applications	IEEE	2025-04-22
Partha Sarathee Bhowmik	IEEE Transactions on Industrial Electronics	IEEE	2025-02-12
Partha Sarathee Bhowmik	IEEE-IAS Renewable and Sustainable Energy Conversion Systems	IEEE	2025-04-22
Partha Sarathee Bhowmik	International Journal of Electrical Power and Energy Systems	Elsevier	2025-01-22
Partha Sarathee Bhowmik	International Journal of Electrical Power and Energy Systems	Elsevier	2025-02-18
Partha Sarathee Bhowmik	International Journal of Electrical Power and Energy Systems	Elsevier	2025-05-06
Partha Sarathee Bhowmik	Journal of Energy Storage	Elsevier	2025-05-30
Partha Sarathee Bhowmik	Measurement	Elsevier	2025-01-20
Partha Sarathee Bhowmik	Measurement	Elsevier	2025-02-10
Partha Sarathee Bhowmik	Electric Power Systems Research	Elsevier	2025-06-06
Aashish Kumar Bohre	journal, Mathematics ISSN: 2227-7390	MDPI	2024-08-20
Aashish Kumar Bohre	journal, World Electric Vehicle Journal ISSN: 2032- 6653	MDPI	2024-04-24

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Reviewer	NameoftheJournal	Publisher	Date ofFinalReview
Aashish Kumar Bohre	IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS	IEEE	2024-11-25
Supriya Sarkar	IEEE Access	Institute of Electrical and Electronics Engineers (IEEE)	2025-03-17
Omkar Yadav	International Journal of Energy Research	WILEY	2025-03-31
Omkar Yadav	Chaos, Solitons and Fractals: the interdisciplinary journal of Nonlinear Science, and Nonequilibrium and Complex Phenomena	Science Direct	2024-07-29

4.7.27 Invited Examiners/Paper-Setters/Board of Studies

NameoftheFaculty	NameoftheExamination	University/Institute	FromDate	ToDate
Subrata Banerjee	For conducting PhD viva-voce	Jadavpur University	2024-12-05	2024-12-05
Subrata Banerjee	Assessment of Technical Officers (Gr-III)	CSIR-CMERI	2025-03-27	2025-03-28
Subrata Banerjee	For conducting PhD viva-voce	Jadavpur University	2025-01-20	2025-01-20
Tapas Kumar Saha	M. Tech	IIST Shibpur	2025-07-02	2024-07-23
Tapas Kumar Saha	NaMPET III MEMS for Machines project Expert	IIST Shibpur	2025-07-02	2024-07-23
Partha Sarathee Bhowmik	Ph.D	COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE	2024-12-09	2024-12-09
Partha Sarathee Bhowmik	Ph. D	BIJU PATNAIK UNIVERSITY OF TECHNOLOGY, ODISHA	2025-06-12	2025-06-12

4.7.28 Invited Expert in Selection Committees

NameoftheFaculty	Discipline	University/Institute	FromDate	ToDate
Subrata Banerjee	Electrical Engineering	NIT Jamshedpur	2024-08-15	2024-08-15
Subrata Banerjee	JRF-SRF Selection	CSIR-CMERI	2025-01-24	2025-01-24
Partha Sarathee Bhowmik	Electrical Engineering	Aliah University	2025-05-23	2025-05-23



4.7.29 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Subrata Banerjee	Switch mode DC-DC converters & multilevel inverters for EV applications	Five-Day Online Workshop on Intelligent Electric Vehicle: The Future of Emobility (IEV-2024)	IIT-ISM Dhanbad (online)	2024-07-15	2025-09-19
Aritro Dey	Flight Control Systems: An Overview	Industry-Academia Consortium in Control, Energy and Measurement	IEM Kolkata, Online Mode	2024-05-15	2024-05-15
Soumya Chatterjee	Implementation of Machine Learning in Power System Asset Management	FDP	Kolkata	2024-11-11	2024-11-14
Aashish Kumar Bohre	"DG-rich Active Distribution System Modelling and Analysis"	Short Term Training Program On MATLABbased Modelling, Simulation, and Data Processing for Power Engineering i Organized by Department of Electrical Engineering, National Institute of Technology - Calicut from 23rd to 27th December 2024	NIT Calicut	2024-12-23	2024-12-27

4.7.30 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Subrata Banerjee	IEEE GIEST-2024 CONFERENCE	NIT Manipur ONLINE	PEMD	2024-10-25	2025-09-26
Subrata Banerjee	11th IEEE PEDES 2024	NIT Karnataka	TT1: Power Converter	2024-10-18	2025-10-21
Subrata Banerjee	1th IEEE PEDES 2024	NIT Karnataka	TT3: Electrical Machines and Industrial Drives	2024-10-18	2025-10-21
IEEE 4th SAFET 2024 conference					
Biman Kumar Saha Roy		Hyderabad	9	2024-07-31	2024-08-03
Partha Sarathee Bhowmik	7th International Conference on Condition Assessment Techniques in Electrical Systems (IEEE CATCON 2024),	Jadavpur University, Kolkata	2024	2024-11-23	2024-11-23
Aashish Kumar Bohre	3rd Ieee International Conference On Electrical Power And Energy Systems Iccpes-2024 Ieee Conference Record #60647 June 21-22, 2024	Manit Bhopal	Technical Session: Ts5-C Mode: Online Venue: Cad Lab, Electrical Engineering	2024-06-21	2024-06-22

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Name of the Faculty	Programme	Place	Session	From Date	To Date
			Department Manit Bhopal June – 22, 2024 (Day-2)		
Omkar Yadav	Worked as Session Chair in "2024 IEEE 11th Power India International Conference (PIICON 2024)"	MNIT Jaipur, India	Technical Session 2	2024-12-10	2024-12-12
Omkar Yadav	Worked as Session Chair in "Third International Conference on Signals, Machines and Automations (SIGMA 2024)"	NSUT, New Delhi, India	Technical Session 11	2024-12-20	2024-12-22

4.8 Department of Earth and Environmental Studies

4.8.1 Department at a Glance:

The Department was started in early 1960's as Department of Geology and later renamed as Department of Earth and Environmental Studies in 2012 because of spread of activities of the department on environment issues, mainly in research and teaching. The Department is the coordinating department for multidisciplinary M.Tech. Programme in "Environmental Science and Technology" from the academic session 2009-2010, presently involving four departments of the Institute. The Department has been offering postgraduate programs in M.Sc. in Applied Geology and Geoinformatics since the 2020-2021 session and contributes to undergraduate education by providing a compulsory course on Ecology and Environment for all first-year students, along with mandatory theory and laboratory courses for students of Metallurgical and Materials Engineering and Civil Engineering.

The Departmental laboratories are well equipped to serve the needs of the students. The Department is equipped with various equipments, required for Earth and Environmental Studies courses, including Research Model Polarizing Microscopes (for both transmitted light and incident light), Student Model Microscopes, and rich collection of models, charts, rocks and mineral specimens. A well-equipped environmental laboratory has also been set up in the department to serve the post graduate students of Environmental Science and Technology and to augment research and consultancy facilities in this emerging field.

The Department provides research facilities to faculty members and research scholars of the Institute. Current research areas span a broad spectrum, including environmental studies, critical mineral research, groundwater availability and management, applications of remote sensing and GIS in resource assessment, water and wastewater treatment technologies, ore geology, and mineralization processes involving uranium and rare earth elements (REEs). At present, thirteen research scholars are pursuing their doctoral work in the Department. The Department also undertakes consultancy projects related to environmental and geological issues, with particular expertise in groundwater studies.

4.8.2 Mission & Vision

Mission:

- To impart quality technical and scientific education and produce engineers, technologists, scientists and citizens who will contribute meaningfully to the growth and development of the country and excel in various disciplines of knowledge
- To create a research-oriented teaching-learning environment in the Institute with a focus on excellence and innovation.
- To embark upon an inclusive growth path committed to the uplift of the community.
- To pursue creative research and develop new technologies in the field of Earth and Environmental sciences, which can contribute to the industry and to academia.

Vision:

- To impart quality technical education and focus on research and innovation to cater to the need of the country



4.8.3 Faculty

Name	Designation	Email-id
Prof. Kalyan Adhikari	Professor	kadhikari.ees@nitdgp.ac.in
Dr. Sandip Mondal	Assistant Professor	smondal.ees@ees.nitdgp.ac.in
Dr. Manoj Ozha	Assistant Professor	mkozha.ees@ees.nitdgp.ac.in

4.8.4 Equipments:

Sl. No.	Name of the equipment	Date of Purchase	Amount
01	1 no. of Advance binocular petrological Microscope with transmitted and reflected light illumination	04-12-2024	493948.00
02	11 no. of Microscope with phase contrast with camera attachment facility	19-12-2024	3627325.90

4.8.5 Laboratories Available

Sl. No.	Name of Laboratory	Major equipment
1	Environmental Lab 1	COD Reactor, Fume Hood, Balance, Hot Plate, Water Distillation Unit, Magnetic Stirrer, etc.
2	Environmental Lab 2	Hot Air Oven, Muffle Furnace, Vacuum Oven, Vacuum Furnace, Incubator Shaker, Tube Furnace, Centrifuge, Laminar, kjeldahl nitrogen distillation apparatus, Autoclave, Stack Monitoring Kit, P.M 2.5 Sampler, High Volume Sampler, Ozone Analyser, Rock Cutting, Polishing and Grinding Machine etc., Vacuum Oven etc.
3	Research Laboratory	Centrifuge, Peristaltic Pump, Ion Meter, pH meter, TDS meter
4	Instrument Laboratory	AAS, GC, Balance, pH meter, UV-Visible Spectrometer
5	Contaminant transport Lab	Permeability Meter, Mechanical Shaker etc.
6	Geology Lab	Petrological Microscope (Monocular, Binocular and Trinocular), Geological Samples and Models
7	Computer Lab	Computers and ERDAS, Nitro Pro, TNT MIPS, GEOMEDIA, HYDRUS, MODFLOW software facilities
8	Petrological Lab	Petrological Microscope (Binocular and Trinocular)
9	Geo-Environmental Lab	Polishing machine, Grinding machine, rock cutting machine, oven, Geological sieving machine

4.8.6 PhD degree awarded till 2024-25

22 (Twenty-two).

4.8.7 Any other relevant information

Department has six Adjunct Faculty members

4.8.8 Specialization

- Ore Geology
- Environmental Engineering
- Groundwater, Environment, Solid waste management

4.8.9 Proposed Plan for Research

- Development of Nanotech laboratory and Critical mineral separation/recovery.
- Groundwater security through numerical modelling.
- Advancing research on critical minerals, with emphasis on REE-bearing phases such as monazite, apatite, xenotime, allanite, and garnet in primary rocks and hydrothermal systems.
- Explore secondary resources with critical mineral potential.
- Fluid-rock interaction and REE mobility

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4.8.10 Area of Research Interest

- Groundwater assessment of occurrence, quality; Subsurface transport of contaminants; Numerical modelling of Groundwater, Application of RS & GIS in Groundwater and Environmental problems.
- Geochemistry of critical minerals, uranium and sulfide systems, and mineral geochemistry, with a particular emphasis on crustal and hydrothermal processes.
- Fluid–rock interaction, fluid-induced dissolution–precipitation mechanisms, and element mobilization in metamorphic and hydrothermal environments.
- Radiation-induced damage and its implications for mineral stability, geochronology, and element transport.
- Environmental Engineering, Water and wastewater treatment, critical elements recovery from industrial/mining waste/wastewater

4.8.11 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
NRSC, Kolkata, ISRO	Application of Remote sensing in Geoscience	PG Project

4.8.12 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Indian Institute of Technology Bombay	Critical Mineral research	Prof. Sakthi Saravanan Chinnasamy	Joint Publications
IIT-ISM Dhanbad	Critical Mineral Research	Prof. Prabodha Ranjan Sahoo	Joint Publications and Projects
IIT-ISM Dhanbad	Critical Mineral Research	Prof. Anand Rajagopal	Joint Publications and Projects
Arya Vidyapeeth College, Guwahati, Assam	Research	Dr. Dicton Saikia	Joint Ph.D., Publications and Projects

4.8.13 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Sumaya Binta Ashraf, Anibrata Das, Sneha Das, Sandip Mondal	Sustainable water treatment: FeCl ₃ modified rice husk for cyanide and chromium adsorption	Indian Chemical Engineer	Volume: Issue No: Page No:1-17 Year:2025 Month: Jan
Sarita Patel, Manoj Kumar Ozha	Geochemical evolution of uranium mineralization in the Mohuldih deposit, Singhbhum Shear Zone, India: constraints from uraninite and brannerite chemistry	Mineralogy and Petrology	Volume:119 Page No:105-125 Year:2025 Month: Mar

4.8.14 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info



Dicton Saikia, Manoj Ozha, Ravi Shankar	Metamorphic Evolution of Rare Garnet-Al- Silicates (Kyanite-Sillimanite-Andalusite)-Staurolite $\pm$ graphite bearing Anatectic Metapelites from Eastern Himalayan Syntaxis, NE India	EGU General Assembly 2024	DOI/ISBN: doi.org/10.5194/egusphereegu24-20042 Year:2024, Month: Apr Presenter: CO-AUTHOR
Reeya Ghosh and Manoj Kumar Ozha	Textural studies of Magnetite from the rocks of Beldih, Purulia, West Bengal	EGU General Assembly 2024	DOI/ISBN: doi.org/10.5194/egusphereegu24-514 Page No: Year: 2024 Month: Apr Presenter: CO-AUTHOR

4.8.15 Conference: Published in Others

Author(s) Name	Paper Name	Conference Name	Others Info
Manoj Kumar Ozha	Uraninite chemistry as a proxy to understand uranium metallogeny in Proterozoic India: Insights from Mohuldih (SSZ) and Pur-Banera (ADFB)	National Seminar on Dynamic Processes of the Earth (DPE 2025)	

4.8.16 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Date
Hydrgeochemical and mineralogical evaluation of shallow(<80m) arsenicaaffected aquifers of Murshidabad district of West Bengal, Eastern India	Rhitwik Chatterjee	Kalyan Adhikari	AWARDED	2024-08-14
Optimization of sustainable integrated Municipal Solid Waste Management system through case studies	Arpan Chattopadhyay	Kalyan Adhikari, Supriya Pal	AWARDED	2025-02-04
Development of Quantitative Tool for Assessment of Regional Sustainability of Coal Mining Area	Vineeta Prasad	Kalyan Adhikari	AWARDED	2024-08-01
Assessment of Pesticide transport in soil and groundwater through field study, experiment and modelling	Nilesh Meshram	Kalyan Adhikari	ONGOING	null
Geochemical and temporal evolution of carbonatite in and around Purulia area, Eastern India: using monazite-apatite geochemistry as proxy	Reeya Ghosh	Manoj Kumar Ozha	ONGOING	null
Petrological and geochemical appraisals of radiation induced effects in radioactive minerals from samarkiya area, Rajasthan	Prachi Pragyan Giri	Manoj Kumar Ozha	ONGOING	null
Effects of radiation-induced on radioactive accessory phases and its surrounding minerals: an geochronological appraisal	Manojit Singh	Manoj Kumar Ozha	ONGOING	null
Synthesis of Magnetic Biochar for the Removal of Emerging Contaminants from Aqueous Medium	Sneha Das	Sandip Mondal	ONGOING	null
Intensive hydrogeologic intervention to augment cultivable lands in a hardrock alluvium mixed terrain of northern part of	Sagorika Chakraborty	Prof. Kalyan Adhikari	ONGOING	null

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Bankura district, India

4.8.17 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Petrological, geochemical, and geochronological appraisals of radiation-induced effects in radioactive accessory phases and its surrounding minerals from Samarkiya area, Rajasthan	Dr. Manoj Kumar Ozha	Science and Engineering Research Board (SERB)	2215200.0	2024

4.8.18 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Kalyan Adhikari	Earth System Science	Springer on behalf of Indian Academy of Science	2024-04-10
Manoj Kumar Ozha	Journal of Geological Society of India	Springer Nature	2024-09-10
Manoj Kumar Ozha	Journal of Geochemical Exploration	Elsevier	2024-09-07
Manoj Kumar Ozha	Resource Geology	Wiley	2024-04-26

4.8.19 Participation in National Committees/Visits

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Kalyan Adhikari	Member of Accreditation committee of GWCO, NABET, Quality Council of India	New Delhi, Online	2020-12-20	2025-09-22

4.8.20 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Kalyan Adhikari	Syllabus of UG programme	Bankura	2024-06-18	2024-06-18
Manoj Kumar Ozha	Conduct Lab exams (Advance Mineralogy and Advance Petrology)	Rajiv Gandhi University, Arunachal Pradesh	2024-11-20	2024-11-20
Manoj Kumar Ozha	Conduct Lab exams (Geochemistry)	Central University of Jharkhand, Ranchi	2024-12-11	2024-12-11
Manoj Kumar Ozha	Conduct Lab exams (Ore Geology)	Central University of Jharkhand, Ranchi	2024-05-15	2024-05-15

4.8.21 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Sandip Mondal	GLACIER PRESERVATION	World water day	Institution of Engineers (India), Durgapur	2025-03-22	2025-03-22



4.8.22 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Kalyan Adhikari	32nd West Bengal State Science and Technology Congress, 2025	Kolkata	Environmental Science including Climate change	2025-03-01	2025-03-01

4.9 Department of Humanities and Social Sciences

4.9.1 Department at a Glance:

The Department has been in existence since the inception of the Institute in 1960. stalwarts like Dr Sujit Mohan Chanda, Dr Hirendranath Roy, Mr Arun Kumar Dutta, Dr Debashish Roychowdhury, Dr Kamala Banerjee, Dr Baidyanath Chakrabarti, Dr Partha Pratim Sengupta graced this Department as illustrious Professors. The Department at present has seven faculty members. They are actively engaged in teaching, research, and administration, specializing in various genres of English, Economics, Sociology, and Social Work. It runs PhD program in different disciplines and one PG program in Social Work, besides functioning as a supporting Department in UG programs, offering two core courses and as many as nine open elective courses. The Department regularly organizes academic activities like conferences, seminars, academic talks by eminent persons, GIAN programs, faculty development programs, short-term courses, and workshops, thereby sustaining and whetting the intellectual appetite of the academic community. The Research Scholars of the Department are also dedicated to the wholesome development of the Department, contributing their best to the formation of the academic and cultural identity of the Department.

4.9.2 Mission & Vision

Mission:

- To achieve excellence in imparting communication skill and to emerge as a centre of excellence in language studies.
- To instil a sense of social awareness and social responsibility by giving exposure to social sciences.
- To enhance decision-making power of budding techno-managers by imparting knowledge of Economics, Management, Social Work, and Literature.

Vision:

- To emerge as a catalyst of synergy between technical education and social sciences so as to produce value-based social technocrats.

4.9.3 Faculty :

Name	Designation	Email-id
Dr Shri Krishan Rai	Associate Professor	hod.hu@nitdgp.ac.in skrai.hu@nitdgp.ac.in
Dr Joydeep Banerjee	Associate Professor	jbannerjee.hu@nitdgp.ac.in
Dr Arindam Modak	Associate Professor	amodak.hu@nitdgp.ac.in
Dr Debasis Chakraborty	Assistant professor, Grade I	dchakraborty.hu@nitdgp.ac.in
Dr Sutanuka Banerjee	Assistant Professor, Grade I	sbanerjee.hu@nitdgp.ac.in
Dr Angshu Jajodia	Assistant Professor, Grade II	ajajodia.hu@nitdgp.ac.in
Dr Rinki Chokhani	Assistant professor, Grade II	rchokhani.hu@nitdgp.ac.in

4.9.4 Labs:

Sl. No.	Name of Laboratory	Major equipment
1	Language Laboratory	Desktops with Software for acquiring Language Skills
2	MSW Laboratory	Desktops and Projector

4.9.5 PhD degree awarded till 2024-25

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4.9.6 Specialization

- Indian English Literature
- Indian English Literature, Cinema, and Religion
- English
- Economics
- Gender Studies, South Asian Literature
- Social Work

4.9.7 Proposed Plan for Research

- My proposed research intends to explore the intersections of ecocriticism, posthumanism, and food studies in Indian English literature, examining how contemporary texts reimagine human–nonhuman relationships and investigating how food acts as an agent and metaphor that mediates cultural identity.
- Generative AI for Academic Research
- Intergrating the study of Literature with Everyday Life Experience
- Submitting Various ICSSR Projects that includes Call for Major & Minor Projects; Special Call etc.
- Finalising ANRF Project that have been applied earlier
- Finalising the ongoing Book Proposal
- Exploring transnational connections and collaborative research
- To conduct research activities in the field of disability and empowerment

4.9.8 Area of Research Interest

- Indian English Literature
- Indian English Literature, Cinema, and Religion
- Literary Theory
- Energy Economics, Development Economics
- gender and women's studies
- Disability and Empowerment, Gender Issues

4.9.9 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
IIT ISM Dhanbad	PhD Supervision	Dr Nirban Manna	<u>D</u> rafting joint research papers

4.9.10 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Dr. P. RamKumar	National Space Day 2024	2024-08-23
Professor (Retd.) Rajeev Chakravarty	Hindi Pakhwada 2024	2024-09-14
Shri Manish Sharshwat, Inspector(Fire), ASP CISF Unit (Fire)	Fire Safety Training	2024-10-19
Dr PK Singh and Ms Manvee Ajit Singh	Unnat Bharat Abhiyan Orientation	2024-09-12
Dr Priyanka Tripathi	Professor Sujit Mohan Chanda Endowment Lecture	2025-07-18

4.9.11 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info



Author(s) Name	Paper Name	Journal Name	Others Info
Dipra Biswas, Joydeep Banerjee	Diaspora, Emotion and Memory: A Gastrocritical Perspective on Jhumpa Lahiri's Unaccustomed Earth	Asiatic: IIUM Journal of English Language and Literature	Volume:18 Issue No:2 Page No:138 - 154 Year:2024 Month:Dec
Shibu Gorai & Shri Krishan Rai	The Shifting Terrains of Disability and Gender: Investigating the Delineation of Women with Disabilities in Hindi Films	International Research Journal of Multidisciplinary Scope	Volume:5 Issue No:3 Page No:162-171 Year:2024 Month:Jul
Mitra, T. , Modak, A. , Banerjee, S.	Bridging the Nationalism-Cosmopolitanism Divide: A Critical Analysis of Rabindranath Tagore's The Home and the World	SIC	Volume:15 Issue No:1 Page No:1-19 Year:2024 Month:
Mohanta, S. , Banerjee, S.	Journey Through an Alien World: Portraying Multi-layered Nuances of Patriarchy in K.R Meera's Hangwoman	31 Language Linguistics Literature	Volume:30 Issue No:1 Page No:50-64 Year:2024 Month:
Rana, R. , Kankaria, L. , Banerjee, S.	Challenging the Glass Ceiling: Gender and Identity in Kanan Devi's My Homage to All (2013)	Wagadu Journal of Transnational Women S and Gender Studies	Volume:25 Issue No:1 Page No:31-41 Year:2024 Month:
Abhijit Maity & Shri Krishan Rai	Mediating ecogenocide: the 1984 Bhopal gas disaster in film	Media Asia,	Volume:52 Issue No:2 Page No:1-12 Year:2024 Month:Apr
Anindita Ghosal & Arindam Modak	Restor(y)ing the Earth: Indigenizing Graphic Storytelling through Tree Matters	World Art	Volume:15 Issue No:2 Page No:271-290 Year:2025 Month:Mar
Sayantan Pahari & Arindam Modak	Post-historicism, Post-territorialism, and the Problem of Scale: A Metacritical Appraisal of the Literary-Theoretical Paradigm of 'Planetary Time'	University of Bucharest review	Volume:14 Issue No:1 Page No:87-100 Year:2024 Month:Oct
Sayantan Pahari & Arindam Modak	Exploring New Avenues Beyond Literary Historicism: A Cross- Temporal and CrossCultural Dialogue Between American Posthistoricism and Slavic Literary Theory	Crossroads: A Journal of English Studies	Volume:47 Issue No:4 Page No:6-23 Year:2025 Month:Mar
Tanushree Mitra, Arindam Modak, & Sutanuka Banerjee	Bridging the Nationalism-Cosmopolitanism Divide: A Critical Analysis of Rabindranath Tagore's The Home and the World	Sic	Volume:15 Issue No:1 Page No:1-19 Year:2024 Month:Dec
Titiksha Das, Debasis Chakraborty	Re-assessing the Environmental Kuznets Curve for the Human Development Index: Evidence from Emerging Asian Economies	Southeast Asian Journal of Economics	Volume:12 Issue No:3 Page No:207-264 Year:2024 Month:
Titiksha Das, Debasis Chakraborty	Effect of energy consumption on economic growth and sustainability: Panel evidence from PCSE and FGLS	Economics and Policy of Energy and the Environment	Volume:02 Issue No: Page No:37-53 Year:2024 Month:

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Author(s) Name	Paper Name	Journal Name	Others Info
Dhiraj Kumar, Debasis Chakraborty	Economic Performance and Resource Utilisation: Empirical Evidence from India's Iron and Steel Industry	Communications on Applied Nonlinear Analysis	Volume:31 Issue No:7S Page No:1-11 Year:2024 Month:
Debasis Chakraborty	Does Income Inequality Play a Role in Renewable Energy Consumption? A Dynamic Panel Evidence of Developing Countries	Review of Economics	Volume:75 Issue No:3 Page No:233-248 Year:2024 Month:
Dhiraj Kumar, Debasis Chakraborty	Digital Transformation & Energy Efficiency to Enhance Sustainability in Indian Iron and steel industry: Empirical study of Integrated Steel Plants, Steel Authority of India Limited	Panamerican Mathematical Journal35	Volume:35 Issue No:3S Page No:375-390 Year:2024 Month:
Chatterjee, Ankita, Banerjee, Sutanuka	The Experience of 'Coming Out': Underscoring Psychological Ambivalence Towards Gay Man as an Identity in Sharif D Rangnekar's Autobiography,	IUP Journal of English Studies	Volume:19 Issue No:3 Page No:13-28 Year:2024 Month:Sep
Tanushree Mitra, Sutanuka Banerjee	EXPLORING CONFLICTING COSMOPOLITAN CONSCIOUSNESS: THE TRANSNATIONAL THEME IN HENRY JAMES'S THE AMBASSADORS	British and American Studies Journal	Volume:XXXI Issue No: Page No:9-16 Year:2025
Shibu Gorai & Shri Krishan Rai	Precarious Lives of the Proletariat: Exploring the Human- Induced Catastrophe in the web series The Railway Men: The Untold Story of Bhopal 1984 (2023)	Rupkatha Journal on Interdisciplinary Studies in Humanities	Volume:16 Issue No:NA Page No:1-17 Year:2024 Month:Jun
Pallabi Maji & Arindam Modak	Humanistic Approach of Greek Writers in Contemporary Medicine – A Perspective	Literary Voice	Volume:23 Issue No:1 Page No:199-206 Year:2024 Month:Sep
Rana, R. , Banerjee, S.	When women broke the mould: Protofeminism and gender equality in Vandana Mishra's I, the Salt Doll	Agathos	Volume:15 Issue No:1(28) Page No:221-230 Year:2024 Month:

4.9.12 Journal: Published in Others in 2024-2025

Author(s) Name	Paper Name	Journal Name	Others Info
Dipra Biswas, Joydeep Banerjee	Navigating the En(gendering) of Consumption in Easterine Kire's A Terrible Matriarchy	International Journal on Multicultural Literature	Volume:15 Issue No:1 Page No:29 - 37 Year:2025 Month:Jan

4.9.13 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info



Tania Koley, Joydeep Banerjee	Combating Gender Based Violence (GBV): A Posthumanist re-reading of Larissa Lai's Salt Fish Girl and Monica Byrne's The Girl in the Road	Global Perspectives on Gender Based Violence – Intersectionality and Interdisciplinary Space	DOI/ISBN: ISBN-9789334174236 Volume: Issue No: Page No:163 Year:2024 Month:Dec Presenter:CO-AUTHOR

4.9.14 Conference: Accepted in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Tania Koley, Joydeep Banerjee	Rockets' without Destination: Gender Sustainability and Identity Challenges in Indian Sports Explored through Rashmi Rocket	International Conference on Gender Studies, NIT Surathkal	DOI/ISBN: Yet to be assigned Volume: Issue No: Page No: Year:2025 Month: Presenter:CO-AUTHOR

4.9.15 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Dipra Biswas	Joydeep Banerjee	Human-Nature Interface: An Ecocritical Study	Sustenance and Environmental Decay in Dystopian Worlds of Claire Vaye Watkins's Gold Fame Citrus and Jeff VanderMeer's Borne	Publisher: Rudra Publishers & Distributors Publication Date: 2025-02-26

4.9.16 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
Emerging Trends in Humanities and Social Sciences: Navigating New Frontiers	IEST Shibpur	2025-02-11	2025-09-13	India
ICSSR Sponsored International Seminar on "Envisioning Janjatiya Gaurav: The Legacy of Birsa Munda and the Decolonisation of 'Global ' Indigenous Studies"	Durgapur Women's College	2025-03-26	2025-03-28	India
Emerging Trends in Humanities and Social Sciences: Navigating New Frontiers	IEST Shibpur, Kolkata	2025-02-11	2025-02-13	India
Future of Women 2025	The International Institute of Knowledge Management (TIKM)	2025-02-20	2025-02-21	Bangkok, Thailand

4.9.17 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date

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Topic Name	Scholar	Supervisor	Status	Status Date
Envisaging the Palate: A Study of Manifestations of Gustatory Memory in Select Indian Culinary Fictions	Dipra Biswas	Joydeep Banerjee	ONGOING	null
Rewiring the Human: Cinematic Representation of Posthumanist Paradigms through Multispecies Citizenship	Tania Koley	Joydeep Banerjee	ONGOING	null
Healing the Trauma of Sexual Abuse: the Health Humanities Approach	Pallabi Maji	Dr Arindam Modak	ONGOING	null
Visualising the Anthro(s)cene: Reconfiguring the Spatial, Temporal, and Material through Eco-Dystopian Graphic Narratives	Anindita Ghosal	Dr Arindam Modak	ONGOING	null
An ANT's Eye-View of the Socio-Literary: Rethinking the Ethico-Onto-Epistemology of Literary and Cultural Studies after Posteritique	Sayantana Pahari	Dr Arindam Modak & Dr Rumpa Das	ONGOING	null
Contrasting Conceptions of Cosmopolitanism at the Centre and the Periphery of the Imperial Machinery: A Comparative Study of the Select Novels of Henry James and Rabindranath Tagore	Tanushree Mitra	Dr Arindam Modak & Dr Sutanuka Banerjee	ONGOING	null
The Yellow Book and the Alternative Literature at the Turn-of-the-Century by New Women Writers and Poets of the Periodical	Satorupa Ghosh Das	Dr Arindam Modak	ONGOING	null
From Sight to Insight: Psychopathological Interpretations of Abnormality of Shakespeare's Characters	Md Abu Barkat Ali	Dr Arindam Modak	ONGOING	null
Understanding People's Perceptions through Visual Research Methods in Climate Change Affected Uncertain Landscapes: The Case of Indian Sundarbans and Kutch, Gujarat	Shibaji Bose	Dr Arindam Modak & Dr Partha Pratim Sengupta	ONGOING	null
Embodies Narratives: Disability Representation in Select Indian Texts and Personal Reflections	Prasanta Rakshit	Dr Arindam Modak & Dr Avijit Pramanik	ONGOING	null
Abjection of Women in/and Contemporary Indian English Fiction: A Select Study	Santanu Panda	Dr Shri Krishan Rai	ONGOING	null
Cultural Representations and Metaphorical Tropes in Indian Disability Life Writings in English: A Select Study	Shibu Gorai	Dr Shri Krishan Rai	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Fiction in the Quantum Realm: The Changing Notions of Reality in Select Quantum Fictions	Sumanta Pramanik	Dr Shri Krishan Rai	ONGOING	null
Petro-culture and Oil Capitalism: Narratives of Oil in Contemporary Fictions	Susanta Dey	Dr Shri Krishan Rai	ONGOING	null
Understanding Different Types of Identity Crisis: A Reading of Contemporary Fiction	Aparna Chatterjee	Dr Shri Krishan Rai	ONGOING	null
TBA	Aritra Ghosal	Dr Shri Krishan Rai	ONGOING	null
Impact of Sustainability Issues on Consumer Purchase Decision Making: Special Emphasis on Indian Middle-Class Consumers	Amit Kumar Banerjee	Dr. Debasis Chakraborty, Prof. Partha Pratim Sengupta (Retd.)	ONGOING	null
Efficiency and Productivity Analysis of India's Iron & Steel Industry: A Comparative Study	Dhiraj Kumar	Dr. Debasis Chakraborty	ONGOING	null
Impact of Energy Consumption on Economic Growth, Human Development and Sustainable Development: A Cross-Country Analysis with Special Reference to India	Titiksha Das	Dr. Debasis Chakraborty	SUBMITTED	2025-06-27
Implementation and Performance Evaluation of Enterprise Resource Planning (ERP) in An Integrated Steel Plant of India	Sumit Ranjan Dasgupta	Dr. Debasis Chakraborty, Prof. Partha Pratim Sengupta (Retd.)	DEGREE AWARDED	2025-04-02
From Ecosystem Services to Gendered Resilience: Integrating Women's Traditional Ecological Knowledge into Climate Adaptation in the Sundarbans Delta of India	Rhitabrita Mukherjee	Dr. Debasis Chakraborty	ONGOING	null
Home-Based Care for the Elderly in India: Insights from Different Economic Sections	Ratul Basu	Dr Angshu Jajodia	ONGOING	null
Modern Voices, Established Expectations: Exploring the Role of Married Bengali Women and Their Relationships with Mothers-in-Law	Sayantani Sengupta	Dr Angshu Jajodia	ONGOING	null
Impact of Urban Planning on People with Disabilities in Public Spaces	Disha Sengupta	Dr Angshu Jajodia	ONGOING	null
Expanding Horizons: A Critical Exploration of Bengali Women's Travel Narratives in English (1915-1947)	Lipika Kankaria	Dr. Sutanuka Banerjee	DEGREE AWARDED	2024-04-22
Braving the Odds: Pioneering Female Actors in Their Own Wor(l)ds	Raju Rana	Dr. Sutanuka Banerjee	DEGREE AWARDED	2025-02-10
Negotiating Normative Spaces: Reading Transgressive Bodies in Select Contemporary Indian Narratives in	Ankita Chatterjee	Dr. Sutanuka Banerjee	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
English				
Unmasking Masculinities in Urban Spaces: A Study on Select Hindi Web Series	Amrita Mitra	Dr. Sutanuka Banerjee	ONGOING	null
Portrayal of Single Woman in Indian English Fiction	Subhasnata Mohanta	Dr. Sutanuka Banerjee & Dr. Rumpa Das	ONGOING	null
Retelling Narratives through Patachitra: Transcending Boundaries	Somjit Halder	Dr. Sutanuka Banerjee & Dr. Nirban Manna	ONGOING	null
Contrasting Conceptions of Cosmopolitanism at the Centre and the Periphery of the Imperial Machinery: A Comparative Study of the Select Novels of Henry James and Rabindranath Tagore	Tanushree Mitra	Dr. Sutanuka Banerjee & Dr. Arindam Modak	ONGOING	null
Lived Realities and Layered Oppressions: Caste, Class, and Gender in the Poetry of Meena Kandasamy, Kalyani Thakur Charal, and Temsula Ao	Anjan Das	Dr. Sutanuka Banerjee	ONGOING	null

4.9.18 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Joydeep Banerjee	Cogent Arts & Humanities	Taylor & Francis	2025-02-13
Sutanuka Banerjee	SIC-a journal of literature, culture and literary translation	University of Zadar	2024-10-08

4.9.19 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Shrikrishan Rai	PhD Viva-Voce of Mr Abhishek Verma	Manipal University-Jaipur	2024-06-10	2024-06-10
Shrikrishan Rai	NIMCET- 2024 Question Paper	NIT Jamshedpur	2024-05-06	2024-05-06

4.9.20 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Joydeep Banerjee	English	Sanaka Educational Trust's Group of Institutions	2025-02-10	2025-02-10
Joydeep Banerjee	English	DAV Model School	2025-03-02	2025-03-02



Sutanuka Banerjee	Ad-hoc Selection Committee	DAV Model School Durgapur	2024-04-20	2024-04-20

4.9.21 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Shrikrishan Rai	Empowering Educators, Transforming Learning!	Innovative Pedagogy Series	NSHM Knowledge Campus Durgapur	2025-02-03	2025-02-03
Sutanuka Banerjee	Employability and Communication Skills for Professional	Employability and Communication Skills for Professional	NSHM Knowledge Campus Durgapur	2024-04-10	2024-04-10

4.9.22 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Joydeep Banerjee	Emerging Trends in Humanities and Social Sciences: Navigating New Frontiers	IIST Shibpur	Posthumanism; Memory & Trauma	2025-02-12	2025-02-13
Debasis Chakraborty	Emerging Trends in Humanities and Social Sciences: Navigating New Frontiers	IIST Shibpur, Kolkata	II	2025-02-11	2025-02-13

4.10 Department of Mathematics

4.10.1 Department at a Glance

The department is involved in teaching three mathematics courses to all the disciplines of undergraduate students and various elective courses are also offered to them. Also, in addition to a two-year M.Sc. programme in Mathematics and a Ph.D. programme, the department participates as a coordinating department in a multidisciplinary M.Tech in Operations Research programme with the Department of Management Studies and the Department of Computer Science & Engineering. The broad range of mathematical research topics we cover include algebra, analysis, differential equations, applied mathematics, theoretical physics and computational sciences. Present set of faculties have already undertaken 20 Govt. funded research projects. Among students completing M.Sc from our department many have qualified National Eligibility Test and pursuing /completed Ph.D . Candidates completing Ph.D from our Dept. has joined colleges, post-doctoral programmes abroad, joined institutes within India or abroad as faculties .

4.10.2 Mission & Vision

Mission:

- To create an ambiance in which state-of-the-art undergraduate, postgraduate, and doctoral programmes will flourish.
- To identify different industrial problems through industry- academia interaction and to undertake collaborative projects for long term development.
- To design the curriculum keeping with the trend of expanding knowledge of Mathematics and to nurture students so that they can establish themselves not just at highest level of academic achievements but also as good human beings. To generate human resources with finest capabilities who can emerge as leaders in a range of professions.

Vision:

- To establish itself as a department teaching Mathematics at par with other premier institutes of our country.

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- To contribute to research at a level of international excellence

4.10.3 Faculty

Name	Designation	Email-id
Samarjit Kar	Professor	samarjit.kar@maths.nitdgp.ac.in
Seema Sarkar (Mondal)	Professor	seema.sarkar@maths.nitdgp.ac.in
Pinaki Pal	Associate Professor	pinaki.pal@maths.nitdgp.ac.in
Lakshmi Kanta Dey	Associate Professor & Head	lakshmikanta.dey@maths.nitdgp.ac.in
Anita Pal	Associate Professor	anita.pal@maths.nitdgp.ac.in
Sarit Maitra	Associate Professor	sarit.maitra@maths.nitdgp.ac.in
Satya Bagchi	Associate Professor	satya.bagchi@maths.nitdgp.ac.in
Goutam Panigrahi	Assistant Professor	goutam.panigrahi@maths.nitdgp.ac.in
Partha Pratim Gopmandal	Assistant Professor	partha.gopmandal@maths.nitdgp.ac.in
Md Firoz Ali	Assistant Professor	firoz.ali@maths.nitdgp.ac.in

4.10.4 Labs

Sl. No.	Name of Laboratory	Major equipment
1	Computational Laboratory	Desktop computers, MATHEMATICA Software

4.10.5 PhD degree awarded till 2024-25

108 (one hundred and eight).

4.10.6 Specialization

- Computational Graph Theory, Fuzzy Mathematics
- Network Optimization
- Algebraic Coding Theory
- Cryptography
- Differential Equation, Nonlinear waves, Mathematical ecology
- Functional Analysis
- Complex Analysis
- Fluid Dynamics
- Optimization
- Geophysics
- Computational Fluid Dynamics

4.10.7 Proposed Plan for Research

- 1. Instabilities in double diffusive convection, 2. Complex dynamics in networks with higher order interactions
- Studying properties of differential equations, investigate the mathematical properties of ecological systems, study the nonlinear waves and structures in dusty and astrophysical plasmas
- To study the thermophoretic motion of colloids
- The main plan of my research aims to advance the field of nonlinear analysis and the geometry of Banach spaces by developing new theories, methods, and applications. The anticipated outcomes will significantly contribute to the understanding and practical solutions of nonlinear problems in Banach spaces.
- Quantum Coding Theory
- This year I want to continue my research in the areas of combinatorial optimization, Supply Chain Management, Mainly I want to continue my research in bio fuel and other sustainable energy resources.
- Energy of Graphs, Spectral Graph Theory
- Multi-objective Combinatorial Optimization and Applications, Application of AI and Machine Learning in Supply Chain Modeling, Stock market Prediction using Machine Learning,
- 1. To study the dynamics of earthquakes by analyzing the ground deformation, 2. develop different mathematical model to study real life inventory problems, 2. To study and analyze the different prey-predator models under different environment.



4.10.8 Area of Research Interest

- Graph Theory, Fuzzy Mathematics
- Network Optimization and different models Ring Star, Ring Tree, TSP, Routing Problems and Multi Objective Optimization,
- Algebraic Coding Theory
- Lightweight Cryptography
- 1. Differential equations 2. Wavelets 3. Nonlinear dynamics
- Nonlinear analysis, Integration Theory, Topology, Geometry of Banach Spaces etc..
- Complex Analysis
- Convective Instability; Machine Learning; Collective Phenomena in complex systems; Network Science
- Supply Chain Modeling, Financial Modeling, Machine Learning
- Geophysics and Operations Research
- Microscale fluid dynamics: Modelling and Simulation

4.10.9 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Yonsei University, Seoul, South Korea	Inventory Control	Biswajit Sarkar	Research
Sungkyunkwan University, Suwon, 16419, Republic of Korea	Spectral Graph Theory	Kinkar Chandra Das	Research
University of Sharjah, Sharjah, UAE	Chemical Graph Theory	Zahid Raza	Research
VIT AP University	Mathematical ecology	Dr. Soumen Kundu	Research Article
Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
University of Rzeszow	Geometric Function Theory	Stanislawa Kanas	Joint Research
TCG CREST	Low dimensional topology	Dr Sayan Chakraborty	Joint research
Thammasat University, Thailand	Nonlinear analysis	Prof. W. Sintunavarat	Joint research
Durgapur Government College	Integration theory	Dr Pratikshan Mondal	Joint research
Chongqing Three Gorges University, Wanzhou 404020, P. R. China	Nonlinear Analysis	Prof. Huaping Huang	Joint research
Department of Mathematics, Babes-Bolyai University Cluj-Napoca, Romania	Nonlinear analysis	Prof. A. Petrusel	Joint research
International Institute of Information Technology - Hyderabad	Network Science	Dr. Chittaranjan Hens	Research Work
Dhirubhai Ambani Institute of Information and Communication Technology - Gandhinagar	Network Science	Dr. Prosenjit Kundu	Research Work
University of Petroleum and Energy Studies - Dehradun	Network Science	Dr. Pitambar Khanra	Research Work
Vilnius Gediminas Technical University	Department of Graphical Systems	Prof Dr Habil Romualdas Baušys	Chief Research Fellow

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Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Hiralal Bhakat College, Naihati, West Bengal	Bio-mathematics	Dr. Banshidhar Sahoo	Research collaboration
Mahadevananda Mahavidyalaya, Barrackpur, Kolkata, West Bengal	Bio-mathematics	Dr. Krishna Pada Das	Research collaboration
Viswa Bharati, Santiniketan, West Bengal	Non-linear Dynamics	Dr. Nikhil Pal	Research collaboration
Tokyo University of Science	Electrokinetic motion of nanoparticles and environmental entities	Prof. H. Ohshima	Tokyo University of Science
Tsukuba University	Electrokinetic motion of biocolloids	Prof. T. Sugimoto	Electrokinetic motion of biocolloids
TU Darmstadt	Flow through nano-microscale devices	Prof. S. Hardt	Flow through nano-microscale devices
CNRS Nancy France	Electrophoresis of membrane coated nanoparticles	Prof. JFL Duval	CNRS Nancy France
Indian Statistical Institute	Dispersion of solutes in microscale system under electrokinetically driven flow	Prof. S. Sarkar	Indian Statistical Institute
Jadavpur University	Electrophoresis and diffusiophoresis of soft nanoparticles	Dr. S. K. Pal	Jadavpur University
MNNIT Allahabad	Electrokinetic of soft particles in non-Newtonian fluidic medium	Dr. N. Bag	MNNIT Allahabad
Gour Banga University	Streaming potential flow	Dr. S. De	Gour Banga University

4.10.10 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Prof. Mahananda Kanjilal and Saswati Sweta Samanta	Women Empowerment-Accelerate Action	2025-03-19

4.10.11 Innovations and Technology Transfer

Title	Inventors	Application Nos	Date of Filling
Mathematical Equation Analysis Device	Sk Amanatulla, S. Samanta, Anita Pal, T. Mahapatra, S. Raut, M. Pal	423575-001	2024-07-18



4.10.12 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Biswajit Sarkar, Sumi Kar, Anita Pal	Does the bullwhip effect really help a dual-channel home delivery policy?	Journal of Retailing and Consumer Services	Volume:78 Issue No: Page No: Year:2024 Month:May
Parikshit Das, Sourav Mondal, Anita Pal	On Second Zagreb Energy of Graphs	MATCH Communications in Mathematical and in Computer Chemistry	Volume:92 Issue No: Page No:105- 131 Year:2024 Month:Jun
Parikshit Das, Kinkar Chandra Das, Sourav Mondal, Anita Pal	First Zagreb spectral radius of unicyclic graphs and trees	Journal of Combinatorial Optimization	Volume:48 Issue No: Page No: Year:2024 Month:Jul
Biswajit Some, Sourav Mondal, Anita Pal	Numerous bounds and significance of the Sombor index in fuzzy graph	Journal of Applied Mathematics and Computing	Volume:70 Issue No: Page No:6323- 6346 Year:2024 Month:Aug
Prosanta Sarkar, Anita Pal and Sourav Mondal	On some neighborhood degree-based structure descriptors and their applications to graphene	European Physical Journal Plus	Volume:140 Issue No: Page No: Year:2025 Month:Jan
Parikshit Das, Sourav Mondal, Zahid Raza and Anita Pal	On exponential inverse symmetric division deg index of graphs	Journal of Applied Mathematics and Computing	Volume:10.1007/s12190-025-02461-9 Issue No: Page No: Year:2025 Month:Apr
Harinandan Tunga, Samarjit Kar, Debasis Giri	Multi-objective brainstorm optimization algorithm based on Bayesian inference learning automaton for solving CVRP with time windows	Applied Soft Computing	Volume:162 Issue No: Page No:111755 Year:2024 Month:Sep
Samarjit Kar, Bikash Koli Roy, Manas Kumar Mohanty	A dual measure of fuzzy entropy: Fuzzy extropy	Iranian Journal of Fuzzy Systems	Volume:21 Issue No:5 Page No:71-88 Year:2024 Month:Oct
Mihir Kr Chakraborty, Sandip Majumder, Samarjit Kar	Rough sets, modal logic and approximate reasoning	International Journal of Approximate Reasoning	Volume:176 Issue No: Page No:109305 Year:2025 Month:Jan
Sanjukta Mishra, Samarjit Kar, Parag Kumar Guhathakurta	Cloud-WAVECAP: Ground- based cloud types detection with an efficient wavelet-capsule approach	The Journal of Supercomputing	Volume:81 Issue No:2 Page No:424 Year:2025 Month:Jan
Shayana Deb, Jayashankar Reddy, Samarjit Kar, Aleena Maria Sunny, Sibnath Deb	Quality of Life of Indian Youth during 3rd Year of COVID-19 Pandemic	Decision Making Advances	Volume:3 Issue No:1 Page No:228- 244 Year:2025 Month:Feb
Prasanta Kumar Ghosh, Amalesh Kumar Manna,	Pricing strategies of the green product with warranty and product insurance based on the consumer's opinion in a	Environment, Development and Sustainability	Volume: Issue No: Page No:1-46 Year:2025 Month:Feb

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Author(s) Name	Paper Name	Journal Name	Others Info
Jayanta Kumar Dey, Samarjit Kar	supply chain model		
Arghadip Roy, Banshidhar Sahoo, Seema Sarkar (Mondal),	Diseased livestock farms: Impacts of vaccination and harvesting	Physica Scripta	Volume:100 Issue No:4 Page No: Year:2025 Month:Mar
M. F. Ali and M. Nurezzaman	On certain close-to-convex functions	Bull. Aust. Math. Soc.	Volume:109 Issue No: Page No:365375 Year:2024 Month:
M. F. Ali and S. Pal	The Schwarzian norm estimates for Janowski convex functions	Proc. Edinburgh Math. Soc.	Volume:67 Issue No: Page No:299315 Year:2024 Month:
M. F. Ali and S. Pandit	On the Pre-Schwarzian Norm of Certain Logharmonic Mappings	Bull. Malays. Math. Sci. Soc.	Volume:47 Issue No: Page No: Year:2024 Month:
M. F. Ali and M. Nurezzaman	The Second Hankel Determinant for Some Classes of Univalent Functions	Mediterr. J. Math.	Volume:21 Issue No: Page No: Year:2024 Month:
Biswadip Saha, Sourav Chowdhury, Sankar Sarkar, Partha P Gopmandal	Electroosmotic flow modulation and dispersion of uncharged solutes in soft nanochannel	Soft Matter	6458-6489 Year:2024 Month:Aug
Pankaj Goswami, Simanta De, Partha P Gopmandal	Streaming potential and associated electrokinetic effects through a channel filled with electrolyte solution surrounded by a layer of immiscible and dielectric liquid	Langmuir	Volume:40 Issue No:22 Page No:11695-11712 Year:2024 Month:May
SK Pal, Paramita Mahapatra, Hiroyuki Ohshima, Partha P Gopmandal	Electroosmotic flow modulation and enhanced mixing through a soft nanochannel with patterned wall charge and hydrodynamic slippage	Industrial & Engineering Chemistry Research	Volume:63 Issue No:29 Page No:12977-12998 Year:2024 Month:Jul
Asim Mahata, Sanjib Kumar Pal, Hiroyuki Ohshima, Partha P Gopmandal	Electrophoresis of polyelectrolyteadsorbed soft particle with hydrophobic inner core	ELECTROPHORESIS	Volume:46 Issue No: Page No:797–809 Year:2024 Month:Aug
Mosedul Sarkar, Alessio Radice, Partha P Gopmandal, Sankar Sarkar	Quadrant analysis of turbulence over a degraded channel-bed of bimodal sediment, with a definition framework for averaging methods	Environmental Fluid Mechanics	Volume:24 Issue No:6 Page No:1387- 1419 Year:2024 Month:Dec
Sourav Chowdhury, Sanjib Kr Pal, Partha P Gopmandal	Dynamic electroosmotic flow and solute dispersion through a nanochannel filled with an electrolyte surrounded by a layer of a dielectric and immiscible liquid	Soft Matter	Volume:21 Issue No:6 Page No:1085- 1112 Year:2025 Month:Jan



Author(s) Name	Paper Name	Journal Name	Others Info
Naren Bag, Komal Singh, Sankar Sarkar, Hiroyuki Ohshima, Partha Pratim Gopmandal	Electrophoresis of soft particles in a non-Newtonian power-law fluidic microenvironment	Physics of FLuids	Volume:37 Issue No:2 Page No:022044 Year:2025 Month:Feb
Haradhan Ghosh, Pramod Kumar Maurya, Satya Bagchi	Secret sharing based RFID protocol using ECC for TMIS	Peer-to-Peer Networking and Applications	Volume:17 Issue No: Page No:624-638 Year:2024 Month:Apr
Haradhan Ghosh, Pramod Kumar Maurya, Satya Bagchi	RFID-enabled protocol based on eigenvalues and eigenvectors of a matrix	International Journal of Ad Hoc and Ubiquitous Computing	Volume:17 Issue No: Page No:59-70 Year:2024 Month:May
Haradhan Ghosh, Pramod Kumar Maurya, Satya Bagchi	Cryptanalysis of an RFID-enabled authentication protocol for healthcare	Wireless Personal Communications	Volume:138 Issue No: Page No:2613-2635 Year:2024 Month:Aug
S Sarkar, S Maitra, S. Kundu	Dynamical exploration of a delayed Leslie-Gower population model with seasonal variation in harvesting and prey's growth	European journal of Physics	Volume: Issue No: Page No: Year:2024 Month:Dec
S Sarkar, S Maitra, RR Patra	Influence of delay and white noise on a population model with preycommensalism and cooperative hunting of predators	International Journal of Computer Mathematics	Volume: Issue No: Page No:1-31 Year:2025 Month:Mar
S. Mondal, S. Maitra	Conservation laws, traveling wave solutions and wavelet solution for the two-component Novikov equation	Journal of Physics A: Mathematical and Theoretical	Volume: Issue No: Page No: Year:2024 Month:Nov
S, Laha, S. Som, L. K. Dey and H. Huang	Best proximity point results for proximal contraction in topological spaces	Fixed Point Theory	Volume:25 Issue No:1 Page No:179-200 Year:2024 Month:Apr
P. Mondal, L.K. Dey and Sk. J. Ali	$\mathcal{I}$ -Convergence of sequences of $\mathcal{P}$ -Bochner, $\mathcal{P}$ -Dunford and $\mathcal{P}$ -Pettis integrable functions with values in a Banach space	J. Convex Anal.	Volume:32 Issue No:4 Page No:1097-1116 Year:2025 Month:Jan
P. Mondal, H. Garai and L. K. Dey	On some common fixed point results of $G\mathcal{V}\{o\}$ rnicki-type mappings	Filomat	Volume:39 Issue No:4 Page No:1331-1339 Year:2025 Month:Feb
S. Laha and L. K. Dey	Generalized Baker's result and stability of functional equations using fixed point results	Math. Slovaca	Volume:75 Issue No:2 Page No:381-394 Year:2025 Month:Jan
A Mondal, S Ghosh, P Kundu, P Khanra, S Boccaletti, P Pal, C Hens	Symmetry invariance in nonlinear dynamical complex networks	Chaos, Soliton and Fractals	Volume:185 Issue No: Page No:115002 Year:2024 Month:May
S Mandal, S Sarkar, P Pal	One-dimensional models for supercritical and subcritical transitions in	Physical Review Fluids	Volume:9 Issue No: Page No:063503 Year:2024 Month:Jun

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Author(s) Name	Paper Name	Journal Name	Others Info
rotating convection			
L Sharma, P Pal, M Ghosh	Nonlinear dynamics of steady oblique rolls in rotating magnetoconvection: Pattern transition, flow multiplicity and hysteresis	Physics of FLuids	Volume:36 Issue No: Page No:094111 Year:2024 Month:Sep
A Kumar, S Ghosh, P Pal, C Hens	Impact of local navigation rules on biased random walks in multiplex Markov chains	Physica A	Volume:654 Issue No: Page No:310122 Year:2024 Month:Sep
S Dutta, P Kundu, P Khanra, C Hens, P Pal	Transition to synchronization in the adaptive Sakaguchi-Kuramoto model with higher-order interactions	Physical Review E	Volume:110 Issue No: Page No:064317 Year:2024 Month:Dec
S Sarkar, S Mandal, PPal	Transitions near the onset of stationary rotating magnetoconvection: Role of magnetic Prandtl number	Physics of Fluids	Volume:37 Issue No: Page No:024119 Year:2025 Month:Feb
Arghyadeep Bhattacharjee, Om Saswat Sahoo, Ahana Sarkar, Saurabh Bhattacharya, Rukhsana Chowdhury, Samarjit Kar, Oindrilla Mukherjee	Infiltration to infection: key virulence players of Helicobacter pylori pathogenicity	Arghyadeep Bhattacharjee, Om Saswat Sahoo, Ahana Sarkar, Saurabh Bhattacharya, Rukhsana Chowdhury, Samarjit Kar, Oindrilla Mukherjee	Volume:52 Issue No:2 Page No:345- 384 Year:2024 Month:Apr
Debopriya Dey, Samarjit Kar, Dilip Kumar Bhattacharya	Periodic review policy in the production management of a single-item inventory with deterioration	Operational Research	Volume:24 Issue No:2 Page No:34 Year:2024 Month:Jun
Prosanta Sarkar, Nilanjan De, Anita Pal and Ismail Naci Cangul	Generalized Zagreb indices for some silicate networks	Journal of Discrete Mathematical Science and Cryptography	Volume:27 Issue No:3 Page No:929- 944 Year:2024 Month:Nov
Biswajit Some, Parikshit Das, and Anita Pal	Balance spherical fuzzy graph and their applications	TWMS Journal of Applied and Engineering Mathematics	Volume:15 Issue No:3 Page No: Year:2025 Month:Mar
Biswajit Some, and Anita Pal	Comparative energy analysis of spherical fuzzy indices in decision-making problems	International Journal of Mathematics for Industry	Volume:10.1142/S2661335224500278 Issue No: Page No: Year:2025 Month:Jan
Biswajit Some and Anita Pal	A novel decision-making approach under spherical fuzzy environment	International Journal of Mathematics for Industry	Volume:10.1142/S2661335225500029 Issue No: Page No: Year:2025 Month:Mar
Amalendu Si, Sujit Das, Samarjit Kar	Hybrid approach for covid-19 vaccine distribution	Decision Making Advances	Volume:3 Issue No:1 Page No:1-17 Year:2025 Month:Jan
Roy, P., Pramanik, S., Sarkar, S., Biswas, S., & Das, K. P.	Series Solution Of A Three Species Food Chain Model Using Adomian Decomposition Method (ADM)	Journal of Applied Nonlinear Dynamics	Volume:14 Issue No:3 Page No:551- 559 Year:2025 Month:Mar



Author(s) Name	Paper Name	Journal Name	Others Info
Amalendu Si, Sujit Das, Samarjit Kar	A brief review of application of fuzzy techniques towards COVID-19 pandemic analysis	Yugoslav Journal of Operations Research	Volume: Issue No:00 Page No:12 Year:2025 Month:Jan
D Dey Sarkar, Samarjit Kar, Kajla Basu, Shivani Sharma	Solution of a transshipment problem with uncertain parameters under impaired and enhanced flow	The Journal of Analysis	Volume:32 Issue No:2 Page No:795-821 Year:2024 Month:Apr
M. F. Ali and S. Pandit	On harmonic meromorphic spirallike functions	J. Anal.	Volume:33 Issue No: Page No:657-672 Year:2024 Month:
Arghadip Roy, Banshidhar Sahoo, Seema Sarkar (Mondal),	Impacts of recruitment and awareness program as pandemic control strategies: A review and a case study	Nonlinear Studies	Volume:32 Issue No:1 Page No: Year:2025 Month:Mar
Ranadeep Dey, Parag Kumar Guha Thakurta, Samarjit Kar	Energy Aware Routing in Wireless Sensor Networks for Agricultural Monitoring: A Deep Q-Network Based Framework	SN Computer Science	Volume:5 Issue No:7 Page No:804 Year:2024 Month:Aug
H, Garai, L. K. Dey, W. Sintunavarat, S. Som and S. Raha	On new existence of a unique common solution to a pair of non-linear matrix equation	J. Math. Anal.	Volume:15 Issue No:6 Page No:12-29 Year:2024 Month:Nov
Pabita Mahato & Seema Sarkar Mondal	Effect on surface deformation due to interacting fault in fractional standard linear solid	GEM-International Journal on Geomathematics	Volume:16 Issue No: Page No: Year:2025 Month:Feb
Sandip Majumder, Samarjit Kar	Rough set theory-based multi-class decision-making framework for cost-effective treatment	OPSEARCH	Volume: Issue No: Page No:1-18 Year:2024 Month:Sep
Pragna Labani Sikdar, Samarjit Kar, Parag Kumar Guha Thakurta	ANNEGA: an artificial neural network embedded genetic algorithm approach for energy efficient street lighting	Evolutionary Intelligence	Volume:17 Issue No:5 Page No:4029-4045 Year:2024 Month:Oct
Harinandan Tunga, Hasanuj-Jaman Hossain, Samarjit Kar, Debasis Giri	Multi-objective Optimization for Order Assignment in Food Cart Evaluation System	Evolutionary Intelligence	Volume:18 Issue No:39 Page No:1-32 Year:2025 Month:Feb
Ranadeep Dey, Parag Kumar Guha Thakurta, Samarjit Kar	Efficient energy aware area coverage in WSNs: a 2L-Voronoi guided PSO approach	OPSEARCH	Volume: Issue No: Page No:1-31 Year:2024 Month:Oct
Ratnabali Pal, Samarjit Kar, Arif Ahmed Sekh	Enhancing Accessibility in Online Shopping: A Dataset and Summarization Method for Visually Impaired Individuals	SN Computer Science	Volume:5 Issue No:8 Page No:1010 Year:2024 Month:Nov

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4.10.13 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Das, K. P., Pramanik, S., Biswas, S., Mondal, S. S., & Karmakar, P.	Role of food conversion efficiency due to predation of prey populations in an eco-epidemiological model with Allee and refugia	International Journal of Biomathematics	Volume: Issue No: Page No: Year:2024 Month:Sep

4.10.14 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Ratnabali Pal, Samarjit Kar, Arif Ahmed Sekh	Customizable and Programmable Deep Learning	International Conference on Pattern Recognition	DOI/ISBN: https://doi.org/10.1007/9783-031-78107-0_7 Volume: Issue No: Page No:101-116 Year:2024 Month:Dec Presenter:CO-AUTHOR
Ratnabali Pal, Samarjit Kar, Dilip K Prasad	A Self-Supervised Generative Fine-Tune of CLIP for VQA for Visually Impaired	2024 IEEE 21st India Council International Conference (INDICON)	DOI/ISBN: 10.1109/INDICON63790.2024.10958384 Volume: Issue No: Page No:1-6

4.10.15 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Mrs.S.N.Santhalakshmi	Dr.Goutam Panigrahi, Dr.Saibal Majumder	Machine Learning: A Gateway to Data Science		Publisher: Leilani Katie Publication and PRESS ISBN: 9789363489653 Publication Date: 2024-0516

4.10.16 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
International Conference on Non – Linear Analysis and Optimization	Kathmandu University	2025-05-08	2025-05-10	Nepal
Non-Parametric Methodologies for Data Analysis - I	ORSI Durgapur Chapter	2025-02-07	2025-02-07	India
Non-Parametric Methodologies for Data Analysis - II	ORSI Durgapur Chapter	2025-02-14	2025-02-14	India
Enhancing academic document writing skills with AI and ChatGPT	SAAMS Academic Society, India	2024-11-24	2024-11-24	India
4th International Conference on Nonlinear Applied Analysis and Optimization (ICNAAO-2024)	Department of Mathematics and Scientific Computing, National Institute of Technology Hamirpur	2024-10-17	2024-10-19	India



National Institute of Technology Durgapur

Name of the Programme	Organized By	From Date	To Date	Organizing Country
3rd International Conference of Applied Mathematics in Science and Engineering (AMSE-2024)	Centre for Data Science & Department of Mathematics, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar	2024-07-25	2024-07-27	India
2nd International Conference on Exploring Advances in Mathematical Sciences	University of Gour Banga	2024-12-19	2024-12-20	India
2nd International Conference on Numerical Optimization in Engineering and Sciences (NOIEAS-2024)	NIT Warangal	2024-12-05	2024-12-07	India
International Conferences on Recent Advances in Mathematics, Statistics, and Data Science (RAMSDS 2024)	Adamas University, Kolkata	2024-10-25	2024-12-26	India
International Workshop on Innovations in Machine Learning, Data Science and Modelling (IMLDSM'24)	Vignan's Foundation for Science, Technology and Research (Deemed to be University), Guntur, Andhra Pradesh	2024-12-13	2024-12-23	India
International Conference on Emerging Trends in Business Analytics & Management Sciences	IIT Bombay	2024-12-12	2024-12-14	India
Name of the Programme	Organized By	From Date	To Date	Organizing Country
Workshop on National Education Policy (NEP 2020): Implementation, Challenges and Opportunities	NIT Durgapur	2024-04-07	2024-04-07	India
Eminent Alumni Entrepreneur Talk	IIC, NITD	2025-02-15	2025-02-15	India
International Conference on Complex Dynamical Systems: Theory and Applications (ICCDSTA 2025)	Calcutta Mathematical Society, Kolkata	2025-02-21	2025-02-23	India
International Conference on Special functions, Analytic functions, Metrics and quasiconformality (ICSAMY)	IIT Indore	2024-12-17	2024-12-20	India
39th Annual Conference of the Ramanujan Mathematical Society	CHRIST (Deemed to be University), Bengaluru	2024-12-27	2024-12-29	India
INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND APPLICATIONS (ICCMA - 2025)	NIT SILCHAR	2025-01-16	2025-01-18	India
International Conference on Nonlinear Analysis and Computational Techniques (ICNACT-2024)	VIT BHOPAL	2024-08-08	2024-08-10	India

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Name of the Programme	Organized By	From Date	To Date	Organizing Country
Workshop on Multiscale Fluid Dynamics: Engineering Aspects	ISI KOLKATA	2025-01-22	2025-01-24	India
Second International Conference on Exploring Advances in Mathematical Sciences, 2024 (SICEAMS-2024)	University of Gour Banga	2024-12-19	2024-12-20	India

4.10.17 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Applications of Graph Invariants in Uncertain Environment	Biswajit Some	Anita Pal	SUBMITTED	2025-02-19
A STUDY ON INVARIANTS AND ENERGY OF GRAPHS	Parikshit Das	Anita Pal	ONGOING	null
Uncertainty Quantification over Graph with Graph invariants	Saroj Ghosh	Anita Pal	ONGOING	null
Fuzzy Graph Optimization	4. Subhajit Roy	Anita Pal	ONGOING	null
Fuzzy Optimization	Samiran Mondal	Anita Pal	ONGOING	null
Design and Development of Device	Md. Hamjala Alam	Swarup Ranjan Debbarma and Anita Pal	ONGOING	null
Designing authentication protocols to enhance security and privacy of RFID systems	Haradhan Ghosh	Satya Bagchi	DEGREE AWARDED	2025-02-13
Locally Repairable Codes: Constructions and Properties	Deep Mukhopadhyay	Satya Bagchi	ONGOING	null
Algebraic Characterization of Some Linear Codes via Group Codes	Ankan Shaw	Satya Bagchi	ONGOING	null
Combinatorics	Swarup Kumar Das	Satya Bagchi, Sajal Kumar Mukherjee	ONGOING	null
Nonlinear differential equation	Supriya Mondal	Sarit Maitra	ONGOING	null
Mathematical Ecology	Susmita Sarkar	Sarit Maitra	ONGOING	null
Nonlinear Analysis	Anish Banerjee	Lakshmi Kanta Dey	ONGOING	null
Topic Name	Scholar	Supervisor	Status	Status Date
Nonlinear Analysis	Supriti Laha	Lakshmi Kanta Dey	DEGREE AWARDED	2025-03-31
Geometry of Banach Spaces	Subhadip Pal	Lakshmi Kanta Dey	ONGOING	null
Low dimensional topology	Pratik Kumar Kundu	Lakshmi Kanta Dey & Dr Sayan Chakraborty	ONGOING	null
Graph theory	Aninda Banerjee	Lakshmi Kanta Dey & Dr Apratim Chakraborty	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
Effect of Horizontal Aspect Ratio on Magnetoconvective Instabilities in the Absence and Presence of Rotation	Lekha Sharma	Pinaki Pal	DEGREE AWARDED	2025-03-31
On Some Variants of Covering Salesman Problem in the Paradigm of Evolutionary Computing	Siba Prasad Tripathi	Tandra Pal, Samarjit Kar	DEGREE AWARDED	2024-08-19
Various kinds of approximation in rough set theory and applications	Sandip Majumder	Samarjit Kar	DEGREE AWARDED	2024-11-05
Convective instabilities and flow transitions: role of rotation and magnetic field	Snehashish Sarkar	Pinaki Pal	SUBMITTED	2025-03-31
Structural Properties of Complex Networks	Abhijit Mondal	Pinaki Pal	ONGOING	null
Transition to synchronization in phase frustrated higher-order networks	Sangita Dutta	Pinaki Pal	ONGOING	null
Nonlinear Dynamics	Anath Bandhu Das	Pinaki Pal	ONGOING	null
Double Diffusive Convection	Santu Hansda	Pinaki Pal	ONGOING	null
Convective Instabilities	Arpita Maji	Pinaki Pal	ONGOING	null
Some Two-stage Four Dimensional Transportation Problems in Uncertain Environments	Sudeshna Devnath	Prof. Seema Sarkar (Mondal), Prof. Manoranjan Maiti (Retd.)	DEGREE AWARDED	2024-04-24
Study of Deformation due to Planar and Non-planar Fault Movement in Viscoelastic Half Space	Pabita Mahato	Prof. Seema Sarkar (Mondal)	ONGOING	null
Stability Properties and Control Techniques of the Dynamical Phenomena in Complex System: A Generalized Interaction Perspective	Anirban Sen	Prof. Seema Sarkar (Mondal)	ONGOING	null
A study of pre-Schwarzian and Schwarzian norms of certain analytic functions	Sanjit Pal	Md Firoz Ali	DEGREE AWARDED	2024-06-14
Bloch Constant	Shaesta Azim	Md Firoz Ali	ONGOING	2025-03-27
Mathematical Modelling of Fractional and Diffusive Ecoepidemiology with Special Emphasis on Chaotic Dynamics	Sanjukta Pramanik	Prof. Seema Sarkar (Mondal), Dr. K. P. Das, Dr. P. Karmakar	ONGOING	null
Mathematical Modelling for the Control of Infectious Diseases	Arghadip Roy	Prof. Seema Sarkar (Mondal), Dr. Banshidhar Sahoo	ONGOING	null
Effect of Planar and Non-planar Fault Movement in Layered Media and Half Space	Tanushree Biswas	Prof. Seema Sarkar (Mondal)	ONGOING	null
Electrokinetic transport phenomena: Fundamentals to applications	BAISAKHI PAL	Dr. Partha Pratim Gopmandal	ONGOING	2025-03-31

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Topic Name	Scholar	Supervisor	Status	Status Date
Diffusiophoresis of fluid droplets and functionalized colloids in solution of general electrolytes	SUSMITA SAMANTA	Dr. Partha Pratim Gopmandal	SUBMITTED	2025-03-31

4.10.18 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
““Impacting the life of Farmers in Giridih district by adopting affirmative steps	Goutam Panigrahi(PI), Sutanu Samanta(Co-PI)	NBCC India Ltd (A Navratna Enterprise) ,Govt of India	9340000.0	2024
Investigation on Locally Repairable Codes	Satya Bagchi	ANRF	660000.0	2022
Rotating and magnetized double-diffusive convection	Pinaki Pal	Anusandhan National Research Foundation	2431264.0	2022

4.10.19 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
Solution of Some Optimization Problems Using Graph Theoretic Approach	Anita Pal	DST, New Delhi	2009
L(h,k)-labelling on intersection graphs	M. Pal and Anita Pal	DST, New Delhi	2014
Graph labeling and its applications	Anita Pal	SERB, DST, New Delhi	2018
Investigation on Locally Repairable Codes	Satya Bagchi	ANRF	2025

4.10.20 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Satya Bagchi	Transactions on Sustainable Computing	Institute of Electrical and Electronics Engineers Inc. (IEEE)	2024-04-08
Satya Bagchi	Designs, Codes and Cryptography	Springer Netherlands	2024-05-21
Satya Bagchi	Mathematics	MDPI	2024-07-15
Satya Bagchi	Malaysian Journal of Mathematical Sciences	Universiti Putra Malaysia	2025-03-03
Sarit Maitra	PRAMANA	SPRINGER	2025-05-05
Sarit Maitra	Chaos soliton fractals	Elsevier	2025-07-30
Lakshmi Kanta Dey	Filomat	University of Nis	2025-01-01
Samarjit Kar	IEEE Transactions on Engineering Management	IEEE	2024-05-10
Samarjit Kar	Applied Soft Computing	Elsevier	2024-11-28



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Samarjit Kar	Soft Computing	Springer	2024-06-01
Seema Sarkar (mondal)	GEM-International Journal of Geomathematics	Springer Publications	2024-08-09
Seema Sarkar (mondal)	ICAMM 2023 Conference proceeding	Springer Proceedings	2024-04-01
Partha Pratim Gopmandal	Langmuir	American Chemical Socceity	2025-01-01
Partha Pratim Gopmandal	Soft Matter	Royal Society of Chemistry	2024-12-06
Partha Pratim Gopmandal	Physics of fluids	American Institute of Physics	2024-11-21
Satya Bagchi	Transactions on Sustainable Computing	Institute of Electrical and Electronics Engineers Inc. (IEEE)	2024-04-08
Satya Bagchi	Designs, Codes and Cryptography	Springer Netherlands	2024-05-21

4.10.21 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Partha Pratim Gopmandal	M. Sc. in Mathematics	Mahatma Gandhi University, Purba Medinipur	2024-03-01	2024-11-01
Samarjit Kar	External member of the BOS and moderation committee meeting of M.Sc Mathematics (PG)	Mahatma Gandhi University, Purba Medinipur	2023-08-17	2023-08-17
Samarjit Kar	Subject Expert Member of the concerned Board of Studies (BOSs)	School of Applied Science & Humanities, HIT Haldia	2024-02-09	2024-02-09
Goutam Panigrahi	BSc 4,5th semester	Vidyasagar University	2024-08-12	2024-08-12
Satya Bagchi	External expert of a PhD assessment committee, as an expert	SRM Institute of Science and Technology, Kattankulathir	2023-12-18	2024-11-05
Anita Pal	PhD Viva-voce	VTU, Karnataka	2023-07-26	2023-07-26
Anita Pal	PhD Viva-voce	PSG College of Technology, Coimbatore	2024-01-29	2024-01-29
Anita Pal	PhD Viva-voce	VIT Vellore	2024-04-08	2024-04-08
Anita Pal	Paper-Setter	Aliah University, Kolkata	2024-04-25	2024-05-05
Anita Pal	Comprehensive Viva	SRMIST, Ramapuram	2024-02-20	2024-02-20
Anita Pal	PhD Viva-voce	Anna University, Chennai	2023-04-13	2023-04-13
Seema Sarkar (mondal)	PhD Thesis Evaluation (Mathematics)	Mody University of Science and Technology, Rajasthan	2024-03-04	2024-03-04
Seema Sarkar (mondal)	PhD defense seminar and Viva-voce	Mody University of Science and Technology, Rajasthan	2024-03-15	2024-03-15

4.10.22 Invited Examiners/ Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Anita Pal	PhD Viva Voce	VIT Vellore	2024-04-08	2024-04-08
Anita Pal	PhD Viva Voce	VIT Chennai	2024-04-18	2024-04-18

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Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Anita Pal	B.Tech Mathematics	Aliah University	2024-04-25	2024-05-05
Anita Pal	PhD Viva Voce	Acharya Institute of Technology, Bangalore	2024-07-27	2024-07-27
Anita Pal	PhD Viva Voce	SRM, Chennai	2025-02-21	2025-02-21
Anita Pal	PhD Thesis Evaluation	University of Madras	2024-03-11	2024-05-01
Anita Pal	PhD Thesis Evaluation	University of Madras	2024-04-02	2024-06-07
Anita Pal	PhD Thesis Evaluation	University of Madras	2024-05-15	2024-07-29
Anita Pal	PhD Thesis Evaluation	Manonmaniam Sundaranar University	2024-05-06	2024-07-02
Anita Pal	PhD Thesis Evaluation	University of Madras	2024-06-12	2024-08-23
Anita Pal	PhD Thesis Evaluation	Thiruvalluvar University	2024-06-06	2024-08-16
Anita Pal	PhD Thesis Evaluation	Thiruvalluvar University	2024-05-21	2024-08-06
Anita Pal	PhD Thesis Evaluation	Manonmaniam Sundaranar University	2024-07-24	2024-10-01
Anita Pal	PhD Thesis Evaluation	Anna University	2024-05-17	2024-10-01
Anita Pal	PhD Thesis Evaluation	SRM Nagar, Katankulathur	2024-10-16	2024-12-12
Anita Pal	PhD Thesis Evaluation	SAVEETHA Institute of Medical and Technical Sciences	2024-11-13	2025-01-27
Anita Pal	PhD Thesis Evaluation	VELS Institute of Technology, Chennai	2024-12-18	2025-02-27
Anita Pal	PhD Thesis Evaluation	Manonmaniam Sundaranar University	2025-01-06	2025-03-10
Anita Pal	PhD Thesis Evaluation	Visva-Bharati	2025-01-09	2025-03-10
Samarjit Kar	Department of Mathematics	Mahatma Gandhi University	2024-04-01	2025-03-31
Samarjit Kar	Department of Applied Science	Department of Applied Science	2024-04-01	2025-03-31
Samarjit Kar	CSE(AIML) Department	Dr. B.C. Roy Engineering College, Durgapur	2024-04-01	2025-03-31
Samarjit Kar	Department of Mathematics	Dr. B.C. Roy Engineering College, Durgapur	2024-04-01	2025-03-31
Samarjit Kar	Department of Mathematics	Haldia Institute of Technology	2024-04-01	2025-03-31
Seema Sarkar (mondal)	Examiner for Ph.D. Thesis Evaluation	Utkal University,	2024-08-23	2024-11-29
Seema Sarkar (mondal)	Examiner for Ph.D. Thesis Evaluation	Viswa-Bharati, Santiniketan.	2024-12-09	2025-01-03
Lakshmi Kanta Dey	Aliah University Admission Test (AUAT) - 2025	Aliah University	2025-03-24	2025-04-16



4.10.23 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Lakshmi Kanta Dey	Selection of Assistant Teachers	DAV Model School	2025-03-02	2025-03-03
Seema Sarkar (mondal)	Mathematics	Jadavpur University, Kolkata	2024-08-29	2024-08-29

4.10.24 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Anita Pal	Game Theory: Applications and Insights	Lecture Series	IIIT Raipur	2025-02-07	2025-02-09
Lakshmi Kanta Dey	Perimetric contraction on quadrilaterals and related fixed point results	International Conference on Nonlinear Applied Analysis and Optimization -2024	NIT Hamirpur	2024-10-17	2024-10-17
Samarjit Kar	Multi-objective Optimization	International Workshop on Cutting-Edge Innovations in Soft Computing, Communication, and Artificial Intelligence	Department of Mathematics, Chaudhary Charan Singh University, Meerut	2024-09-12	2024-09-13
Samarjit Kar	Responsible AI and data analytics for sustainable and inclusive growth of young minds	Analytics Global Conference 2025 (AGC2025)	NSHM Institute of Computing & Analytics, Kolkata	2025-03-08	2025-03-08
Seema Sarkar (mondal)	Optimization with Stochastic Programming (16.08.25)	UGC MMTC Refresher Course in Computational Mathematics and Applications"	Assam University, Silchar, India	2024-08-05	2024-08-19
Seema Sarkar (mondal)	Introduction to the Dynamics of Earthquakes and Faults - Some Mathematical Models (19.06.24)	Workshop on Recent Development of Mathematical Sciences on Biological and Dynamical Systems with Fuzzy and Fractional Environments.	Mahadevananda Mahavidyalaya, Barrackpore, Kolkata	2024-06-19	2024-06-29

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4.10.25 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Samarjit Kar	International Conference on Emerging Trends in Business Analytics & Management Sciences	IIT Bombay	Supply Chain	2024-12-12	2024-12-14
Samarjit Kar	4th International Conference on Nonlinear Applied Analysis and Optimization	National Institute of Technology Hamirpur	Optimization	2024-10-17	2024-10-19

4.11 Department of Mechanical Engineering

4.11.1 Department at a Glance:

Department of Mechanical Engineering is the second largest and one of the oldest Departments of the Institute started in the year 1960. It offers both undergraduate (B.Tech.) and postgraduate (M.Tech.) degree courses apart from doctoral programme.

The annual intake of the UG course is 187+ and that of the PG course is 20 for three specializations each, totaling 60(app.). At present about 55 students are doing their doctoral research in the department. The department comprises of well-qualified faculty members, supporting staff and well-equipped laboratories. The continuous development of faculty and upgradation of the laboratories makes the department at par with the current day academic and research requirement of global standard which is reflected by continuously increasing student of the department opting for higher studies in India and abroad.

Department of Mechanical Engineering offers three PG courses with different specializations: Machine Design, Thermal Engineering, Fluid Mechanics & Heat transfer.

4.11.2 Mission & Vision

Mission:

- Imparting quality education to the students and enhancing their skills to make them globally competitive mechanical engineers.
- Maintaining state-of-the art research facilities for providing our students and faculties with opportunities to innovate, interpret, apply and disseminate their knowledge.
- To develop linkages with reputed R&D organization, Institutes and Industries world-wide through education and research.

Vision:

- Advancement of the society through excellence in teaching, research and innovation and services that exploits the rapidly changing technical diversity of Mechanical Engineering

4.11.3 Faculty

Name	Designation	Email-id
Apurba Layek, PhD	Professor	alayek.me@nitdgp.ac.in
Asit Baran Puri, PhD	Professor	abpuri.me@nitdgp.ac.in
Biswajit Halder, PhD	Professor	bhalder.me@nitdgp.ac.in
Indrajit Basak, PhD	Professor	ibasak.me@nitdgp.ac.in
Nilotpal Banerjee, PhD	Professor	nbanerjee.me@nitdgp.ac.in
Nirmal Baran Hui, PhD	Professor	nbhui.me@nitdgp.ac.in
Shibendu Shekhar Roy, PhD	Professor	ssroy.me@nitdgp.ac.in
Achintya Kumar Pramanick, PhD	Associate Professor	akpramanick.me@nitdgp.ac.in
Ambuj Kumar Mitra, PhD	Associate Professor	akmitra.me@nitdgp.ac.in
Kallol Khan, PhD	Associate Professor	kkhan.me@nitdgp.ac.in



Subhas Chandra Rana, PhD	Associate Professor	scrana.me@nitdgp.ac.in
Animesh Patari, PhD	Assistant Professor	apatari.me@nitdgp.ac.in
Aparesh Datta, PhD	Assistant Professor	adata.me@nitdgp.ac.in
Arjyajyoti Goswami, PhD	Assistant Professor	agoswami.me@nitdgp.ac.in
Asim Kumar Das	Assistant Professor	adas.me@nitdgp.ac.in
Biswajit Bera, PhD	Assistant Professor	bbera.me@nitdgp.ac.in
Chintamani Mishra, PhD	Assistant Professor	cmishra.me@nitdgp.ac.in
Debabrata Gayen, PhD	Assistant Professor	dgayen.me@nitdgp.ac.in
Deepak Kumar, PhD	Assistant Professor	dkumar.me@nitdgp.ac.in
Jagannath De, PhD	Assistant Professor	jde.me@nitdgp.ac.in
Jayabrata Dhar, PhD	Assistant Professor	jdhar.me@nitdgp.ac.in
Kuntal Jana, PhD	Assistant Professor	kjana.me@nitdgp.ac.in
Rabindra Nath Barman, PhD	Assistant Professor	rnbarman.me@nitdgp.ac.in
Ranjan Kumar Mitra, PhD	Assistant Professor	rkmitra.me@nitdgp.ac.in
Ratnesh Kumar, PhD	Assistant Professor	rkumar.me@nitdgp.ac.in
Saif Akram, PhD	Assistant Professor	sakram.me@nitdgp.ac.in
Sayantan Sengupta, PhD	Assistant Professor	ssengupta.me@nitdgp.ac.in
Shantanu Pramanik, PhD	Assistant Professor	spramanik.me@nitdgp.ac.in
Shashi Kant Verma, PhD	Assistant Professor	skverma.me@nitdgp.ac.in
Sirshendu Mondal, PhD	Assistant Professor	smondal.me@nitdgp.ac.in
Sujit Karmakar, PhD	Assistant Professor	skarmakar.me@nitdgp.ac.in

4.11.4 Labs

Sl. No.	Name of Laboratory	Major equipment
1	Heat Power Laboratory	Heat Conduction Unit, Heat exchanger, Natural convection, Forced convection, Stefan-Boltzman Apparatus, Automobile Laboratory, Boiler, Separating and Throttling Calorimeter, Variable CR multi-fuel IC Engine test rig, Diesel Engine test rig, Morse test, Rope brake dynamometer, Air compression test rig, Convective heat transfer over artificial roughness, Liquid Crystal thermography system, Refrigeration Unit
2	Thermal Engineering Laboratory	Fluidization and fluid bed heat transfer unit, Computer linked Refrigeration Laboratory Unit, Air Conditioning Laboratory unit, Cross flow heat Exchanger unit
3	Machine Dynamics Laboratory	Twin rotor MIMO system, Digital Pendulum system, Dynamic balancing Machine, 3-Axis Gyroscope, Mechanical Power Transmission system, FFT analyzer, Soccer Robot set-up.
4	Production Engineering Laboratory	Gas tungsten arc welding (GTAW)/ Gas metal arc welding (GMAW), Photochemical Etching machine, Vertical ram turret milling machine, Submerged Arc welding machine,
5	Metrology Laboratory	Tool Maker's Microscope, Floating Carriage Micrometer, Strain Measuring Device, Surface roughness Measuring machine.
6	Fluid Mechanics & Hydraulic Machines Laboratory	Impact of Jet, Pelton Turbine, Francis Turbine, Kaplan Turbine, Centrifugal Pump, Reciprocating Pump, Venturimeter, Wind Tunnel.
7	Robotics and AI Laboratory	Six-legged Robot, Wheel-base Robot
8	Mechanism Laboratory	-----
9	Project Laboratory	Peristaltic pump, Data acquisition system, DC power supply, heater, Pressure Transducer, Vacuum pump etc.

4.11.5 PhD degree awarded till 2024-25

Fifty nine (59)

4.11.6 Specialization

- Thermal Engineering
- Thermal Engineering
- Fluid Mechanics and Thermal Science
- Thermal and Fluid Engineering

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- Thermofluids
- Thermal Engineering
- Fluid Dynamics
- Water Resources and Hydraulics
- Mechanical Engineering
- Production Engineering, Micro Nano Scale manufacturing
- Manufacturing Engineering
- machine tool , simulation and modelling of dynamic systems
- Machine Design, Robotics and Control, Soft Computing, Engineering Optimization
- Manufacturing Science & Engineering
- Mechanical Engineering
- Machine Design
- Thermal science
- Machine Design
- Machine Design
- Fluid and Thermal Engineering
- Fluid Mechanics
- Fluid Mechanics and Gas Dynamics

4.11.7 ProposedPlanforResearch

- Dynamical analysis in thermal systems
- Continue to work on the principles and applications of the "Law of Motive Force" as discovered by myself (Achintya Kumar Pramanick) and documented also by myself (Achintya Kumar Pramanick) in the book entitled "The Nature of Motive Force" published by Springer-Verlag, Berlin, Germany in 2014.
- Multiphase flow and CFD modeling
- Viscous instability in porous medium
- Active flow in porous environment
- Electroosmotic flow under porous settings
- Optimization of hybrid renewable energy power systems
- Design, simulation and analysis of sustainable energy systems,
- UG students pursuing project
- NIL
- Developing set up for micro scale manufacturing of chips, specifically Photochemical Etching, Hot Embossing, Laser Marking, Developing set ups for large area fabrication
- Additive Manufacturing
- Development of bipedal robots, mine & pipe inspection robots, Sustainable Vaccine Supply Chain Network Design
- Friction Stir Welding and Additive Manufacturing
- Supersonic Jet, Machine Learning, Biomedical Engineering
- Design and Development of a Metallic and Composite Based Unmanned Vehicle for Health Monitoring of Dams • Tribological Study of machine elements
- Bimodular Compoaite material Laminated plates and shells, Sandwich Structure of bimodular laminated composite
- Flow dynamics behind flapping wing aerodynamics, Instability of flow past various shape bluff bodies
- Electric Vehicle Cooling

4.11.8 AreaofResearchInterest

- Nonlinear dynamics, Natural Circulation Loop, Pulse Combustor
- Thermodynamics, Heat Transfer and Fluid Mechanics.
- Incompressible turbulent jet, Multiphase flow
- Hydrodynamic instability
- Bioconvection
- Porous systems
- Nematic liquid crystals
- Computational fluid dynamics and sustainable energy
- Sustainable energy system, Techno-economic analysis, Life cycle analysis (LCA), Bioresource technology
- Flow through a subsonic diffuser
- Fluid Mechanics and Hydraulics
- Dynamics and design of machine



- Micro and Naano scale Manufacturing
- Friction Stir Welding
- Additive Manufacturing
- additive manufacturing
- Biped Robot Locomotion, Assistive Technology and Devices, Supply Chain Management
- Theory of Machining, Nonconventional Machining, Machine tool Engineering, Micro Manufacturing, Process Modelling and Optimisation, etc.
- Fluid Dynamics
 - Functionally graded materials (FGMs) structures: Designs, developments and applications.
 - Dynamics of cracked structures (beams, shafts, rotors, turbine blades and pipes) made of FGMs.
 - Experimental setup for studying dynamic behavior of FGMs rotor system.
 - CFRC hydrogen pressure vessel: Optimized design, developments, and applications.
 - CFRC wind turbine blades: Optimized design, developments, and applications.
 - Mechanics of shear transformation zones in metallic glasses using LAMMPS and DFT-FE.
 - Wave propagation of FG components and coupled Fluid-sandwich structure.
- Tribology
- Fluid flow
- Heat Transfer
- Composite Materials, Finite Element analysis, Vibration
- Hydrodynamic Instability, Bluff Body flows
- Fluid flow and heat transfer by turbulent jet, Heat transfer through porous media
- CFD and Heat Transfer

4.11.9 CollaborationwithAcademicandResearchInstitutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Jadavpur University	Thermal Engineering	Prof. Achintya Mukhopadhyay, Prof. Koushik Ghosh, Prof. Swarnendu Sen	Sponsored research Project
University of Stuttgart, Germany	Thermodynamics	Bernhard Weigand	Student and Faculty Exchange
Duke University, USA	Thermodynamics	Adrian Bejan	Pedagogy
University of Lorraine, France	Thermodynamics	Michel Feidt	Pedagogy
Central Mechanical Engineering Research Institute, Durgapur, India	Thermodynamics and Heat Transfer	Malay Kumar Karmakar	Student Exchange
IIT Bombay	Multiphase flow and CFD modeling	Prof. Atul Sharma	Research and Joint Ph.D. supervision
IIT Madras	Membrane technology and photobioreactor systems	Dr. Sankha Karmakar	Joint proposal submission, research collaboration and future paper publications
University of Luxembourg	Active flows and bioconvection	Prof. Anupam Sengupta	Numerical simulations, and joint paper writing
IISc Bangalore	Nematic liquid crystals	Dr. Shubhadeep Mandal	Developing NLC model, joint paper writing
IIT Guwahati and GITAM University	Design and Development of a Metallic and Composite Based Unmanned Vehicle for Health Monitoring of Dams	Dr. Anshul Garg (IITG) and Dr. Sibananda Mohanty (GITAM)	Design and Development of a Metallic and Composite Based Unmanned Vehicle for Health Monitoring of Dams

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4.11.10 Innovations and Technology Transfer (Patents filed during)

Title	Inventors	Application Nos	Date of Filing
A HYBRID AIR PURIFIER	AKRAM, Saif, AZAM, Sadique and CHAURASIA, Nagesh Kumar	202531079493	2025-08-21

4.11.11 Workshops/SeminarsOrganized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Dr. Nilanjan Chattraj, Dr. Deepak Kumar	Drone Bootcamp on UNMANNED AND AERIALSYSTEMS & RELATED TECHNOLOGY	2024-07-29
Dr. Nilanjan Chattraj, Dr. Deepak Kumar	Drone Bootcamp on UNMANNED AND AERIALSYSTEMS & RELATED TECHNOLOGY	2024-09-30

4.11.12 Journal: Published in 2024-2025 SCI/SCOPUS/ Web of Science

Author's Name	Paper Name	Journal Name	Others Info
S Sengupta, UK Kar, A Banerjee, S Pramanik	A theory of rheological film condensation	Journal of Dispersion Science and Technology	Volume:45 Issue No:12 Page No:2315-2329 Year:2024 Month:Dec
Jay Shankar Prasad, Aparesh Datta, Anupam Dewan, Sirshendu Mondal	Solar air heater roughened with chamfered grooves: Thermal enhancement and entropy minimization	Energy	Volume:313 Issue No: Page No:133958 Year:2024 Month:Dec
Subham Show, Sirshendu Mondal, Aparesh Datta	The role of cavity shapes in improving the performance of a heat sink incorporating nanoenhanced phase change material	Renewable Energy	Volume:232 Issue No: Page No:121024 Year:2024 Month:Oct
Vivek Kumar, Sirshendu Mondal, Aparesh Datta, Amit Agrawal	A flow structure design based novel micro heatsink	Physics of Fluids	Volume:36 Issue No:7 Page No: Year:2024 Month:Jul
Jay Shankar Prasad, Aparesh Datta, Sirshendu Mondal	Numerical analysis of a solar air heater with offset transverse ribs placed near the absorber plate	Renewable Energy	Volume:227 Issue No: Page No:120608 Year:2024 Month:Jun
Orkodip Mookherjee, Shantanu Pramanik and Atul Sharma	A novel THINC scheme-based CLSVOF method for axisymmetric two-phase flows	Computer Physics Communications	Volume:314 Issue No: Page No:109673 (22) Year:2025 Month:Sep
Orkodip Mookherjee, Shantanu Pramanik & Atul Sharma	A mass-momentum consistent THINC-scaling scheme for CLSVOF method on co-located grid	Numerical Heat Transfer, Part B: Fundamentals	Volume: https://doi.org/10.1080/10407790.2024.2379604 Issue No: Page No:01-27 Year:2024 Month:Jul
Animesh Patari, Shantanu Pramanik and Tanmoy Mondal	Performance analysis of various wall treatments of RANS models for prediction of near-wall turbulence transport characteristics of plane wall jet	Engineering Computations	Volume:42 Issue No:1 Page No:117-148 Year:2024 Month:Nov



Author's Name	Paper Name	Journal Name	Others Info
Francesco Di Nezio,Irvine Lian Hao Ong,René Riedel,Arkajyoti Goshal,Jayabrata Dhar,Samuele Roman,Nicola Storelli,Anupam Sengupta	Synergistic phenotypic adaptations of motile purple sulphur bacteria Chromatium okenii during lake-to-laboratory domestication	PLOS One	Volume:19 Issue No:10 Page No:e0310265 Year:2024 Month:Oct
Indrani Basu and Jayabrata Dhar	Enhancement in electroosmotic mixing in obstruction-laden microchannels	Microfluidics and Nanofluidics	Volume:29 Issue No:3 Page No:13 Year:2025 Month:Feb
S Sengupta, A Banerjee, S Pramanik	Morphology of laminar rheological flow in polygonal ducts	Physics of Fluids	Volume:36 Issue No:8 Page No:083627(1-18) Year:2024 Month:Aug
Dheeraj Tripathi, Chandan Bose, Sirshendu Mondal, J Venkatramani	Effect of structural parameters on the synchronization characteristics in a stall-induced aeroelastic system	Journal of Fluids and Structures	Volume:133 Issue No: Page No:104246 Year:2025 Month:Mar
UK Kar, S Sengupta, S Pramanik	On the non-linearity of rheological film condensation	Thermal Science and Engineering Progress	Volume:55 Issue No: Page No:102996 (1-9) Year:2024 Month:Oct
S Sengupta, UK Kar	A hybrid approach portraying the dynamics of free convection condensation around a circular cylinder	Physics of Fluids	Volume:36 Issue No:12 Page No: 123611 (1-21) Year:2024 Month:Dec
Raj, D.K. and Datta, A.	Three-dimensional study of microchannel with elliptical rib	Physics of Fluids	Volume:36 Issue No:7 Page No: Year:2024 Month:
Prasad, J.S., Datta, A. and Mondal, S	Flow and thermal behavior of solar air heater with grooved roughness	Renewable Energy	Volume:220 Issue No: Page No:119698 Year:2024 Month:
Ranjan Kumar, Ponnada Durga Prasad, Ranjan Kumar Mitra, Debabrata Gayen	Delayed feedback control of pitch oscillations of an ALP tower	International Journal of Mechanical Sciences	Volume:302 Issue No: Page No:110578 Year:2025 Month:Sep
Ranjan Kumar , Ranjan Kumar Mitra , Debabrata Gayen	Entrainment of limit cycles in a simply supported beam under delayed position feedback	International Journal of NonLinear Mechanics	Volume:170 Issue No: Page No:105000 Year:2025 Month:Mar
Debabrata Gayen, Rajiv Tiwari & Debabrata Chakraborty	Thermo-Elastic Static Behavior of Functionally Graded Shafts with Different Material Gradation Patterns	Journal of Vibration Engineering & Technologies	Volume:12 Issue No: Page No:8963– 8978 Year:2024 Month:Dec
Saif Akram, Nadeem	The Dynamics of Supersonic	Progress in Computational Fluid	Volume:24 Issue No:1 Page No:1-28 Year:2024
Hasan	Flow Past a New Cusped Leading Edge Airfoil	Dynamics	Month:Jan
Deepak Kumar and Bhaskar Kumar	Tertiary wake mode in flows past elliptic cylinders	European Journal of Mechanics- B/Fluids	Volume:106 Issue No: Page No:130- 136. Year:2024 Month:Jul

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Author's Name	Paper Name	Journal Name	Others Info
Patari A., Pramanik S., and Mondal T.	Performance analysis of various wall treatments of RANS models for prediction of near-wall turbulence transport characteristics of plane wall jet	Engineering Computations	Volume:42 Issue No:1 Page No:117-148 Year:2025 Month:Jan
Geeta Verma, Rabindra Nath Barman	Optimized Heat Transfer and Drag Reduction through Corner Modifications in Square Cylinders Immersed in PowerLaw Fluids	Physics of Fluids	Volume:37 Issue No:2 Page No: Year:2025 Month:Feb
R Kumar, S Mandal, P Bhardwaj, C Mishra, S Mahato	Defect diagnosis of high contact ratio spur gear system with increasing level of fault	Engineering Failure Analysis	Volume:169 Issue No: Page No:109097:1-20 Year:2025 Month:Mar
Rajeev Kumar , Samrat Mandal , Chintamani Mishra , Nirmal Baran Hui, Ranjan Kumar Mitra	Defect Diagnosis of Bevel Gear System: A Study of Experimental and Simulated Signal	Journal of Sound and Vibration	Volume: 593 Issue No: Page No:118658:1-17 Year:2024 Month:Dec
Tuhin Kar, Swarup S Deshmukh, Arjyajyoti Goswami	Change in reflectance of silicon wafer with different micropatterned surface fabricated using fiber laser	Journal of Micromanufacturing	Volume: Issue No: Page No: Year:2025 Month:Feb
Tuhin Kar and Arjyajyoti Goswami	Fabrication of superhydrophobic titanium surfaces: impact of different micropatterns	Materials and Manufacturing Processes	Volume:39 Issue No:6 Page No:2253-2265 Year:2024 Month:Aug
Tuhin Kar, Swarup Deshmukh and Arjyajyoti Goswami,	Fabrication of micro holes using low power fiber laser: surface morphology, modeling and soft-computing based optimization	Advances in Manufacturing	Volume: Issue No: Page No: Year:2024 Month:Apr
G. C. Karar, Ratnesh Kumar, S. Chattopadhyaya	Developments on friction surfaced coatings for corrosion, wear-resistant and composite	Surface Engineering	Volume:DOI: 10.1177/02670844241293139 Issue No: Page No:1-17 Year:2024 Month:Oct
Meghnath Sen, Asit Baran Puri	An Experimental Investigation on micro-Friction Stir Welding (μ FSW) Process Using Pinless Tool	Journal of Materials Engineering and Performance	Volume:34 Issue No: Page No:19652–19663 Year:2025 Month:Jan
Raj, D.K. and Datta, A.	Numerical analysis of microchannel heat sink performance using delta vortex generator	Physics of Fluids	Volume:36 Issue No:4 Page No: Year:2024 Month:
Chandan Kumar Bharti, Geeta Verma, Rabindra Nath Barman	Computational study of steady flow across a modified semicircular cylinder in power-law fluids	International Journal of Thermofluids	Volume:Volume 26 Issue No: Page No:101082 Year:2025 Month:Mar
Saurabh Dewangan, Garvit Maheshwari, Jay Prakash Tripathi, Ratnesh Kumar, Uday Kumar	Analytical Study of Temperature Variation and Estimation of Heat Affected Zone in Arc Welded Low Carbon Steel Plates	AIP conference proceeding	Volume:2835 Issue No:020005 Page No:1-8 Year:2024 Month:
Geeta Verma, Chandan Kumar Bharti, Rabindra Nath Barman	Computational Analysis of Natural Convection in a RightAngle Trapezoidal Enclosure with Partially Cooled Inclined Surface	International Journal of Fluid Mechanics Research	Volume: Issue No: Page No:103-115 Year:2025 Month:Mar



Author's Name	Paper Name	Journal Name	Others Info
Subhadeep Saha and Ratnesh Kumar	A Comprehensive Review of the Latest Advances in Wire Arc Additive Manufacturing: Physical Characteristics, Defects and Quality Enhancement	Lecture Notes in Mechanical Engineering	Volume:978-981-96-3164-3 Issue No: Page No:83-99 Year:2024 Month:
Prabas Banerjee, Rupam Laha, Mithilesh K Dikshit, Nirmal Baran Hui, Subrata Rana, Vimal Kumar Pathak, Kuldeep K Saxena, Chander Prakash, Dharam Buddhi	A study on the performance of various predictive models based on artificial neural network for backward metal flow forming process	International Journal on Interactive Design and Manufacturing (IJIDeM)	Volume:18 Issue No:3 Page No:1141-1150 Year:2024 Month:Apr
Meghnath Sen, Asit Baran Puri	Joining of thin aluminum sheets by micro-friction stir welding (μ FSW) using a pinless tool	Engineering Research Express	Volume:6 Issue No:4 Page No:1-15 Year:2024 Month:Dec
Subir Datta and Arjyajyoti Goswami	Machine learning and design of experiments for optimizing laserengraved micro fresnel lens mould	Engineering Research Express	Volume: Issue No: Page No: Year:2024 Month:Sep
Ranjan Kumar, Ranjan Kumar Mitra & Debabrata Gayen	Limit cycle oscillation and entrainment phenomena of a cubic-quintic Duffing oscillator under delayed velocity feedback	International Journal of Dynamics and Control	Volume:13 Issue No: Page No:109 Year:2025 Month:Feb
Subir Datta, Swarup S Deshmukh, Tuhin Kar, Arjyajyoti Goswami	Fabrication of Anti-Reflective Film for Solar Cells through Hot Embossing Process Using Laser-Patterned Mold: Parametric Analysis and Optimization	Journal of Advanced Manufacturing Systems	Volume: Issue No: Page No: Year:2024 Month:Jun
Tuhin Kar and Arjyajyoti Goswami	Experimental investigation on fiber laser micro drilling of Titanium grade 5: fabrication, nature-inspired optimization and analysis through image processing	Engineering Research Express	Volume: Issue No: Page No: Year:2024 Month:May
Meghnath Sen, Asit Baran Puri	Development of low-cost conventional milling fixture for micro-friction stir welding process	Welding International	Volume:39 Issue No:2 Page No:114-122 Year:2025 Month:Jan
Debabrata Gayen	Thermo-Elastic buckling and free vibration behavior of functionally graded beams with various materials gradation laws	International Journal on Interactive Design and Manufacturing	Volume:19 Issue No: Page No:5397-5416 Year:2024 Month:Oct

4.11.13 Journal accepted for publication 2024-25

Author(s) Name	Paper Name	Journal Name	Others Info
Amiruzzahan Mondal, Shashi Kant Verma, Saif Akram	A Systematic Review on Aerodynamics and Aero-Acoustics of Supersonic Jets	Progress in Computational Fluid Dynamics	Volume: Issue No: Page No: Year:2025 Month:Aug

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4.11.14 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Arka Banerjee, Sayantan Sengupta Shantanu Pramanik	Fully Turbulent Non Newtonian Flow Characteristics in Ploygonal Ducts	4 th International Conference On Industrial Engineering and Mechanical Power (IEMPOWER 2025)	DOI/ISBN: ---- Volume: Issue No: Page No:---- Year:2025 Month:Jul Presenter:
R Kumar, S Sengupta	Influence of Prandtl number on closed cavity convective flow structures formed adjacent to an anti- symmetrically heated cylinder pair	Proceedings of the 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference	DOI/ISBN: ISBN Online: 978- 156700-546-2; DOI: 10.1615/IHMT-2023.390 Volume: Issue No: Page No:235240 Year:2024 Month:Dec Presenter:CO-AUTHOR
D. Gayen, R.K. Mitra, S. Swar, D. Ghosh, N. Dey	Stress analysis of tapered laminated composite beam under hygrothermal environment	2nd International Conference on Mechanical Engineering	DOI/ISBN: 978-81-954806-6-1 Volume: Issue No: Page No: Year:2024 Month:Jan Presenter:SELF
Singh, Ravi Kant and Dubey, Rakesh and Garikapati, Pruthviraju and Shinde, Vinayak Kashinath and Patil, Makrand Milind and Rana, Subhas Chandra	Investigating the influence on thermal separation in the vortex tube with flow valve shapes using a computational approach	{AIP Conference Proceedings	DOI/ISBN: https://doi.org/10.1063/5.0229884 Volume: Issue No: Page No: volume={3178}, number={1}, pages={130010}, year={2024}, Year:2024 Month:Aug Presenter:

4.11.15 Conference: Published in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Prasad, J. S., Dewan, A., Mondal, S.	Thermal Performance of Solar Air Heater with Inclined Offset Ribs Placed near Heated Wall	Proceedings of the 2nd International Conference on Fluid, Thermal and Energy Systems (ICFTES'24)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:Jun Presenter:CO- AUTHOR
Samanta, D., Diwadkar, D., Kumar, V., Prasad, A., Mondal, S	Rate-Dependent Bifurcation around subcritical Hopf point in Pulse Combustor	Proceedings of the 2nd International Conference on Fluid, Thermal and Energy Systems (ICFTES'24)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:Jun Presenter:CO- AUTHOR
Show, S., Datta, A. Mondal, S	Passive Thermal Management of Electronic Devices in a PCM-Filled Semi-elliptical cavity	Proceedings of the 2nd International Conference on Fluid, Thermal and Energy Systems (ICFTES'24)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:Jun Presenter:CO- AUTHOR
Kumar, V., Poojitha, P., Mondal, S, Datta, A.	Design of a microchannel heat sink to augment the thermal performance and minimize the entropy generation with microchamber and diamond rib in a wavy channel	Proceedings of the 2nd International Conference on Fluid, Thermal and Energy Systems (ICFTES'24)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:Jun Presenter:CO- AUTHOR



Author(s) Name	Paper Name	Conference Name	Others Info
Rayleigh-Taylor convection for CO ₂ sequestration by dissolution trapping: an experimental study in granular porous media	Rayleigh-Taylor convection for CO ₂ sequestration by dissolution trapping: an experimental study in granular porous media	AGU Fall Meeting Abstracts	DOI/ISBN: - Volume: Issue No: Page No:H23D-103 Year:2024 Month:Dec Presenter:CO-AUTHOR
Shreyan Ghosh. B, Iman Biswas, Dr. Aniruddha Mondal, and Dr. Rabindra Nath Barman	Highly Sensitive and Flexible Capacitive Pressure Sensor with PVDF Dielectric and Copper Electrode Fabricated on Kapton Substrate	Sixth International Conference on Materials Science and Manufacturing Technology 2024	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:May Presenter:CO-AUTHOR
Ratnesh Kumar ¹ , Kundan Kumar ² , Ranit Das ² , Navlesh Kumar ² , Tamminent Rajesh ² and	Conceptualizing an Idea of Seed and Pesticide Sprinkling Machine Powered by Solar Energy for Indian Agriculture Sector	1st international conference on sustainable technologies	DOI/ISBN: 1 Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:SELF
Author(s) Name	Paper Name	Conference Name	Others Info
Minukuri Nishanth Reddy ²			
Debajyoti Ray, Asit Baran Puri	Experimental Study on Micro-Milling of Bulk Metallic Glass	2nd International Conference on Mechanical Engineering (INCOM 2024)	DOI/ISBN: 978-981-977308-4 Volume: Issue No: Page No:809-812 Year:2024 Month:Jan Presenter:CO-AUTHOR
Debajyoti Ray, Asit Baran Puri	An Experimental Investigation into the Top Burr Formation in Micro-milling using Bulk Metallic Glass	2nd National Conference on 'Recent Advancements in Manufacturing Technology & Management (RAMTM – II 2025)	DOI/ISBN: 978-81-9865679-7 Volume: Issue No: Page No:249-255 Year:2025 Month:Jan Presenter:SELF
Meghnath Sen, Asit Baran Puri	Micro-Friction Stir Welding (μ FSW) of Aluminum Alloys Using Pinless Tool	2nd National Conference on 'Recent Advancements in Manufacturing Technology & Management (RAMTM – II 2025)	DOI/ISBN: 978-81-9865679-7 Volume: Issue No: Page No:191-197 Year:2025 Month:Jan Presenter:CO-AUTHOR
Amiruzzahan Mondal, Shashi Kant Verma and Saif Akram	Analyzing RANS Models for Open Flow Supersonic Jet: A Comparative Study within Low Computational Cost	Annual AeSI CFD Symposium organized by Department of Space Engineering & Rocketry, Birla Institute of Technology, Mesra, Ranchi jointly with Aeronautical Society of India CFD Division	DOI/ISBN: na Volume: Issue No: Page No:575-582 Year:2024 Month:Aug Presenter:CO-AUTHOR
Siva Surya Narayana, Subham Show, Aparesh Datta and Saif Akram	Numerical Study on the Effect of SemiCircular Venturi Barrier Height on Droplet Generation in a T-Junction Microchannel	2nd International Conference on Fluid, Thermal and Energy Systems, NIT Calicut, Kerala, India	DOI/ISBN: na Volume: Issue No: Page No:1-6 Year:2024 Month:Jun Presenter:CO-AUTHOR

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4.11.16 Conference: Accepted in Others 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Debabrata Gayen and Rajiv Tiwari	Thermo-Elastic responses of a cracked FG hollow shaft with different material gradations – An FE approach	7th National Symposium on Rotor Dynamics (NSRD 2024)	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:SELF
Debabrata Gayen, Ranjan Kumar Mitra and Subhankar Das	Effect of material inhomogeneity on thermoelastic behavior of functionally graded hollow cylinders	2nd International Conference on Mechanical Engineering: Researches and Evolutionary Challenges	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:May Presenter:SELF
Ranjan Kumar, Debabrata Gayen, and Ranjan Kumar Mitra	Effect of delayed positive position feedback on limit cycle oscillation and entrainment phenomena of a cubic-quintic duffing oscillator	2nd International Conference on Mechanical Engineering: Researches and Evolutionary Challenges	DOI/ISBN: NA Volume: Issue No: Page No: Year:2024 Month:May Presenter:CO-AUTHOR

4.11.17 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Meghnath Sen, Asit Baran Puri		Advances in Mechatronics Systems	Automation in Friction Stir Welding: A New Era of Fabrication Techniques	Publisher: Springer, Singapore Publication Date: 2024-12-16
Debajyoti Ray and Asit Baran Puri		Properties and Uses of Metallic Glass	Micromachining of Bulk Metallic Glass: A Comprehensive Study into the Micromachining Performances	Publisher: Springer, Singapore Publication Date: 2024-03-15

4.11.18 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
INTERNATIONAL CONFERENCE ON MATERIALS AND MEMBRANES FOR WATER AND ENERGY	CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar, Gujarat, India	2024-07-10	2024-07-12	India
NA	NA	2025-09-15	2025-09-15	India
1st international conference on sustainable technologies	NIT Durgapur	2024-12-12	2025-12-15	India
2nd International Conference on Mechanical Engineering (INCOM 2024)	Department of Mechanical Engineering, Jadavpur University, Kolkata	2024-01-05	2024-01-06	India
2nd National Conference on 'Recent Advancements in Manufacturing Technology & Management (RAMTM – II 2025)	Department of Production Engineering, Jadavpur University, Kolkata-32	2025-01-16	2024-01-17	India



2nd International Conference on Mechanical Engineering	Jadavpur University	2024-01-05	2024-01-06	India
7th National Symposium on Rotor Dynamics (NSRD 2024)	SRM Institute of Science and Technology	2024-12-18	2024-12-20	India
2nd International Conference on Mechanical Engineering: Researches and Evolutionary Challenges	National Institute of Technology Warangal	2024-05-29	2024-05-31	India
NEP2020 ORIENTATION & SENSITIZATION PROGRAMME	University Grants Commission (UGC)	2025-02-06	2025-02-18	India

4.11.19 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Flow and Thermal Characteristics of Solar Air Heater with Extracted and Extended Roughness	Jay Shankar Prasad	Sirshendu Mondal	SUBMITTED	2025-03-03
Cooling Performance Of Electronic Sink With PCM And Study Of Biomass Based Form- Stable Phase Change Material (PCM) for thermal storage system	Subham Show	Aparesh Datta and Sirshendu Mondal	ONGOING	null
Microchannel	Deepak Kumar	Aparesh Datta	Ongoing	null
Experimental And Numerical Study On Thermal And Hydraulic Performance Of Microchannel With Disruptive Structures	Vivek Kumar	Aparesh Datta and Sirshendu Mondal	ONGOING	null
Effect of Coupling and Noise on the Dynamics and Bifurcation of Pulse Combustor	Vivek Kumar	Sirshendu Mondal and Aparesh Datta	ONGOING	null
Pore-Scale Investigation of Viscous Instability and Dispersion in Miscible Displacement Processes	Abhishek Kumar	Jayabrata Dhar and Sirshendu Mondal	ONGOING	null
Dynamics and System Behavior of Natural Circulation Loops: A Fourier Series Based Semi-analytical Approach	Dinabandhu Rout	Sirshendu Mondal	ONGOING	null
Studies on Flow Physics of a Vortex Tube	Ravi Kant Singh	Achintya Kumar Pramanick and Subhas Chandra Rana	DEGREE AWARDED	2024-07-16
Numerical Investigation of Solar Chimney Power Plant	Avishek Mukherjee	Achintya Kumar Pramanick and Sayantan Sengupta	ONGOING	null
Theoretical and Computational Findings in Newtonian and non-Newtonian Condensations for Potential Applications	Uttam Kumar Kar	Dr. Sayanta Sengupta and Dr. Shantanu Pramanik	DEGREE AWARDED	2024-07-08
Computational Study of Rheological Secondary Flow in Various Ducts	ARKA BANERJEE	Dr. Sayantan Sengupta and Shantanu	SUBMITTED	2024-08-05

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Topic Name	Scholar	Supervisor	Status	Status Date
for		Pramanik		
Engineering and Biomedical Applications				
Computational multi-Fluid Dynamics Development and its Application for the Analysis of Droplet Coalescence	Orkodip Mookherjee	Dr. Shantanu Pramanik and Prof. Atul Sharma	SUBMITTED	2024-08-22
Numerical Investigation of Wall Jet Turbulence and Thermal Transport Characteristics with Different Wall Configuration	Mr. Animesh Patari	Dr. Shantanu Pramanik	ONGOING	null
Fluid Flow and Heat Transfer Simulation of Turbulent Jets	SIDDHANT HORE	Dr. Shantanu Pramanik	ONGOING	null
Biomechanics of Hydrodynamics Instability in Active Systems	SACHIDANANDA MAHATO	Jayabrata Dhar	ONGOING	null
Pore-Scale Investigation of Viscous Instability and Dispersion in Miscible Displacement Processes	Abhishek Kumar	Jayabrata Dhar and Sirshendu Mondal	ONGOING	null
Dynamics of Unsteady Flow Past Elliptical Cylinder	Subhash Chandra Paramanik	Deepak Kumar and Jayabrata Dhar	ONGOING	null
Computational Study of Rheological Secondary Flow in Ducts for Engineering and Biomedical Applications	ARKA BANERJEE	Dr. S. Sengupta and Dr. S. Pramanik	SUBMITTED	2025-08-06
Theoretical and Computational Findings in Newtonian and non-Newtonian Condensations for Potential Application	UTTAM KUMAR KAR	Dr. S. Sengupta and Dr. S. Pramanik	DEGREE AWARDED	2024-07-08
Performance Characterization of a Solar Chimney Power Plant	Avishek Mukherjee	Dr. A. K. Pramanick and Dr. S. Sengupta	ONGOING	null
Sustainable biofuels	Rahul Kumar	Kuntal Jana, Sujit Karmakar	ONGOING	null
NON-NEWTONIAN FLUID FLOW AND HEAT TRANSFER PAST A CYLINDER	Geeta Verma	RABINDRA NATH BARMAN	ONGOING	null
Fluid Flow and Heat Transfer	Chandan Kumar Bharti	RABINDRA NATH BARMAN	ONGOING	null
Flow past a cylinder with splitter plate	Malwika Choudhary	RABINDRA NATH BARMAN	ONGOING	null
Modelling and Diagnosis of Gear Faults	Rajeev Kumar	Chintamani Mishra, Ranjan Kumar Mitra	DEGREE AWARDED	2025-05-19
Photochemical machining for micro patterns	Sourav Das	Dr. Arjyajyoti Goswami	ONGOING	null
Studies on hot embossing of polymer substrate for different applications	Swarup Deshmukh	Dr. Arjyajyoti Goswami	DEGREE AWARDED	2023-12-18
Experimental and Numerical studies on Hot Embossing of polymers for different applications	Subir Datta	Dr. Arjyajyoti Goswami	DEGREE AWARDED	2025-09-17
Studies on Fiber Laser parameters for different applications	Tuhin Kar	Dr. Arjyajyoti Goswami	SUBMITTED	2025-09-17



Topic Name	Scholar	Supervisor	Status	Status Date
Study on Wire Arc Additive Manufacturing of Nickel-based superalloy	Subhadeep Saha	Dr. Ratnesh Kumar	ONGOING	null
Study on Ceramic Extrusion Additive Manufacturing Process	Manish Thakur	Dr. Ratnesh Kumar	ONGOING	null
rotor dynamic system fault diagnosis	koushik chatterjee	jagannath de	ONGOING	null
Micro Friction Stir Welding	Mr. Meghnath Sen	Prof. A. B. Puri	ONGOING	null
Metal to Non-metal Dissimilar Joining by Friction Stir Welding	Mr. Lalita Prasad Nayek	Prof. A. B. Puri	ONGOING	null
On the Morphological Parameters affecting the Flow Development within Human Airways	Amitava Bairagi	Saif Akram	ONGOING	null
Aerodynamics and Aeroacoustics of Supersonic Jets	Amiruzzahan Mondal	Saif Akram, S K Verma	ONGOING	null
Fracture analysis of structural component made of functionally graded materials	Sourav Samanta	Dr. Debabrata Gayen	ONGOING	null
PCM Material	Subham Show	Aparesh Datta, Sirshendu Mondal	ONGOING	null
Bimodular laminated sandwich beams	Yogesh Kumar	Kallol Khan	ONGOING	null
Dynamics of Unsteady flow past elliptic cylinders	Subhash Chandra Paramanik	Dr. Deepak Kumar and Dr. Jayabrata Dhar	ONGOING	null
Flow dynamics behind various shaped bluff bodies	Satrajit Halder	Dr. Deepak Kumar and Dr. Sujit Karmakar	ONGOING	null
Performance Study of 3D S-Shaped Diffuser	Asim Kumar Das	Dr. Subhas chandra rana	DEGREE AWARDED	2024-12-16
Performance study of air foil.	Arunabha Mahato	Dr. Subhas Chandra Rana	ONGOING	null

4.11.20 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Identification and Control of Instabilities in Natural Circulation Loops (NCLs) in Thermal and Nuclear Power Plants using Dynamical Systems Theory	Achintya Mukhopadhyay, Koushik Ghosh, Aranyak Chakravarty, Sirshendu Mondal	STARS, MOE	6107000.0	2023
Modulation of Bioconvective Transport at Pore-scale Resolution	Jayabrata Dhar	DST-SERB	2268530.0	2023
Design and Development of a Metallic and Composite Based Unmanned Vehicle for Health Monitoring of Dams	Dr. Debabrata Gayen (PI), Dr. Sibananda Mohanty (Co-PI, GITAM University), Dr. Anshul Garg (Co-PI, IIT Guwahati TIDF)	Technology Innovation and Development Foundation	600000.0	2024

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Capacity building for human resource development in Unmanned Aircraft System (Drone and related Technology)	Co-PI: Dr. Deepak Kumar, PI Dr. Nilanjan Chattaraj Other Co-PI Dr. Jayati Dey Dr. Aritro Dey	Ministry of Electronics and Information Technology	15090000	2022

4.11.21 Completed sponsored projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
Design of High Performance Microisinks with disruptive structures like cavity, secondary branch and rib	Aparesh Datta, Amit Agrawal, Sirshendu Mondal	SERB, DST	2025
Self-sensing of ground proximity of multi-copter UAV and adjustment of auto-landing speed for minimizing chances of crash-landing	Co-PI: Dr. Deepak Kumar, PI Dr. Nilanjan Chattaraj Other Co-PI Dr. Sujoy Saha	Ministry of Electronics and Information Technology	2024

4.11.22 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Achintya Kumar Pramanick	Proceedings of the Indian National Science Academy	Springer	2024-04-01
Jayabrata Dhar	Communications Physics	Nature Portfolio	2024-09-05
Jayabrata Dhar	Microfluidics and Nanofluidics	Springer Nature)	2025-03-07
Jayabrata Dhar	Journal of Thermophysics and Heat Transfer	American Institute of Aeronautics and Astronautics (AIAA)	2024-08-26
Sayantan Sengupta	Journal of Applied Fluid Mechanics	Isfahan University of Technology	2025-03-27
Sayantan Sengupta	Journal of Applied Fluid Mechanics	Isfahan University of Technology	2025-02-27
Sayantan Sengupta	Journal of Applied Fluid Mechanics	Isfahan University of Technology	2025-02-16
Sayantan Sengupta	Microfluidics and Nanofluidics	Springer Verlag	2025-01-27
Sayantan Sengupta	Physics of Fluids	American Institute of Physics	2025-01-19
Sayantan Sengupta	Journal of Applied Fluid Mechanics	Isfahan University of Technology	2024-12-13
Sayantan Sengupta	Energy	Elsevier	2024-06-17
Chintamani Mishra	Journal of Vibration Engineering and Technology	Springer nature	2025-09-14
Chintamani Mishra	Sadhana	Springer	2025-06-18
Ratnesh Kumar	Journal of The Institution of Engineers (India): Series D (IEID)	Springer Nature	2024-11-25



Ratnesh Kumar	Cognitive Robotics	Elsevier	2025-01-13
Ratnesh Kumar	Journal of The Institution of Engineers (India): Series C (IEIC)	Springer Nature	2024-08-29
Ratnesh Kumar	Journal of The Institution of Engineers (India): Series D (IEID)	Springer Nature	2025-01-02
Asit Baran Puri	Journal of Materials Engineering and Performance	Springer/ ASM International	2025-01-20
Asit Baran Puri	Journal of Materials Engineering and Performance	Springer/ ASM International	2025-02-15
Debabrata Gayen	Journal of Adhesion Science and Technology	Taylor and Francis	2024-07-15
Debabrata Gayen	The Journal of Strain Analysis for Engineering Design	SAGE	2024-07-30
Debabrata Gayen	Earthquake Engineering and Engineering Vibration	Springer	2024-08-19
Debabrata Gayen	Journal of Applied Mathematics and Mechanics	Wiley	2025-02-21
Debabrata Gayen	Acta Mechanica Sinica	Springer	2024-11-18
Debabrata Gayen	Journal of Thermal Stresses	Taylor & Francis	2024-12-31
Debabrata Gayen	Iranian Journal of Science and Technology, Transactions of Mechanical Engineering	Springer	2025-01-10
Debabrata Gayen	Journal of Reinforced Plastics and Composites	SAGE	2025-02-15
Debabrata Gayen	Ships and Offshore Structures	Taylor & Francis	2025-02-17
Saif Akram	Physics of Fluids	American Institute of Physics	2024-12-30
Saif Akram	Proceedings of the 11th International and 51st National Conference on Fluid Mechanics and Fluid Power (FMFP)	Fluid Mechanics and Fluid Power (FMFP)	2024-12-21
Saif Akram	Fortieth National Convention of Mechanical Engineers and National Conference on Recent Advances in Mechanical Engineering (RAME 2025)	IEI	2025-07-15
Deepak Kumar	Physics of Fluids	American Institute of Physics (AIP)	2025-02-28

4.11.23 Review of books

Reviewer	Title of the Book	Name and Affiliation of the Author	Publisher	Date
Achintya Kumar Pramanick	Fluid Mechanics and Hydraulics	Not disclosed to the reviewer by the publisher.	Springer	2024-12-20
Achintya Kumar Pramanick	Thermodynamics: A Conceptual Approach	Not disclosed to the reviewer by the publisher.	Springer	2025-02-06

4.11.24 Invited Examiners /Paper-Setters /Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Asit Baran Puri	PhD Thesis Examination and PhD Open Viva-voce	VSSUT	2025-03-11	2025-09-11

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Asit Baran Puri	PhD Thesis Examination	Utkal University	2025-02-18	2025-03-18
Asit Baran Puri	PhD Thesis Examination and PhD Open Viva-voce	NIT Patna	2025-01-03	2025-02-04

4.11.25 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Asit Baran Puri	Chairman of the Selection Committee (Walk-In-Interview) for selection of Project Personnel (SRF/JRF/Project Assistant) under different projects	CSIR-CMERI	2024-09-30	2025-10-01
Saif Akram	Mechanical Engineering	CMERI, CSIR	2024-02-01	2024-02-01

4.11.26 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Ratnesh Kumar	Electric vehicles a leap towards future using advantages of additive manufacturing	Electric Vehicles: Tribology and Additive Manufacturing (EVTAM 2024)	VIT-AP University, Amaravati (AP),	2024-07-23	2024-07-27
Debabrata Gayen	Dynamic analysis of structural members made up of composite and functionally graded materials	Sustainable Advancements and Developments in Mechanical Engineering	NIT Manipur	2024-06-10	2024-06-14
Deepak Kumar	Fundamental concept of flight mechanics: Aerodynamics	5 days Online Short Term Course on “Emerging Aspects in Mechanical Engineering Research and Their Applications(EAMERA-2024)” at NIT Manipur	Online	2024-04-30	2024-04-30
Deepak Kumar	Fundamental concept of	5 days Online Short Term	Online	2024-06-10	2024-06-10

4.12 Department of Metallurgical and Materials Engineering

4.12.1 Department at a Glance:

Brief Outline of the Department:

The Department, which started its journey in the year 1960, presently offers B.Tech. (Metallurgical and Material Engineering), M.Tech.(Metallurgy and Materials Technology) and Ph.D Programme. The Department maintains high level of interactions with other academic institutes (IIT Kharagpur, Jadavpur University, IIST (Shibpur) and NIFT (Ranchi)), CSIR Laboratories, SAIL and other steel plants in India. At present, fifteen highly qualified and dedicated faculty members are serving this Department.

Teaching & Research Activities:



National Institute of Technology Durgapur

The teaching at B.Tech level focuses on the fundamental knowledge base development in various areas of Metallurgical and Materials Engineering, such as, Extractive Metallurgy, Physical Metallurgy, Mechanical Metallurgy and Corrosion Science and Engineering. M.Tech level teaching emphasizes on advanced knowledge input in new material development and latest techno-scientific progress in Metallurgical Industry. The research activities of the Department are centered on B.Tech and M.Tech Projects, Ph.D Programmes and sponsored research projects. Many research papers have been published in reputed peer reviewed Journals.

4.12.2 Mission & Vision

Mission:

- To produce highly educated, well-rounded and motivated graduates possessing fundamental understanding and knowledge in Metallurgical and Materials Engineering, who can provide service and leadership to the nation and the world.
- To pursue creative research and new technologies in Metallurgical and Materials Engineering in order to cater the needs of industry, government and society.
- To accomplish visibility by active participation in conferences and technical activities.

Vision:

- To prove and be accepted globally as a leading department and as a quality establishment for gathering and disseminating knowledge in the field of metallurgical and materials engineering.

4.12.3 Faculty

Name	Designation	Email-id
Ghosh Karuna Sindhu, PhD	Professor	ksgghosh2001@mme.nitdgp.ac.in
Maity Joydeep, Ph.D	Professor	joydeep.maity@mme.nitdgp.ac.in
Show Bijay Kumar, Ph.D	Associate Professor	bijay.show@mme.nitdgp.ac.in
Ghosh Madan Mohan, Ph.D	Associate Professor	madanmohan.ghosh@mme.nitdgp.ac.in
Mondal Manas Kumar, Ph.D	Associate Professor	manas.mandal@mme.nitdgp.ac.in
Bera Supriya, PhD	Associate Professor	sbera.mme@nitdgp.ac.in
Ghorai Satadal, PhD	Associate Professor	Sghorai.mme@nitdgp.ac.in
Pramanik Susanta, Ph.D	Associate Professor	spramanik.mme@nitdgp.ac.in
Maji Barnali, Ph.D	Assistant Professor	bmaji.mme@nitdgp.ac.in
Mallik Manab, Ph.D	Assistant Professor	mmallik.mme@nitdgp.ac.in
Mandal Arup Kumar, PhD	Assistant Professor	arup.mandal@mme.nitdgp.ac.in
Mandal Durbadal, Ph.D	Associate Professor	dmandal.mme@nitdgp.ac.in
Yagati Krishna Priya, Ph.D	Assistant Professor	kp.yagati@mme.nitdgp.ac.in
Roy Barna, Ph.D.	Assistant Professor	broy.mme@nitdgp.ac.in

4.12.4 Equipments

Sl. No.	Name of the equipment	Date of Purchase	Amount (Rs.)
1	EDM wire cut machine	13/12/2022	1,42,780
2	Vacuum Arc melting Furnace	28/09/2022	8,48,400
3	Polishing Machine with Double Disc (3 Nos)	08.07.2022	44, 92,996
4	Vickers Hardness Tester (01 No)	20/04/2022	45,800
5	Die and Punch	20/04/2022	89,775

4.12.5 Labs

Sl. No.	Name of Laboratory	Major equipment
1	X-Ray Diffraction Laboratory	XRD
2	Mechanical Working Laboratory	Rolling Mill
3	Transport Phenomena Laboratory	Bernoulli's Theorem Apparatus
4	Thermodynamics of Materials Laboratory	Gas-Solid Dissociation Unit and Oxidation Furnace, Fluidized Bed Furnace(High Temperature)
5	Metal Joining Laboratory	Welding Unit
6	Composites Laboratory	Stir-Casting Unit
7	Agglomeration Laboratory	Disk Pelletizer, Sintering Unit, Ball Mill
8	Foundry and Casting Laboratory	Sand Casting Unit

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Sl. No.	Name of Laboratory	Major equipment
9	Powder Metallurgy Laboratory	Planetary Ball Mill
10	Heat Treatment Laboratory	Furnaces
11	Metallography Laboratory	Optical Microscopes
12	Corrosion Testing Laboratory	SSRT, Potentiostat
13	Surface Engineering Laboratory	Potentiostat / Galvanostat
14	Extractive Metallurgy Laboratory	Grinding Ball Mill, Pelletizer, Sintering unit
15	Plastic Deformation and Strengthening of Materials Laboratory	UTMIInstron-100kNHardness Tester Impact testing machineTorsion testing machine
16	Manufacturing Processes Laboratory	Melting Furnace, Indirect Arc Melting Furnace
17	Mineral Beneficiation Laboratory	Flotation Cell, Sieve Shaker
18	Nanomaterials Laboratory	Particle Size Analyser, Thermal Conductivity Measuring Equipment
19	Computation Laboratory	Computers, Servers
20	Reducibility Testing Laboratory	Reducibility Testing Unit
21	Materials Characterization Laboratory	DSC, Composition analyser, Wear testing unit
22	Mechanochemical synthesis Lab	PM400 planetary Ball MillPM200 Planetary Ball Polishing UnitMicro ovenWeighing Balance
23	Advanced Casting Lab	AM200 Arc melting unit Spectrometer
24	Mineral Beneficiation Laboratory	Froth Floatation Jaw Crusher Roll Crusher Ball Mill Cyclone Separator
25	Precision Sample Cutting Laboratory	EDM wire cut

4.12.6 PhD degree awarded till 2024-25

Three

4.12.7 Specialization

- Physical Metallurgy
- Physical Metallurgy
- Foundry Technology, Physical Metallurgy, Corrosion Engineering, Metal Joining, Manufacturing processes, casting, composite materials • Physical Metallurgy
- Process Metallurgy
- Physical Metallurgy
- Metallurgical and Materials Engineering
- Corrosion Engineering, Physical Metallurgy, Welding Technology
- Mechanical Metallurgy, Nanostructured materials
- Metallurgical and Materials Engineering
- Advanced Materials
- Extractive Metallurgy
- Process Metallurgy

4.12.8 Proposed Plan for Research

- Alloy development for aerospace/automobile applications
- Mg/Ti based biomaterials, Development of new Al/Cu alloys
- Research on composite materials and computational modelling
- Development of wear resistant materials (Al alloys and Al based composites))
- Microwave processing of Materials
- Development of Advanced Materials through Computational Modelling and Experiments
- Characterization of Al-alloys, SCC, HE, EIS, etc.



- Developing facilities for processing bulk nanostructured materials
- Teaching and Research
- Ceramic 3D printing
- Biomass based iron making
- Hydrogen based iron and steel making
- Critical Mineral extraction from primary and Secondary sources

4.12.9 Area of Research Interest

- Alloy & its composite development
- Micromechanics of materials
- Wire Arc Additive Manufacturing (WAAM)
- Tribological behaviour of materials
- Biomaterials, Alloy development, Phase transformation
- Foundry, non-ferrous metal casting
- Microstructure-property correlation and wear behaviour of different materials
- Alternative routes of ironmaking, Production of Ferroalloys, Utilization of wastes and Low grade ores,
- Alloy development, Heat Treatment
- Design and Development of Ti-based Alloys for Orthopaedic Implants and Zr-based Alloys for Dental Implants
- Corrosion, SCC, HE, EIS, Polarisation etc
- Bulk nanostructured materials, Thermal stabilization
- Material development and structure-property correlation in materials
- Ultra-high Temperature Ceramics
- Iron and Steel Making
- Circular Economy
- Green Steel Making and Decarbonization in iron and Steel sectors
- Critical Minerals extraction

4.12.10 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
ISP, Burnpur	Increase in Indian coal utilization in coke making	Collaborative PhD Research work
Durgapur Steel Plant	Material development and structure-property correlation in materials	Joint research work and publication through Ph.D. supervision
Durgapur Steel Plant SAIL	Green Steel Making	Joint Project
Shyam Ferro Alloy	Green Ferro Alloy Production	Joint project
IISCO Steel Plant	Coke property enhancement	Joint research
Neo Metalliks Limited	Skill Development	Training of working professional

4.12.11 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Department of Materials Science and Engineering, Indian Institute of Technology Delhi	Material Characterization	Prof. Suresh Neelakantan	Sharing ideas and doing research, Publications
CSIR-Central Mechanical Engineering Research Institute, Durgapur, West Bengal, India	Aluminum based composite development	Dr. Sudip Kumar Samanta	Sharing ideas and doing research, Publications

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Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Department of Materials Science and Engineering, Indian Institute of Technology Delhi	Material Characterization	Prof. Suresh Neelakantan	Sharing ideas and doing research, Publications
Sikkim Manipal Institute of Technology, Sikkim Manipal University, Majitar, Sikkim, India	Advanced functional materials development	Dr. Joydeep Biswas	Sharing ideas and doing research, Publications
CGCRI Kolkata	Biomaterials	Dr. M. Das	Joint PhD student
Erich Schmid Institute of Materials Science, Austria	Al-based alloys	Dr. R. Parthiban	Joint Publication
Narula Institute of Technology, Kolkata	Magnetic Materials	Dr. S. Chabri	Joint PhD student
KNU, Asansol	Al alloys, biomaterials	Dr. G Mandal, Dr. A. Sinha	Joint publications
RDCIS, Ranchi	Process Metallurgy	Dr. G. M. Chowdhury	Joint PhD guidance
CSIR-National Metallurgical Laboratory, Jamshedpur	Metallurgy	Dr. H N Bar	Research work for Joint PhD Guidance
Indus University, Ahmedabad, Gujarat	Metallurgy	Dr. Sujoy Kumar Choudhury	Research work for paper and patent publication
DRDO	Design and Development of Gamma Titanium Aluminide Alloy for Aircraft Turbines	Dr. S. Banumathy, Sc. F, DMRL, Hyderabad	Joint Research Funded by DRDO
NIAMT National Institute of Advanced Manufacturing Technology (NIAMT) CSIR-CIMFER-Dhanbad, CSIR-CMERI-Durgapur and NIMT Ranchi	Thermal stabilization	Koushik Sikdar	Doing research work
	Structure-Property correlation in Materials	Professor (Dr.) Joydeep Maity	Joint research work and publication
IIT Hyderabad	Green Steel Making	Dr. Ashok Kamaraj	Joint Project
CSIRO Australia	Green Steel Making	Dr. Nawshad Haque	India Australia Mineral Scholar Network program
IMMT Bhubaneswar	Critical Minerals	Dr. Kali Sanjay	Critical minerals project CO-PI from NIT Durgapur
IISc Bangalore	Critical Minerals	Prof. G.S. Gupta	Critical minerals project CO-PI from NIT Durgapur
IIT(ISM) Dhanbad	Critical Minerals and Green Steel research	Dr. Raj Kumar Dishwar	ANRF-PAIR project CO-PI from NIT Durgapur

4.12.12 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Dr Nawshad Haque	GIAN course of MoE, GoI	2025-07-09



4.12.13 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
S. Barik and M. K. Mondal	Effect of active substrate cooling in wire arc additive manufacturing for manganese-rich low-carbon steel	Material Science and Engineering Technology	Volume:56 Issue No:3 Page No:364–375 Year:2025 Month:Mar
Prosanta Biswas, Akash Raj, Suresh Neelakantan and Manas Kumar Mondal	Wear Micromechanics, Mechanisms, and Wear Map of Al–12.6Si–0.25Fe–xMn Alloy: The Role of Al ₁₅ (Mn,Fe) ₃ Si ₂ Intermetallic and Microstructure Modification	Journal of Tribology	Volume:147 Issue No:3 Page No:031702 Year:2025 Month:Mar
Prosanta Biswas and Manas Kumar Mondal	Dry Sliding Wear Behaviour of Al–7.6Si–xZr Alloys: Understanding the Impact of Zr on Wear Characteristics, Mechanics, and Transition	International Journal of Metalcasting	Volume:19 Issue No:1 Page No:187 - 212 Year:2025 Month:Jan
Sougata Barik, Rahul Bhandari, Tirtharaj Paul, Sudip Kumar Samanta, and Manas Kumar Mondal	Development of novel nano-B ₄ C and CNF reinforced aluminium matrix hybrid nanocomposite	Materials Science and Technology	Volume: Issue No: Page No: Year:2024 Month:Sep
S. Sarkar, M. K. Mondal & M. Mallik	Correlation Between Pressureless Sintering, Microstructure, and Properties of ZrB ₂ -SiC-Y ₂ O ₃ Composites	Journal of Materials Engineering and Performance	Volume:33 Issue No:11 Page No:5487–5500 Year:2024 Month:Jun
Suveksha Tamang, Sadhna Rai, Manas Kumar Mondal, Nayan Kamal Bhattacharyya, Reetik Singh, Sanat Kumar Mukherjee, and Joydeep Biswas	Synthesis of reduced graphene oxide and Nickel oxide/reduced graphene oxide composite materials for supercapacitor applications and their computational investigations	Journal of Molecular Structure	Volume:1315 Issue No: Page No:138865 Year:2024 Month:Nov
S Chabri, S Samanta, G Roy, A Sarkar, S Bera	Effect of free energy on the solubility and magnetic behaviour of a mechanically	Bulletin of Materials Science	Volume:47 Issue No:3 Page No:214 Year:2024 Month Nov

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Author(s) Name	Paper Name	Journal Name	Others Info
	alloyed nanocrystalline Cu– Co–Ti alloy		
S. Sarkar, M.K. Mondal, and Manab Mallik	Correlation Between Pressureless Sintering, Microstructure, and Properties of ZrB ₂ -SiC-Y ₂ O ₃ Composites	Journal of Materials Engineering and Performance	Volume:33 Issue No: Page No:5487–5500 Year:2024 Month:Apr
Kashi Nath Malik, Satadal Ghorai, and Arup Kumar Mandal	Studies on increased utilization of high-ash Indian coal in coke-making	International Journal of Coal Preparation and Utilization	Volume:45 Issue No:2 Page No:311-324 Year:2024 Month:Apr
Avash Kumar Saha, Ramesh Kumar and Arup Kumar Mandal	Modern steel production using biomass energy in 21st century: blessing or curse?	Int. J. Oil, Gas and Coal Technology	Volume:37 Issue No:4 Page No:489-519 Year:2025 Month:Jun
Arup Kumar Mandal , Nirmal Baran Hui , U.K. Chatterjee	Failure investigation of a pipeline of emulsion storage tank to drum filling in a bitumen producing plant	Engineering Failure Analysis	Volume:179 Issue No: Page No:109831 Year:2025 Month:Jun
Ramesh Kumar, Arup Kumar Mandal	Sustainable Steel Refining by Hydrogen Plasma: Effect of Impurities on Desulfurization of Liquid Iron	Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science	Volume:56 Issue No: Page No:4635–4647 Year:2025 Month:Jun
Ramesh Kumar and Arup Kumar Mandal	Modification In Design Parameters Of Transferred Arc Plasma Furnace For Improved Efficiency	International Journal of Metalcasting	Volume: Issue No: Page No: Year:2025 Month:Sep
S Kumar, S Bera, D Mandal, AK Chakraborty	Transforming waste red mud and fly ash to wealth by designing a hybrid Al alloy composite with improved mechanical and tribological properties	Materialwissenschaft und Werkstofftechnik	Volume:56 Issue No:1 Page No:122-131 Year:2025 Month:Jan
Ankita Mallick, Rupam Mandal, Nitesh Mondal, Subhasish Sarkar, Nisantika Biswas, Barnali Maji, Gautam Majumdar	Parametric optimization and minimization of corrosion rate of electroless Ni–P coating using Box- Behnken design and Artificial Neural Network	Results in Surfaces and Interfaces	Volume: https://doi.org/10.1016/j.rsurfi.2024.100228 IssueNo: https://doi.org/10.1016/j.rsurfi.2024.100228 Page No: https://doi.org/10.1016/j.rsurfi.2024.100228 Year:2024 Month:May



Author(s) Name	Paper Name	Journal Name	Others Info
Md Imran Rizwi, Shubhadip Paul, Biplab Hazra, Durbadal Mandal, Bijay Kumar Show	Wear behavior of a novel hybrid aluminium based nanocomposite	Journal of Materials Engineering and Performance	Volume:33 Issue No:21 Page No:11763-11780 Year:2024 Month:Nov
Md Imran Rizwi, Durbadal Mandal, Bijay Kumar Show	Microstructural modification and simultaneous enhancement of strength, ductility in a novel nano- composite	Materials Today Communications	Volume:41 Issue No: Page No:110899 Year:2024 Month:Dec
Raj Kumar Kalshyan, Madan Mohanasundaram, Golap Mohammad Chowdhury & Satadal Ghorai	Synthesis of calcium ferrite using microwave susceptor heating	Canadian Metallurgical Quarterly	Volume: Issue No: Page No:1-11 Year:2024 Month:Nov
Chandan Choudhary, H.N Bar, Sk. Md. Arif, K.L Sahoo, D.Mandal	Effect of structural refinement and modification on the mechanical properties of Al-7Si alloy	Journal of Materials Engineering and Performance	Volume:33 Issue No: Page No:5155-5167 Year:2024 Month:May
Imran Rizwi, B. Hazra, Subhadip Paul, D. Mandal, B.K Show	Wear behavior of a novel hybrid aluminium based nano-composite	Journal of Materials Engineering and Performance	Volume:33 Issue No: Page No:11763-11780 Year:2024 Month:Nov
Falgun V. Suthar, Hetalkumar Shah,Durbadal Mandal, Sujoy K. Chaudhury	Effect of alloy 625 buffer layer on corrosion resistance of nickel base hardfacing	Surface & coatings Technology	Volume:485 Issue No: Page No:130893 Year:2024 Month:Jun
Md. Imran Rizwi, D. Mandal, B.K Show	Microstructural modification and simultaneous enhancement of strength, ductility in a novel nano- composite	Materials Today Communications	Volume:41 Issue No: Page No:110899 Year:2024 Month:Nov
Falgun V. Suthar, Hetalkumar N Shah, Durbadal Mandal, Sujoy K. Chaudhury	Effect of deposition current on microstructure, hardness, and residual stress distribution of NiCrBSiC hardfacing alloy	Journal of Materials Engineering and Performance	Volume:34 Issue No: Page No:10080-10092 Year:2025 Month:Feb
A. K. Jaiswal, B. Maji, M. Kumar and J. Maity	Structure-Property Correlation of a Newly Synthesized 6351Al/Body- Centered Tetragonal Boron Nitride Composite	Journal of Materials Engineering and Performance (Springer-Nature, ASM international, USA)	Volume:33 Issue No:14 Page No:7164–7193 Year:2024 Month:Jul
Joydeep Maity	An analytical model to ascertain A.C. electrical conductivity of	Philosophical Magazine	Volume:104 Issue No:22 Page No:1052–1075 Year:2024 Month:Nov

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Author(s) Name	Paper Name	Journal Name	Others Info
	metal matrix composites		
Joydeep Maity, Maharshi Ghosh Dastidar, Suvajit Mandal, Sourav Sharma, Sujeet Kumar Chaudhary and Atanu Saha	Development of significantly hard hypereutectoid plain carbon steel through incomplete austenitization based cyclic quenching treatment	Material Science and Engineering Technology (Materialwissenschaft und Werkstofftechnik), Germany	Volume:55 Issue No:11 Page No:1519-1528 Year:2024 Month:Nov
Joydeep Maity, Anurag Shivam Bansfore, Anjan Pal, Biplab Hazra, Liton Roy, Dipayan Mahato and Athram Beer Shav	Hardness enhancement of commercially pure aluminium by a typical cyclic heat treatment process involving repeated ice-brine quenching	Material Science and Engineering Technology (Materialwissenschaft und Werkstofftechnik), Germany	Volume:56 Issue No:2 Page No:201-211 (e202400181) Year:2025 Month:Feb
Z Seikh, B De, D Ghosh, S Saha, S Bera, G Mandal, A Sinha	An Overview on the Utilization of Hydroxyapatite from Fish Wastes: A Transition from Waste to Wealth	Journal of The Institution of Engineers (India): Series D	Volume: Issue No: Page No:1-9 Year:2024 Month:Jun
B De, D Ghosh, S Saha, Z Seikh, S Das, S Bera, G Mandal, A Sinha	Thermally Derived Hydroxyapatite from Nibea soldado Fish Bones Within Magnesium Matrix: Processing and Mechanical Behaviour	Journal of The Institution of Engineers (India): Series D	Volume: Issue No: Page No:1-10 Year:2024 Month:May
Arup Kumar Mandal, Avash Kumar Saha	Decarbonizing Metal Production: The Role of Green Hydrogen and Public Perception	Annual Technical Volume of IEI	Volume: Issue No: Page No: Year:2024 Month:Jul
Avash Kumar Saha, and Arup Kumar Mandal	Towards a Low-Carbon Steel Industry in India: Decarbonization Strategies and Environmental Impact Assessment	Journal of The Institution of Engineers (India): Series D	Volume: Issue No: Page No: Year:2025 Month:Aug
Avash Kumar Saha, Chunlin Chen, Nawshad Haque	Green House Gas Lifecycle Assessment of Traditional and Biomass-Integrated Steelmaking Routes	TMS, Energy Technology	Volume: Issue No: Page No: Year:2025 Month:May
Ramesh Kumar, Avash Kumar Saha & Kashi Nath Malik, Arup Kumar Mandal	Comparative Study on the Characteristics of Fluidized Bed Combustion and Pulverized Coal	Journal of The Institution of Engineers (India): Series D	Volume:105 Issue No: Page No:839-851 Year:2024 Month:Jul



Author(s) Name	Paper Name	Journal Name	Others Info
	Combustion Bottom Ash Bricks		

4.12.14 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Pritam Sadhukhan, Satadipa Banerjee, Hrishikesh Kumar, Ajay Kumar Mishra, Arijit Banerjee, Barnali Maji, and M.M. Ghosh	Development of Orthopedic Implant through Computational Modeling and Additive Manufacturing: A Review	JMEPEG	Volume: Issue No: Page No: Year:2025 Month:Mar
Pritam Sadhukhan, Satadipa Banerjee, Hrishikesh Kumar, Ajay Kumar Mishra, Arijit Banerjee, Barnali Maji and M.M. Ghosh	Development of Orthopaedic Implant through Computational Modelling and Additive Manufacturing: A Review	Journal of Materials Engineering and Performance	Volume: Issue No: Page No:1-28 Year:2025 Month:Mar
Joydeep Maity, Biplab Hazra, Mousumi Mallick, Aman Kumar Lal Das and Bijay Kumar Show	Advent of low-density superhard orthorhombic diamond based 24 % quartz composite	Journal of Alloys and Compounds	Volume:1036 Issue No:20 July-2025 issue Page No:Article No. 181963; https://doi.org/10.1016/j.jallcom.2025.181963 Year:2025 Month:Jul

4.12.15 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
5th Indo-Austrian Symposium (IASME 2024)	IIT Kharagpur	2024-12-12	2025-09-13	India
International Conference on Advanced Materials for Sustainable Development (ICAMSD 2025), during 28 - 29 March, 2025, at MNIT Jaipur, India.	MNIT Jaipur, India	2025-03-28	2025-03-29	India
5th Indo-Austrian Symposium on Materials Engineering (IASME 2024)	IIT Kharagpur	2024-12-12	2024-12-13	India
1st Symposium of India-Australia Minerals Scholar Network-2024	CSIRO Australia	2024-05-09	2024-05-10	Australia
78th ATM- National Metallurgical Day 2024	The Indian Institute of Metals	2024-11-19	2024-11-21	India
10th International Congress on Science and Technology of ironmaking, 2024	Chinese Society for Metals (CSM)	2025-08-25	2025-08-29	china
9th International Congress on the Science and Technology of Steelmaking, South Korea 2025	Korea Chamber of Commerce and Industry	2025-07-02	2025-07-05	South Korea

4.12.16 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Synthesis and Characterization of Mg-based alloys and composites for biomedical application	Sudeep Paul	S Bera, D. Mandal, M. Das	DEGREE AWARDED	2025-03-14

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Topic Name	Scholar	Supervisor	Status	Status Date
Development of Cu-Co-Ni Alloys for Magnetic Applications	A. Sarkar	S Bera, S Chabri	ONGOING	-
Development of Cu-based alloys and alloy composite for electrical applications	A Mahato	S Bera, BK Show	ONGOING	-
Synthesis and Characterization of Titanium based alloys for biomedical applications	S Arulmozhiselvar	S Bera, D Mandal	ONGOING	-
Development of Al-Cu-Ni alloys for high temperature applications	S Das	S Bera, BK Show	ONGOING	-
Processing, microstructure and characterization of biomaterials microstructure and characterization of biomaterials	A Dhar	M Mallik, S Bera	ONGOING	-
Development of Hypereutectic Al-Mg ₂ Si Composite for Automobile Application	Rahul Bhandari	Dr. Manas Kumar Mondal and Dr. Manab Mallik	SUBMITTED	2025-01-29
ZrB ₂ based ultrahigh temperature ceramic composites for high temperature applications	Sayandip Sarkar	Dr. Manab Mallik and Dr. Manas Kumar Mondal	ONGOING	-
Development of novel copper based hybrid composite with adequate combination of physical and mechanical properties	Logachander K	Dr. Manas Kumar Mondal and Prof. Joydeep Maity	ONGOING	-
Wire Arc Additive Manufacturing: Integrating Process Driven Approach for Alloy.	Sougata Barik	Dr. Manas Kumar Mondal	ONGOING	-
Development of low-density boron carbide reinforced aluminium based metal matrix composite	Anjan Pal	Prof. Joydeep Maity and Dr. Manas Kumar Mondal	ONGOING	-
Design and Development of Ti-based Alloys for Biomedical Applications.	Pritam Shadukhan	Dr. Barnali Maji and Dr. Madan Mohan Ghosh	ONGOING	-
Design and Development of Zr–Nb Nanostructural Alloys for Biomedical Applications.	Satadipa Banerjee	Dr. Madan Mohan Ghosh and Dr. Barnali Maji	ONGOING	-
Structural property correlation of ceramics.	Abhishek Kumar	Dr. Manab Mallik and Dr. Barnali Maji	ONGOING	-
Nanomaterials and applications	Aritra Das	Dr. Madan Mohan Ghosh and Dr. Barnali Maji	ONGOING	-
Synthesis of calcium ferrite through microwave heating	Raj Kumar Kalshyan	Golap Md. Chowdhury and Satadal Ghorai	ONGOING	-
Studies on increased utilization of high-ash Indian coal in coke-making	Kashinath Mallik	Arup Kumar Mandal and Satadal Ghorai	ONGOING	-
Study on Development of Ilmenite Ore Pellet	Rahul Dhibar	Satadal Ghorai	ONGOING	-



Topic Name	Scholar	Supervisor	Status	Status Date
Development of nano-AlN and nano-TiN reinforced aluminum metal matrix composite by stir casting method	Md. Imran Rizwi	Dr. Bijay Kumar Show and Dr. Supriya Bera	ONGOING	-
Coupled multi-scale modeling and experimental approach to develop carbon fiber reinforced epoxy resins composites with enhanced mechanical properties for advanced structural applications.	Ajay Kumar Mishra	Dr. Madan Mohan Ghosh and Dr. Bijay Kumar Show	ONGOING	-
Development of Cu-based alloys and alloy composite for electrical applications	Amar Mahato	Dr. Supriya Bera and Dr. Bijay Kumar Show	ONGOING	-
Development of Al-Cu-Ni alloys for high temperature applications	Sagar das	Dr. Supriya Bera and Dr. Bijay Kumar Show	ONGOING	-
Synthesis and Characterization of Mg-based alloys and composites for biomedical application	Sudeep Paul	Dr. Supriya Bera, Dr. Durbadal Mandal and Dr. Mitun Das	DEGREE AWARDED	2025-03-10
Influence of Quenching and Partitioning Process Parameters on Microstructure, Tensile and Fatigue Behaviour of High Strength Steel	Sk Md Arif	Dr. Durbadal Mandal and Dr. H N Bar (CSIR-NML, Jamshedpur)	ONGOING	-
Development of Nano AlN and Nano TiN reinforced Al metal matrix composites by stir casting method	Md Imran Rizwi	Dr. Bijay Show and Dr. Durbadal Mandal	ONGOING	-
Synthesis and Characterization of Titaniumbased alloys for biomedical applications	S Arulmozhiselvar	Dr. Supriya Bera and Dr. Durbadal Mandal	ONGOING	-
Development of Nano-structured Cu-Ni Alloy Thin Films with Enhanced Mechanical Properties through MD Modelling and Experiments	H. Kumar	M.M. Ghosh and S.Pramanik	ONGOING	-
Design and Development of Ti-based Alloys for Biomedical Applications	Pritam Sadhukhan	M.M. Ghosh and B. Maji	ONGOING	-
Coupled Multi-scale Modelling and Experimental Approach to Develop Carbon Fiber Reinforced Epoxy Resin Composites with Enhanced Mechanical Properties for Advanced Structural Applications	Ajay Kumar Mishra	M.M. Ghosh and B.K. Show	ONGOING	-
Transfer Bar Thickness Variation and its Impact on Ridge Defects in Rolled Sheets	Arijit Banerjee	M.M. Ghosh and K.S. Ghosh	ONGOING	-
Design and Development of Zr-Nb Alloys for Dental Implants	Satadipa Banerjee	M.M. Ghosh and B. Maji	ONGOING	-
Development of a Promising TiNbZrTaHf High Entropy Alloy through Integrated Computational and Experimental	Aritra Das	M.M. Ghosh and B. Maji	ONGOING	-

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Topic Name	Scholar	Supervisor	Status	Status Date
Approach for Orthopaedic Implants				
Design and Development of a Promising Ternary γ -Titanium Aluminide Alloy Containing Niobium for Aerospace Applications	Sayan Mondal	M.M. Ghosh and K.S. Ghosh	ONGOING	-
Characterization of 7075 Al-Zn-Mg-Cu Alloy with Different Tempers and their Effects on Environmental Assisted Cracking	Abhishek Kumar Sinha	K.S. Ghosh and M.M. Ghosh	ONGOING	-
Thermal stabilization of INVAR alloys	Ajfarul Islam	Barna Roy	ONGOING	-
Bulk nanostructured materials	MD Iqbal Akhtar	Barna Roy	ONGOING	-
Development of novel copper based hybrid composite with adequate combination of physical and mechanical properties	Logachander K.	Dr. Manas Kumar Mondal and Professor (Dr.) Joydeep Maity	ONGOING	-
Development of low-density boron carbide reinforced aluminium based metal matrix composite	Anjan Pal	Professor (Dr.) Joydeep Maity and Dr. Manas Kumar Mondal	ONGOING	-
Development of a novel composite material (tentative topic before registration)	Deepak Kumar	Professor (Dr.) Joydeep Maity and Dr. Bijay Kumar Show	ONGOING	-
Structure property correlation of magnesia refractory	Abdur Rouf	Mallik Manab and Krishna Priya Yagati	ONGOING	-
ZrB ₂ —SiC based ultrahigh temperature ceramic composites for high temperature applications	Sayandip Sarkar	Mallik Manab and Manas Kumar Mondal	ONGOING	-
Processing, microstructure and characterization of biomaterials	Amit Dhar	Mallik Manab and Bera Supriya	ONGOING	-
Structure-Property correlation of Advanced Ceramics processed by Additive Manufacturing	Abhishek Kumar	Mallik Manab and Maji Barnali	ONGOING	-
Development of Hypereutectic Al-Mg ₂ Si Composite For Automobile Application	Rahul Bhandari	Manas Kumar Mondal and Manab Mallik	SUBMITTED	2025-03-31
Desulphurization studies of liquid iron by hydrogen in an indigenously fabricated transferred arc plasma furnace	Ramesh Kumar	Arup Kumar Mandal	DEGREE AWARDED	2024-08-14
Studies on enhanced utilization of Indian coking coal in coke making	Kashi Nath Malik	Arup Kumar Mandal, Satadal Ghorai	ONGOING	-



Topic Name	Scholar	Supervisor	Status	Status Date
Production of Steel by green DRI using biomass as a reductant	Avash Kumar Saha	Arup Kumar Mandal	ONGOING	-
Studies on Biomass integration in existing coal based iron making towards decarbonization	Santanu Sengupta	Arup Kumar Mandal	ONGOING	-
Feasibility Studies of Environment-Friendly Sustainable Steel Making Using High Alumina, High Phosphorus Australian and Indian Iron Ores by Hydrogen Plasma	Dr. Prasenjit Singha	Arup Kumar Mandal	ONGOING	-

4.12.17 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Design and Development of a Promising Ternary γ -Titanium Aluminide Alloy Containing Niobium for Aerospace Applications	M.M. Ghosh (PI), K.S. Ghosh (Co-PI) and Dr. S. Banumathy (Domain Scientist from DMRL)	DRDO	3533605.0	2024
Studies on Sustainable Steelmaking in 2050 using biomass as a reductant	Arup Kumar Mandal	SERB-CRG, GoI	3564000.0	2023
Feasibility Studies of Environment-Friendly Sustainable Steel Making Using High Alumina, High Phosphorus Australian and Indian Iron Ores by Hydrogen Plasma	Arup Kumar Mandal	CSIRO Australia	3455000.0	2025

4.12.18 Testing & Consultancy Services Rendered

Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
Bitchem Asphalt Technologies Limited, Barjora, Bankura, West Bengal	Failure Investigation of Pipeline of Emulsion Storage Tank #4 to Drum Filling	125000.0	Completed

4.12.19 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Supriya Bera	Trans IIM	Springer	2024-08-21
Supriya Bera	Trans IIM	Springer	2025-03-19
Supriya Bera	JAC	Elsevier	2024-08-20
Supriya Bera	BOMS	Springer	2025-01-28
Manas Kumar Mondal	Advanced Engineering Materials	Wiley-Blackwell	2025-01-03

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Reviewer	Name of the Journal	Publisher	Date of Final Review
Manas Kumar Mondal	Advanced Engineering Materials	Wiley-Blackwell	2024-08-02
Manas Kumar Mondal	Ceramics International	Elsevier	2024-10-03
Manas Kumar Mondal	Engineering Fracture Mechanics	Elsevier	2024-10-20
Manas Kumar Mondal	Engineering Fracture Mechanics	Elsevier	2024-06-03
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-04-15
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-12-17
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-12-03
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-07-28
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-11-28
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-12-31
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-09-26
Manas Kumar Mondal	Journal of Alloys and Compounds	Elsevier	2024-08-20
Manas Kumar Mondal	Journal of Environmental Chemical Engineering	Elsevier	2024-04-15
Manas Kumar Mondal	Journal of Materials Research and Technology	Elsevier	2024-06-05
Manas Kumar Mondal	Journal of Materials Science	Springer	2025-09-05
Manas Kumar Mondal	Materials Letters	Elsevier	2024-12-10
Manas Kumar Mondal	Materials Letters	Elsevier	2024-12-12
Manas Kumar Mondal	Materials Science & Engineering A	Elsevier	2024-12-18
Manas Kumar Mondal	Materials Science & Engineering A	Elsevier	2025-02-09
Manas Kumar Mondal	Scientific Reports	Nature Portfolio	2024-08-16
Manas Kumar Mondal	Steel research international	Wiley-Blackwell	2024-05-11
Manas Kumar Mondal	Steel research international	Wiley-Blackwell	2024-06-09
Manas Kumar Mondal	Materials Today Communications	Elsevier	2024-11-08
Manas Kumar Mondal	Materials Today Communications	Elsevier	2024-05-14
Satadal Ghorai	Transactions of the Indian Institute of Metals	Springer	2024-07-17
Satadal Ghorai	Transactions of the Indian Institute of Metals	Springer	2024-12-23
Satadal Ghorai	Transactions of the Indian Institute of Metals	Springer	2025-03-17
Satadal Ghorai	JOM, The Journal of The Minerals, Metals & Materials Society (TMS)	Springer TMS	2024-07-15
Satadal Ghorai	JOM, The Journal of The Minerals, Metals & Materials Society (TMS)	Springer TMS	2024-10-01
Satadal Ghorai	JOM, The Journal of The Minerals, Metals & Materials Society (TMS)	Springer TMS	2024-12-17



Reviewer	Name of the Journal	Publisher	Date of Final Review
Satadal Ghorai	JOM, The Journal of The Minerals, Metals & Materials Society (TMS)	Springer TMS	2025-02-27
Satadal Ghorai	Ironmaking & Steelmaking	Sage	2024-07-23
Satadal Ghorai	Ironmaking & Steelmaking	Sage	2024-12-26
Satadal Ghorai	Ironmaking & Steelmaking	Sage	2025-02-05
Bijay Kumar Show	Journal of Materials Engineering and Performance	Springer	2024-10-01
Bijay Kumar Show	Silicon	Springer	2024-05-30
Bijay Kumar Show	Tribology Letters	Springer Nature	2024-10-15
Durbadal Mandal	Transaction of Indian Institute of Metals	Springer	2024-11-11
Durbadal Mandal	Steel Research International	Wiley-Blackwell	2024-08-12
Karuna Sindhu Ghosh	Journal of Alloys and Compounds	Elsevier	2024-08-09
Karuna Sindhu Ghosh	Journal of Alloys and Compounds	Elsevier	2024-08-26
Karuna Sindhu Ghosh	Journal of Alloys and Compounds	Elsevier	2024-09-17
Karuna Sindhu Ghosh	Journal of Alloys and Compounds	Elsevier	2024-09-26
Karuna Sindhu Ghosh	Journal of Alloys and Compounds	Elsevier	2024-11-06
Karuna Sindhu Ghosh	Journal of Alloys and Compounds	Elsevier	2025-01-25
Karuna Sindhu Ghosh	Materials Science and Engineering A	Elsevier	2025-03-12
Barna Roy	Bulletin of Materials Science	Springer Nature	2025-07-17
Arup Kumar Mandal	Journal of Sustainable Metallurgy	TMS	2025-02-03
Arup Kumar Mandal	International Journal of Coal Preparation and Utilization	Taylor and Francis	2024-12-10
Arup Kumar Mandal	Transactions of the Indian Institute of Metals	Springer	2024-11-12
Arup Kumar Mandal	Canadian Metallurgical Quarterly	Springer	2024-10-15
Arup Kumar Mandal	Journal of the Institution of Engineers (India): Series D	Springer	2024-09-12

4.12.20 Review of Books

Reviewer	Title of the Book	Name and Affiliation of the Author	Publisher	Date
Karuna Sindhu Ghosh	Revised copy "Foundation of Welding Technology"	K S Ghosh, Professor	PHI	2025-03-12
Karuna Sindhu Ghosh	Foundations of Corrosion Science and	K S Ghosh, Professor	PHI Learning	2024-10-23

4.12.21 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Supriya Bera	Subject moderator in UG exam	KNU Asansol	2024-04-01	2025-03-31
Satadal Ghorai	Invited to act as an external examiner for evaluation of dual degree MTech projects and conduct the viva voce	Department of Metallurgical & Materials Engineering, IIT Kharagpur	2024-05-03	2024-05-03
Bijay Kumar Show	To act as an external examiner for evaluating the project	IIT, Kharagpur	2024-05-03	2024-05-03

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	dissertations and conducting the viva-voce examination of dual degree M. Tech students at IIT Kharagpur.			
Manas Kumar Mondal	Project dissertations and conducting the viva-voce examination of Dual-Degree M.Tech students	Indian Institute of Technology, Kharagpur, Kharagpur - 721302, West Bengal	2024-05-03	2024-05-03
Manas Kumar Mondal	Acted as an external expert to conduct the PhD final defence seminar	Academy of Scientific and Innovative Research	2024-04-08	2024-04-08
Durbadal Mandal	External Examiner for evaluating the project dissertations and conducting the viva-voce examination of Dual-Degree M.Tech/5 yrs. student in Metallurgical and Materials Engineering	IIT Kharagpur	2024-05-03	2024-05-03
Durbadal Mandal	Examiner for PhD Thesis Evaluation	Savitribai Phule Pune University, Pune	2024-12-26	2024-12-26

4.12.22 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	From Date	To Date
Supriya Bera	Invited speaker	Student Induction programme	KNU, Asansol	2024-08-27
Supriya Bera	Invited Talk	5th Indo-Austrian Symposium (IASME 2024) on Materials Engineering	IIT Kharagpur	2024-12-13
Arup Kumar Mandal	A new concept for environment-friendly, sustainable, single-step impurities removal process of liquid iron	Online short term course on road map for green steel production; Industry 4.0	NIT Rourkela	2024-07-01
Arup Kumar Mandal	Green Steel making by hydrogen & Ammonia	One-day conference on Long & flat products- Mission green steel and energy efficiency in steel industry	Fortune Park, Durgapur	2024-07-01
Arup Kumar Mandal	Green Steel Making Using Hydrogen and Ammonia	One day Seminar on Green Steel making	BC Roy Engineering College	2024-08-23
Arup Kumar Mandal	Green Steelmaking by Hydrogen Plasma	One week short term course on Green Steel	NIT Durgapur	2025-02-15

4.12.23 Patents

Title	Inventors	Application	Date of Filing
FABRICATION OF COST EFFECTIVE NI-	Mohd Talha Arvind Dixit O.P. Sinha C.K. Behera Arup Kumar Mandal	202211043443	2024-06-21



Title	Inventors	Application	Date of Filing
FREE AUSTENITIC STAINLESS STEELS FOR BIOMEDICAL APPLICATIONS			
STRONG, WEATHERRESISTANT METALLIC CHARGE MATERIALS FOR IRON AND STEELMAKING AND METHOD OF PREPARATION THEREOF	Arup Kumar Mandal, Avash Kumar Saha	202431069660	2024-11-08
A METHOD FOR PRODUCING STEEL BY UTILIZING HYDROGEN GAS IN PLASMA ELECTRIC ARC FURNACE	Arup Kumar Mandal, Ramesh Kumar	202431080781	2024-10-23

4.12.24 Participation in National Committees/Visits

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Arup Kumar Mandal	BIS Cast Iron Sectional Committee	Kolkata	2024-04-01	2025-03-31

4.13 Department of Management Studies

4.13.1 Department at a Glance:

DMS offers MBA with specialization in Marketing, Finance, OB & HR and Systems and Operations. DMS in Collaboration with Mathematics and Computer Science and Engineering Departments offer M Tech in Operation Research. DMS offers Courses like Principle of Management and Accounting for all streams of B Tech courses and open elective courses namely Marketing Research and Analytics, Security and Stock Market Analysis and Industrial Marketing. Already DMS has started offering Minor programs namely Financial Management and Marketing Management in BTech streams.

4.13.2 Mission & Vision

Mission

- To deliver rigorous and relevant education of international standing that inspires students to implement their professional skills in an enterprising manner and become architects of an equitable world. Through vibrant collaboration, and innovation we drive excellence in teaching and research to contribute to the intellectual, social and economic development of the communities. We serve thereby shaping a responsible future for both business and society.

Vision

- To become center of academic excellence with commitment to provide quality education in management, liberal studies, entrepreneurship and related fields to the students and working executives with a holistic approach, to develop them as entrepreneurs and future leaders of the industry.

4.13.3 Faculty

Name	Designation	Email-id
Dr. Mousumi Roy	Professor	mroy.dms@nitdgp.ac.in

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Dr. Avijan Dutta	Professor	adutta.dms@nitdgp.ac.in
Dr. Gautam Bandyopadhyay	Professor	gbandyopadhyay.dms@nitdgp.ac.in
Dr. Neelotpaul Banerjee	Associate Professor	nbanerjee.dms@nitdgp.ac.in
Dr. Kaushik Mandal	Associate Professor	kmandal.dms@nitdgp.ac.in
Dr. Anupam De	Associate Professor	ade.dms@nitdgp.ac.in
Dr. Durba Pal	Associate Professor	durba.pal@dms.nitdgp.ac.in
Dr. Amlan Ghosh	Associate Professor and HOD	aghosh.dms@nitdgp.ac.in
Dr. Subhadip Sarkar	Assistant Professor	ssarkar.dms@nitdgp.ac.in
Dr. Ujjwal Kanti Paul	Assistant Professor	ukpaul.dms@nitdgp.ac.in
Dr. Umamaheswarrao Jada	Assistant Professor	ujada.dms@nitdgp.ac.in

4.13.4 Labs

Sl. No.	Name of Laboratory	Major equipment
1	Business Laboratory for MBA	Desktop Computer
2	Finance Lab for Minor program Financial Management	Desktop computers
3	Marketing Lab for Minor Program Marketing Management	Desktop computers/ Laptop

4.13.5 PhD degree awarded till 2024-25

Sixty

4.13.6 Any other relevant information

Unique Selling Proposition of DMS

- High Return on Investment (ROI) for students (Average package/Total expenditure for the study)
- Multiple courses relevant to Business analytics
- Focus on practical implementation through hybrid courses (theory and practical)

SWOT of DMS

Strengths:

- Well-qualified and motivated faculty members with industry background
- An ideal mix of experience and youth in the faculty members
- Regular revision of curricula and syllabi with the help of experts from academia and industries
- Large number of publication and reviews by faculty members.
- Students encouraged to take up research early
- Faculty development programmes given highest priority
- Low tuition fee, higher average package
- Over 50 PhDs earned by the students of the DMS since its inception
- Providing exposure to all the BTech students through core, minor and open elective courses

Weaknesses:

- Inadequate facilities for the post graduate laboratories and research
- Limited number of Institute research scholars
- Limited number of students in reserved categories
- Inadequate number of technical and supporting staffs
- Inadequate space for expansion of laboratories and setting up new laboratories
- Limited access to case studies, and full text research articles of international peer-reviewed journals
- Inadequate number of equipped class rooms
- Budget constraint for promotion of MBA and PhD courses

Opportunities

- Globalisation of education opening up huge opportunities for market driven courses and research
- Government focus on skill based education and entrepreneurship.



- Huge demand for job oriented courses
- Rising demand for online and executive management programs
- Corporate Spending on CSR has increased as per new regulation. Thus, scopes for CSR based consultancies have risen.

Threat

- Challenges from newer IIMS and private management Institutes including newer branches spread over the country.
- Gradual reduction in number of applicants (CAT, XAT)
- Declining industrial activities in and around Durgapur
- Limited job opportunities in few specialisation areas like OB& HR, Systems and operations Management and Finance.
- Availability of online courses (certificate, regular and executive MBA)

4.13.7 Specialization

- Finance
- Systems & Operations Management
- Digital Marketing
- Sustainable Marketing
- Agricultural Marketing
- Health Insurance
- Organizational Behaviour; Human Resource Management
- Marketing Management
- Managerial Economics, Sustainable Development, International Business, Green Marketing

4.13.8 Proposed Plan for Research

- Behavioral Finance; Corporate Finance
- AI in Marketing
- Sustainable Marketing and Digital Marketing
- Workplace Spirituality.
- To develop Algorithm faster than Simplex for solving LPP, To develop Algorithm faster than Simplex for solving QPP, SCM and TQM
- Pension sector and banking sector in India.
- Responsible Marketing and its antecedents and Consequences
- Financial Markets
- Sustainable Development of Santal Tribes in India, Green Marketing of Sustainable products; Sustainable Development Strategy, Sustainable HR development

4.13.9 Area of Research Interest

- Behavioral Finance; Corporate Finance; Capital Market; Corporate Social Responsibility; Banking; Stock Market Analysis
- Marketing
- Sustainability and Marketing
- Digital Marketing
- Health Insurance
- OCB, Green OCB, Employee Green Behaviour, Workplace Adaptability, Workplace Diversity and Inclusion, Psychological Capital, Organizational Spirituality, Workplace Resilience, Positive Organizational Behaviour
- Optimization, SCM and TQM
- Banking, Insurance & Pension
- Societal and other areas of marketing
- Capital Market
- Sustainable Development Strategy, Green Marketing, Sustainable HR development, Knowledge, Sustainable Development towards net-zero
- Economics
- Leadership, Employee Behaviours

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4.13.10 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
NSIC, Kolkata, Govt. of India	Sustainable MSME development	Dissemination programs towards sustainable MSME development

4.13.11 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
NIT Silchar	Joint Ph D supervision	Gurudas Das and Ujjwal Kanti Paul	Joint Ph D supervision
Lappeenranta UNiversity of Technology Finland	Sustainable Development	Prof.L.Linnanen	Workshop, Invited Lectures, Publications
Miracle educational society group of institutions	Board of Studies Member	Management Department Faculties, Dignitaries from other Institutes	Curriculum Development

4.13.12 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Prof.R.W.Belk	GIAN course on Qualitative Marketing Research	2025-01-20
Gurudas Das, Satish Kumar, Gautam Bandyopadhyay	5 day online FDP for Social Science	2024-07-01
Prof. Tathagata Bandyopadhyay, Dr. Surupa Chakraborty, Prof. Gautam Bandyopadhyay, Dr. Amlan Ghosh, Dr. Kaushik Mandal, Dr. Anupam Dey	Workshop on fundamentals of research Methodology using APPLICATION software	2024-06-24
Prof. Tathagata Bandyopadhyay, Prof. Debabrata Mitra, Dr Bhargab Chattopadhyay	MANAGEMENT DOCTORAL RESEARCH COLLOQUIUM (MDRC 2024)	2024-12-21

4.13.13 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Swarup Mukherjee, Anupam De, and Supriyo Roy	Supply chain risk prioritization: a multi-Criteria based intuitionistic fuzzy topsis approach	International Journal of Quality & Reliability Management, Emerald Publishing	Volume:41 Issue No:6 Page No:1693–1725 Year:2024 Month:
Aishwarya Mitra and Anupam De	Financial Literacy and its Impact on Life Satisfaction in Rural Households: A Mediated Approach via Financial Self-efficacy	Journal of Indian Business Research	Volume:16 Issue No:3 Page No:353–374 Year:2024 Month:
Aishwarya Mitra and Anupam De	Enhancing life satisfaction through financial literacy and behavior: Insights from the Indian IT sector	Journal of Workplace Behavioral Health, Taylor & Francis	Volume:40 Issue No:2 Page No:Journal of Workplace Behavioral Health, Taylor & Francis Year:2025 Month:
Krishna Roy, Ujjwal Kanti Paul, Saurabh Tiwari, and Arunava Mookherjee	Impact of electronic word of mouth (e-WOM) on purchasing decisions: an empirical study	Benchmarking: An International Journal	Volume: 32 Issue No: 10 Page No: 3901-3906 Year:2024 Month:Nov



Suchi Smita Swain, Gurudas Das, and Ujjwal Kanti Paul	Does Flow of Remittances Matter for Enhancing the Labor Market Behavior of the Left-Out Members? A Micro-Level Analysis in the Context of Rural Jharkhand, India	Journal of Public Affairs	Volume: 25 Issue No: 1 Page No: Year:2024 Month:Dec
Suchi Smita Swain, Ujjwal Kanti Paul, Satish Kumar and Gurudas Das	Investigating the Role of Migration on Household Wellbeing: A Study in an Emerging Market	Global Business and Organizational Excellence	Volume: 44 Issue No: 3 Page No: 84-98Year:2024 Month:Oct
Bijoy Kumar Dey, Charbel Jose Chiappetta Jabbour, Satish Kumar and Ujjwal Kanti Paul	Technical Efficiency in the Manufacturing Industry: A Meta Regression Analysis	Global Business and Organizational Excellence	Volume: 44 Issue No: 6 Page No: 53-68 Year:2025 Month:Mar
Vikash Mandal and Durba Pal	Sustainable leadership: empowering green organizational citizenship behaviour through employee green value in the Indian healthcare sector	Journal of Asia Business Studies	Volume:19 Issue No:1 Page No:79-102 Year:2025 Month:Jan
Vikash Mandal and Durba Pal	Going Green from Within: The Mediation of Employee Green Creativity in the Relationship Between Green Inclusive Leadership and Green Organizational Citizenship behaviour	Global Business Review	Volume:OnlineFirst Issue No: https://doi.org/10.1177/09721509241264132 Page No: Year:2024 Month:Aug
Indu Nath Jha, Durba Pal and Subhadip Sarkar.	Thriving in diversity: the role of inclusive leadership and workplace inclusion in enhancing satisfaction with life among Indian IT employees	Journal of Management Development	Volume:43 Issue No:5 Page No:663-689 Year:2024 Month:Sep
Subhadip Sarkar	ABC classification using MCDA, DDF and TOPSIS approach	International Journal of Operational Research	Volume:Vol. 50 Issue No:No. 2 Page No:pp 170-187 Year:2024 Month:Jun

Author(s) Name	Paper Name	Journal Name	Others Info
K K Prasad and Amlan Ghosh	A Genetic Algorithm Approach to Optimal Asset Allocation of Defined Contribution Pension Funds: Evidence from India's National Pension System	Compensation & Benefits Review	Volume:56 Issue No:4 Page No:195-210 Year:2024 Month:Sep
Abhijit Mukherjee and Amlan Ghosh	Does Economic Factors improves Property Liability Insurance Consumption in India: An Empirical Assessment	International Journal of Business and Globalisation	Volume:38 Issue No:3 Page No:441-460 Year:2024 Month:Oct
Avijit Sarkar, Hemant Gupta, and Avijan Dutta	Sustainable dairy sector of an emerging economy: An empirical quest based in India	Agricultural Systems, Elsevier	Volume:218 Issue No: Page No: Year:2024 Month:Jun

4.13.14 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Swarup Mukherjee, Anupam De, and Supriyo Roy	Service Quality Management Under Risk Prioritization And Imprecise Information: A Hybrid Fuzzy Approach	The TQM Journal, Emerald Publishing	Volume: https://doi.org/10.1108/TQM07-2024-0245 Issue No: Page No: Year:2024 Month:Sep
Swarup Mukherjee, Anupam De, and Supriyo Roy	Enterprise Risk Management in Supply Chain Operation: A Fuzzy Risk Prioritization Approach	Benchmarking: An International Journal	Volume: https://doi.org/10.1108/BIJ04-2024-0308 Issue No: Page No: Year:2024 Month:Aug

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Aishwarya Mitra and Anupam De	Empowering financial choices: how financial literacy and behavioral bias shape access to financial products and services	International Journal of Accounting and Information Management	Volume:https://doi.org/10.1108/IJAIM10-2024-0412 Issue No: Page No: Year:2025 Month:Mar
Swarup Mukherjee, Anupam De, and Supriyo Roy	Risk Prioritization in Enterprise Supply Chains: Application of Fuzzy Analytic Hierarchy Process	Business Process Management Journal	Volume:https://doi.org/10.1108/BPMJ10-2024-1003 Issue No: Page No: Year:2025 Month:Mar
P Sahoo N Banerjee K Mandal	The Impact of Media information on Consumer Buying Decisions During Uncertain times: The Mediating Role of Personal Characteristics and the Moderating Role of Uncertainty	International Journal of Business Excellence	Volume: Issue No: Page No: Year:2025 Month:
K K Prasad, Amlan Ghosh and D Singh	Exploring asset allocation approaches in pension plans: a comprehensive review and future research agenda	International Journal of Services, Economics and Management	Volume: Issue No: Page No: Year:2024 Month:Aug
K K Prasad, Amlan Ghosh and S Gupta	Decision Support for unorganised Worker's Retirement Savings: Optimization of Asset Allocation in India's NPS Active Choice	Asian Review of Financial Research	Volume: Issue No: Page No: Year:2025 Month:Jan

4.13.15 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Indu Nath Jha, Subhadip Sarkar and Durba Pal.	"They made me feel included" – Investigating predictors of Inclusive behaviour of Indian IT employees: A hybrid SEM-ANN based approach.	Strategic Management Forum Conference 2024' at Indian Institute of Management, Mumbai	DOI/ISBN: N.A. Volume: Issue No: Page No:14 Year:2024 Month:Dec Presenter:CO-AUTHOR
Vikash Mandal and Durba Pal	Sustainable Leadership and Green Organizational Citizenship Behaviour: An Integrated SEM-ANN Approach.	Management Doctoral Research Colloquium 2024 at DMS, NIT DURGAPUR	DOI/ISBN: NA Volume: Issue No: Page No:76 Year:2024 Month:Dec Presenter:CO-AUTHOR
Indu Nath Jha, Subhadip Sarkar and Durba Pal	The Synergy of Inclusion: How Inclusive Leadership Drives Performance and Creativity Through Psychological Empowerment.	Management Doctoral Research Colloquium 2024' at DMS, NIT DURGAPUR	DOI/ISBN: N.A. Volume: Issue No: Page No:77 Year:2024 Month:Dec Presenter:CO-AUTHOR

4.13.16 Conference: Published in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
Aishwarya Mitra and Anupam De	Exploring the Pathways from Digital Financial Literacy to Perceived Financial Well-being in IT Sector Employees: A Sequential Mediation Approach	Strategic Management Forum Conference 2024	DOI/ISBN: N.A. Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
Aishwarya Mitra and Anupam De	Decoding pathways to financial empowerment of women: A two-way mediated approach	Management Doctoral Research Colloquium (MDRC) 2024	DOI/ISBN: N.A. Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR



Raunak Bhattacharyya and Anupam De	Comparative Analysis of the Impact of Financial Variables on Return on Equity: A Study of State Bank of India (SBI) and Bank of Baroda (BOB)	Management Doctoral Research Colloquium (MDRC) 2024	DOI/ISBN: N.A. Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR

4.13.17 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
Durba Pal	Vikash Mandal	Green Management Approaches to Organizational Behavior	Green Mindfulness and Organizational Citizenship: Unveiling the Role of Intrinsic Motivation in Healthcare Sustainability.	Publisher: IGI Global Scientific Publishing. Publication Date: 2025-0221

4.13.18 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
Transforming Mobility: Business Innovations, Financial Strategies, and Sustainability Practices for a Greener Future	IIT Kharagpur	2025-02-13	2025-02-14	India
International Conference on Empowering Viksit Bharat @ 2047	IIT Dhanbad	2025-02-13	2025-02-14	India
Strategic Management Forum Conference 2024	Indian Institute of Management Mumbai	2024-12-05	2024-12-07	India
Management Doctoral Research Colloquium 2024	DMS, NIT DURGAPUR	2024-12-21	2024-12-22	India
International Conference on Recent Advances in Operations Research & Business Analytics, 2024	Operational Research Society of India (ORSI) Kolkata and BIMS, Kolkata, India	2024-07-25	2024-07-26	India
Management Doctoral Research Colloquium (MDRC), 2024	DoMS, NIT Durgapur	2024-12-21	2024-12-22	India
International Research Conference on Pension (IRCP,2025)	IIM Ahmedabad and PFRDA	2025-04-03	2025-04-04	India
Strategic Management Forum Conference	IIM, Mumbai	2024-12-05	2024-12-07	India
International Marketing Conference	IIM Visakhapatnam	2025-05-09	2025-05-10	India

4.13.19 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
A Study on Corporate Social Responsibility and its Impact on the Performance of Indian Corporate Sector	Dipanita Deb	Dr. Anupam De & Prof. Philippe Gillet	DEGREE AWARDED	2025-03-31

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Wavelet Based Multi-Horizon Investment Analysis in an Economy Dominated by Heterogeneous Agents	Anindya Chakrabarty	Dr. Anupam De	DEGREE AWARDED	2025-03-31
Capital Structure Determinants and Decisions during Pre and Post Period of the Recent Financial Crisis in Global Economy: An Empirical Study on Indian Scenario	Arindam Banerjee	Dr. Anupam De	DEGREE AWARDED	2025-03-31
Financial Analysis and Planning in Indian Urban Local Self Governments- A Theoretical and Empirical Study	Smriti Ranjan Bhattacharyya	Dr. Anupam De	DEGREE AWARDED	2025-03-31
Impact of Financial Cognition and Mental Accounting on Personal Financial Planning – A Study on Indian Households	Mousumi S. Mahapatra	Dr. Anupam De & Dr. Jayasree Raveendran	DEGREE AWARDED	2025-03-31
A Study on Predictability of Stock Returns and Behavioral Biases	Arindam Banerjee	Anupam De & Prof. Gautam Bandyopadhyay	DEGREE AWARDED	2025-03-31
The Market Impact of Corporate News Release: Indian evidence	Nayanjyoti Bhattacharjee	Dr. Anupam De	DEGREE AWARDED	2025-03-31
Topic Name	Scholar	Supervisor	Status	Status Date
Frauds in Public Sector Banks of India: A Study to Find out the Factors and Impact	Souvik Kumar Ghosh	Dr. Anupam De	DEGREE AWARDED	2025-03-31
Economic Sustainability and Strategic Management of Cultural Capital: An Exploratory Study with Special Reference to West Bengal	Asmita Basu	Dr. Anupam De	DEGREE AWARDED	2025-03-31
Impact of Financial Literacy on Financial Inclusiveness with the Mediating Role of Behavioral Bias: An Empirical Study in Indian Context	Aishwarya Mitra	Dr. Anupam De	DEGREE AWARDED	2025-03-31
Enterprise Risk Management in Supply Chain Operation: An Application of Multi-Criteria Fuzzy Data-Driven Risk Assessment Methods in an Integrated Steel Plant	Swarup Mukherjee	Dr. Anupam De & Prof. Supriyo Roy	DEGREE AWARDED	2025-03-31
Implementation and Performance Evaluation of Enterprise Resource Planning (ERP) in Durgapur steel plant under Steel Authority of India Ltd.	Sumit Ranjan Dasgupta	Dr. D. Chakraborty, Prof. P. P. Sengupta & Dr. Anupam De	SUBMITTED	2025-03-31
PhD Thesis Registration is not done yet	Raunak Bhattacharyya	Dr. Anupam De	ONGOING	Null
A study on the relationship of promotional mix with sales and profits	Somroop Siddhanta	N.Banerjee	DEGREE AWARDED	2025-09-08
Determining the attitude of Indian young consumers towards online marketing	Debasis Ghosh	N.Banerjee	DEGREE AWARDED	2025-09-08
A study of evolution, growth and decline of small brands of apparels in India.	Naveen Arora	N.Banerjee	DEGREE AWARDED	2025-09-08
An empirical study on the impact of social media to facilitate the effectiveness of marketing.	Kaustav Mukherjee	N.Banerjee	DEGREE AWARDED	2025-09-08
An empirical analysis on various facets of celebrity endorsement in Indian context.	Ramendra Pratap Singh	N.Banerjee	DEGREE AWARDED	2025-09-08
A study on various aspects of consumer behavior in context to different products and services – A comparison between consumers in India and USA.	Jyotirmoy Samanta	N.Banerjee	DEGREE AWARDED	2025-09-08



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A study on effective management of national economic planning using soft computing based techniques.	Mriganka Mohan Chanda	G.Bandyopadhyay & N.Banerjee	DEGREE AWARDED	2025-09-08
A study on consumer buying decision in the time of pandemic.	Pabitra Sahoo	N.Banerjee & K.Mandal	ONGOING	null
Chatbots in service industry: Relevance, adoption, and impact.	Sarmistha Ghatak	N.Banerjee & S.Sarkar	ONGOING	null
Beyond the Digital Shift: The Impact of AIEnabled Technologies on Consumer Behaviour.	Sandip Ray	N.Banerjee	ONGOING	null
Three Essays on eWOM: Antecedents, Measure & Impact	Krishna Roy	Ujjwal Kanti Paul	SUBMITTED	2025-03-03
Migration and Development: A Micro Level Analysis With Reference to Rural Jharkhand	Suchi Smita Swain	Gurudas Das & Ujjwal Kanti Paul	SUBMITTED	2025-01-08
A Study on the Adoption Intention of Electric Cars in India	Divya Singh	Ujjwal Kanti Paul	ONGOING	null
Topic Name	Scholar	Supervisor	Status	Status Date
A Study on Workplace Adaptability: An Indian Perspective.	Sujata Bose.	Dr.Durba Pal.	DEGREE AWARDED	2022-05-31
Exploring Green Organizational Citizenship Behaviour Vis-a-vis its Correlates among the Employees of Indian Organizations: An Empirical Investigation.	Vikash Mandal	Dr.Durba Pal.	ONGOING	null
Exploring Antecedents and Consequences of Workplace Inclusivity among Employees of Indian Organizations: An Empirical Study.	Indu Nath Jha	Dr.Subhadip Sarkar; Dr.Durba Pal.	ONGOING	null
Yet to be Registered	Khusbu Shaw	Dr.Durba Pal.	ONGOING	null
Study on Consumer Buying Decision at the time of a pandemic	P Sahoo	N Banerjee and K Mandal	ONGOING	null
Attitude towards Femvertising and its impact on Brand Building: An analysis based on Experimentation and Empirical Survey	A Majumder	K Mandal	ONGOING	null
Impact of Societal Marketing on Business Performance of B2B product/service	S Dutta	K Mandal	ONGOING	null
Optimum assets allocation of DC pensions funds in India	Keshav Kant Prasad	Dr Amlan Ghosh	SUBMITTED	2024-12-04
Evaluating Techniques for Strategic Asset Allocation of Pension Funds in India.	Abhisikta Basak	Dr Amlan Ghosh	ONGOING	null
Understanding Behavioral Aspects of Unorganized Sector Workers' Retirement Planning in India	Srijana Tamang	Dr Amlan Ghosh	ONGOING	null
Essay's on Earning management of Indian firms with special emphasis on family business and the role of corporate governance	Soumen Chatterjee	Avijan Dutta, Ameet Banerjee	SUBMITTED	2025-03-31
Issues of HR development Among the selected Santal Tribal in eastern India	Alok Emanuel Kisku	Prof.Mousumi Roy	ONGOING	null
Strategy for Emulsion Coating Product	Sayantana Ghosh Dastidar	Prof.Mousumi Roy	ONGOING	null

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4.13.20 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
A Study on the Antecedents of Electric Car Adoption in India	Ujjwal Kanti Paul	ICSSR	2025
Social Entrepreneurial Intentions among Young Women: A case of select Universities and Institutes in India	Dr. Umamaheswararao Jada	ICSSR	2025

4.13.21 Testing and Consultancy Services Rendered

Sponsoring Industry / Institute Name	Title of the Project	Total Amount (in Rs.)	Remarks
DSP Durgapur	The Impact Assessment Study on CSR initiatives of Durgapur Steel Plant 2022-23.	512000.0	Completed
Durgapur Steel Plant (DSP), SAIL, Durgapur	Impact Assessment Study of various CSR activities of DSP	512000.0	Completed

4.13.22 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Durba Pal	Acta Psychologica	Elsevier.	2025-02-23
Amlan Ghosh	International Journal of Social Economics	Emerald	2025-01-21
Amlan Ghosh	Int. J. of Services, Economics and Management	Inderscience	2024-10-31

4.13.23 Participation in National Committees/Visits

Name of the Faculty	Name of the Committee	Place of Visit	From Date	To Date
Avijan Dutta	NBA accreditation	Jagan Institute of Management Studies, 3, Institutional Area, Sector-5, Rohini, Delhi- 110085	2024-09-06	2024-09-08
Mousumi Roy	CSIR -CMERI Scientific Staff Select Assessment Committee	CSIR-CMERI, Durgapur	2025-03-27	2025-03-28
Mousumi Roy	Senate Meeting, NIT Jamshedpur as Senator	NIT Jamshedpur	2024-07-12	2024-07-12
Mousumi Roy	Senate Meeting NIT Jamshedpur	NIT Jamshedpur	2024-10-21	2024-10-21

4.13.24 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Anupam De	Ph. D. Thesis Examination	Bodoland University, Assam	2024-12-30	2025-02-12
Neelotpaul Banerjee	PhD thesis evaluation as an external examiner.	ICFAI University, Jharkhand	2024-05-13	2024-09-23



Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Anupam De	Conducting Viva Voce Examination of IMSc (Food Technology) Final Semester Projects	BIT Mesra, Ranchi	2024-05-08	2024-05-08
Anupam De	Conducting Viva Voce Examination of B.Tech. (Chemical) Final Semester Projects	BIT Mesra, Ranchi	2024-05-09	2024-05-09
Amlan Ghosh	PG board of Studies (PGBOS) in Management,	University of North Bengal	2020-07-01	2025-09-18
Amlan Ghosh	Departmental Research Committee	Department of Mmanagement Stuies, University of North Bnegal	2022-07-01	2025-09-18
Amlan Ghosh	Research Advisory Committee (RAC)	St. Xavier University, Kolkata.	2023-03-13	2025-09-18
Avijan Dutta	Board of Studies	B.C. Roy College	2024-10-28	2024-10-28
Mousumi Roy	XURET 2025	St. Xaviers University Kolkata	2025-03-23	2025-03-24
Mousumi Roy	PhD thesis examination	NIT Jamshedpur	2024-04-22	2025-03-22
Mousumi Roy	PhD via-voce	NIT Jamshedpur	2024-04-11	2024-04-11
Mousumi Roy	PhD thesis examination	NIT Jamshedpur	2024-10-15	2024-10-15
Mousumi Roy	PhD viva-voce	NIT Jamshedpur	2024-10-29	2024-10-29

4.13.25 Invited Expert in Selection Committees

Name of the Faculty	Discipline	University/Institute	From Date	To Date
Anupam De	Commerce	CBSE Board, DAV Model School, Durgapur	2024-04-20	2024-04-20
Anupam De	Commerce	CBSE Board, DAV Model School, Durgapur	2025-03-03	2025-03-03
Avijan Dutta	Management	NIT Jamshedpur	2024-09-03	2024-09-03
Mousumi Roy	Science and Technology	CSIR-CMERI	2025-03-21	2025-03-22

4.13.26 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Anupam De	Acted as a Resource Person in the Orientation Course for the CA students	Orientation Course for the CA students	Durgapur branch of the Institute of Chartered Accountants of India (ICAI)	2025-07-26	2025-09-27
Ujjwal Kanti Paul	Research Seminar on Electric Car Adoption in India	MBA	NIT Silchar	2025-02-03	2025-02-03
Kaushik Mandal	Descriptive Analysis- Normality Test T Test Z test ANOVA	Research Methodology	Online	2024-07-03	2024-07-03

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Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Kaushik Mandal	Cluster Analysis using SPSS	Workshop on Fundamentals of Research Methodology using Application Software	Online	2024-06-27	2024-06-27
Kaushik Mandal	Mediation & Two-way ANOVA (Special Case): Latin Square Design	Workshop on Fundamentals of Research Methodology using Application Software	Online	2024-06-28	2024-06-28
Kaushik Mandal	Analytics for new product design related problem using statistical software	AICTE (ATAL) sponsored FDP on "Emerging Trends in Business Analytics for Data-Driven Decision Making"	BC Roy Durgapur	2024-07-23	2024-07-23
Kaushik Mandal	Cluster Analysis	PhD Course work	WBSU Barasat	2024-12-12	2024-12-12
Kaushik Mandal	Conjoint Analysis	Invitation Lecture for PhD Coursework	WBSU Barasat	2024-12-19	2024-12-19
Amlan Ghosh	Basic of Time Series Analysis	AICTE-ATAL FDP program on "Emerging Trends in Business Analytics for Data-Driven Decision Making	Department of Business Administration, Dr. B.C. Roy Academy of Professional Courses, Durgapur, West Bengal, India.	2024-07-22	2024-07-27
Amlan Ghosh	Longevity Risk	AHOVAAN 2025"	University of North Bengal,	2025-02-12	2025-02-13
Avijan Dutta	Changing Dimensions of Business and Technology	3rd International Conference	.DSMS Durgapur	2024-06-14	2024-06-14
Mousumi Roy	Woman Entrepreneurship Development: Road Ahead	Entrepreneur Development Program	NSIC Kolkata	2025-03-21	2025-03-21
Umamaheswararao Jada	Qualitative Research Using Grounded Theory	One Week online Faculty Development Programme	Kolkata (Online)	2024-10-21	2024-10-25
Umamaheswararao Jada	HR Analytics using Excel	Online FDP on HR Analytics	Hyderabad (Online)	2024-10-21	2024-10-26

4.13.27 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Ujjwal Kanti Paul	MDRC 2024	NIT Durgapur	Marketing track	2024-12-21	2024-12-22
Anupam De	Management Doctoral Research Colloquium (MDRC) 2024	NIT Durgapur	Finance	2024-12-21	2024-12-22



Name of the Faculty	Programme	Place	Session	From Date	To Date
Kaushik Mandal	Coherence 2024 - International Management Conference	SNU Kolkata	Marketing Management	2024-04-18	2024-04-18
Kaushik Mandal	MDRC	DMS NIT DGP	Marketing and Sustainability	2024-12-21	2024-12-21
Amlan Ghosh	MANAGEMENT DOCTORAL RESEARCH COLLOQUIUM (MDRC) 2024	NIT Durgapur, India	Chair: Finance, Accounting, and Economics	2024-12-21	2024-12-22
Mousumi Roy	MDRC 2024, NIT Durgapur	NIT Durgapur	Research Colloquium 2024	2024-12-21	2025-12-22

4.14 Department of Physics

4.14.1 Department at a Glance:

This is one of the oldest departments of the institute which has been providing the basic knowledge of physics to all the undergraduate students of this institute who come to become engineers of future. Physics is one of the core subjects along with mathematics that drive engineering and innovation as it teaches us about the laws of nature and its consequences in both microscopic and macroscopic domains. Over the years, the department has also established its identity as an independent knowledge centre for physical science studies and research through two postgraduate programs and PhD. Programs across diverse disciplines of Physical sciences. Currently, the interest of the department of physics spreads over many interdisciplinary areas of science and the boundaries are not rigidly defined. The department encourages and appreciates new ideas in physics that have relevance to technologies useful for the mankind.

The department currently boasts of several state-of-the-art research laboratories which provide the infrastructural support for cutting edge multidisciplinary research which is primarily focused on various aspects of synthesis, properties and applications of materials and in particular nanostructured materials. In recognition of the high-quality research in materials science and engineering conducted by its faculty members, the department has been selected by the MHRD, Govt. of India for the prestigious “Centre of Excellence” grant in 2013 (in partnership with the department of MME of this institute). In recent years, department has recruited several new faculty members to add more diversity to the knowledge and expertise. As a consequence, the department is now also very much active in terms of research in areas such as exploration of helium and geothermal power, earthquake precursory studies, environmental radioactivity, Water geochemistry, nonlinear systems and time series analysis, study of chaotic behavior of electronic circuits and systems and application of chaos in cryptography, nanomaterials for optical sensors, solar cells, photocatalyst, standard model and beyond standard model, B meson decays, boson phenomenology, biophysics and biostatistics, artificial intelligence and machine learning in physical and biological phenomena, etc. The research in the above-mentioned areas are conducted in the various laboratories which are described in the Laboratory section.

4.14.2 Mission & Vision

Mission

To provide quality education to students with sound understanding of the fundamentals and applications of physics for the advancement of science & technology with the following aims:

- To provide high quality teaching and research.
- To improve global visibility of the department through highly qualified and internationally acclaimed faculty and staff.
- To provide the most up to date and purposeful curriculum and the state-of-the-art laboratory facilities in a “student centric” approach to empower them in finding suitable employment.
- To improve employability of our graduates by arranging close interaction with nearby industries, so that our programs and graduates are highly regarded and accepted in their workplace.
- To provide necessary knowledge, experience and ethical values to the students leading them to responsible citizens of the nation

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Vision

- To impart quality education & focus on research in basic and applied sciences leading to advancement of technology to cater to the need of the country.

4.14.3 Faculty

Name	Designation	Email-id
Ajit Kumar Meikap	Professor (HAG)	ajit.meikap@phy.nitdgp.ac.in
Pathik Kumbhakar	Professor (HAG)	patihk.kumbhakar@phy.nitdgp.ac.in
Amit Kumar Chakraborty	Professor	amit.chakraborty@phy.nitdgp.ac.in
Sukadev Sahoo	Associate Professor	sukadev.sahoo@phy.nitdgp.ac.in
Mrinal Kanti Mandal	Associate Professor	mrinalkanti.mandal@phy.nitdgp.ac.in
Soumen Basu	Associate Professor	soumen.basu@phy.nitdgp.ac.in
Hirok Chaudhuri	Associate Professor	hirok.chaudhuri@phy.nitdgp.ac.in
Aniruddha Mondal	Associate Professor	aniruddha.mondal@phy.nitdgp.ac.in
Soumik Das	Assistant Professor	soumik.das@phy.nitdgp.ac.in
Hemachander Subramanian	Assistant Professor	hemachander.subramanian@phy.nitdgp.ac.in
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Abhijit Ghosh	Assistant Professor	abhijit.ghosh@phy.nitdgp.ac.in
Arghya Chatterjee	Assistant Professor	achatterjee.phy.nitdgp.ac.in
Karthikeyan Jeyakumar	Assistant Professor	kjeyakumar.phy@nitdgp.ac.in

4.14.4 Labs

Sl. No.	Name of Laboratory	Major equipment
1	Electronics Laboratory	Oscilloscope 1GHz, RF Signal generator 3GHz, Spectrum Analyzer, Function Generator, Programmable power supply, Caddo-71 PCB Designer.
2	Nanoscience Laboratory	UV-Vis. absorption spectrophotometer, Photoluminescence spectrofluorometer.
3	Carbon Nanotechnology Laboratory	Centrifuge, vacuum furnace, hot air oven, rotary vacuum evaporator, spin coater, bath sonicator and probe sonicator, diamond wheel saw, fume hood, etc.
4	Materials Science Laboratory	DTA-TGA Perkin Elmer, Autolab 302N Electrochemical workstation, Agilent LCR meter, High temperature electrical measurement setup.
5	Facility for the theoretical study	Two GPU-based HP workstations with different computational software
6	Optical Sensor Laboratory	E-Beam evaporation cum GLAD system (), Thermal evaporation cum GLAD system, VLS GLAD system, PerkinElmer UV-Vis spectrophotometer (Model No: LAMDA 365+), Photocurrent measurement system, Keithley make source meter unit (I-V Meter) (Model no: 2450), LCR Meter (Model No: IM3536), Helium Cryostat.
7	Low-Temperature Characterization Laboratory	1 tesla electromagnet, Closed Cycle He-Cryostat, Liq. N2 Cryostat, Impedance Analyser (Hz to MHz & MHz to GHz) LCR meter, Keithley Electrometer, PH Multimeter, High Temp. furnace etc.
8	UG and PG Laboratories	The UG and PG laboratories are equipped with standard experimental setup B. Tech and MSc Physics student
9	Facility for research on Helium & Geothermal Exploration, and Earthquake Precursor Study and Environmental radioactivity	Rad 7 radon-222 semiconductor detector with aqua kit Alpha Guard ionisation chamber Radon detector Soil moisture, soil temperature detector
10	Facility for research on Water geochemistry, and photocatalyst for organic pollutant removal	Photocatalytic reactor, Muffle Furnace, Hot Air Oven, Ultrasonic Bath, Digital Balance, Wastewater treatment laboratory set up, Membrane set up for wastewater treatment, Multiparameter analyser for water
11	Energy Materials & Devices lab	Electrochemical workstation, Glove Box, Muffle Furnace
12	Nuclear Physics Laboratory (for PG and Research)	GM Counter, NaI detector, Plastic Scintillator, Standard gamma and beta Radioactive sources, Furnace, Digital Multi Channel Analyser, DC Discriminator
13	HEP Data Analytics and Simulation	Access to the RHIC-STAR collaboration server at BNL (named RCF). The



Sl. No.	Name of Laboratory	Major equipment
	Laboratory	RCF provides large-scale computational and data-storage facilities, along with high-performance networking infrastructure to support demanding data analysis and simulation needs.
14	Holography Laboratory	Honeycomb breadboard with rigid support, He-Ne Laser (12mW), Optical components and mounts

4.14.5 PhD degree awarded till 2022-23

One Hundred Seven.

4.14.6 Specialization

- High Energy Nuclear and Particle Physics
- Materials Science
- Condensed Matter Theory
- Nuclear Physics
- Nuclear and Particle physics
- Materials Sciences; Energy Storage and Sensing;
- Nonlinear Optics; 2D Materials; Photonics; Condensed Matter Physics
- Theoretical High Energy Physics
- Electronics & Condensed Matter Physics
- Nanomaterials; Photonics; Energy Generation; Supercapacitor; Nonlinear optics; Random laser
- Electronics
- Condensed matter physics
- Device and Sensors
- Laser Physics
- Theoretical Biology
- Condensed matter experiments
- Materials for Environmental Applications
- Environmental Radioactivity
- Nonlinear Analysis
- Helium and Geothermal Explorations
- Biophysics
- Condensed matter physics experimental
- Condensed Matter Physics, Experimental & Interdisciplinary Physics

4.14.7 Proposed Plan for Research

- Nano electrocatalyst
- Relativistic heavy-ion collisions at RHIC/STAR, which mimic conditions of the microsecond-old Universe.
- Fluctuations and transport properties of QCD matter to probe its phase structure
- QGP-hadron transition.
- Development of 2D Nanomaterials
- Energy storage and Sensing using Nanostructured materials
- Development of Random Laser
- Studies on Nonlinear Optical Effects in 2D Materials by Z-scan and SSPM Techniques
- To design secure and fast cryptographic algorithm for IoMT
- Study of different B, K and D meson decays in beyond standard models.
- Density functional theory to understand the physical and chemical properties
- Computational study of nanomaterials for energy and environmental applications.
- Holographic optical elements, Optical metrology, Photovoltaic concentrator
- Development of Energy Storage Materials
- Photodetectors and Resistive Switching Memory Device
- Host circuit interplay in cancer, and cellular motility in metastasis
- Resource allocation in subcellular processes
- Energy optimization and cell motility
- Reinforcement learning in Bacterial systems
- Develop cost-effective sodium ion hybrid capacitor and battery

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- Study on water pollution (geochemical investigation, water chemistry, antibiotic pollution) in Damodar River Basin and Ganga River
- Development of novel material for wastewater treatment
- Environmental Radioactivity monitoring (in water bodies, sub-soil gas) in Damodar River Basin
- Nonlinear Time Series Analysis (FFT, MFDFA, EMD, SOC) of climate data, geochemical data, medical data
- Investigation on Geochemical and Geophysical Aspect for Geothermal Exploration.
- Large scale Extraction of helium from petroleum deposits and hydrothermal gas and its purification

4.14.8 Area of Research Interest

- Fuel Cell, Hydrogen Evaluation Reaction(HER), OER
- High Energy Physics (Experiment & Phenomenology)
- Relativistic Heavy Ion Collision
- QGP and early Universe
- Data analysis
- Nanomaterials, 2D materials; TMDCs.
- Energy storage and Sensing by Electrochemical Technique; Nonlinear Optics; Random Lasing
- Synchronous Communication Systems. Nonlinear Dynamics, Chaos and Cryptography
- High Energy Physics Phenomenology, Gravitation and Cosmology
- Condensed Matter Theory
- Theoretical Catalysis
- Electronic Structure of Nanomaterials
- Structure Properties Correlation
- Nuclear Physics, Artificial intelligence
- Holographic optical elements, Optical metrology, Photovoltaic concentrator
- Experimental Condensed Matter Physics
- Genetic code and Genomics
- Semiconductors, Optoelectronic Devices
- Cancer dynamics
- Statistical physics
- Nonlinear dynamics
- Foundations of Statistical Machine learning
- Engineering nanomaterials for sustainable energy & environmental applications
- Study on water pollution (geochemical investigation, water chemistry, antibiotic pollution) in Damodar River Basin and Ganga River Development of novel material for wastewater treatment
- Development of novel material for Geo jute textile for its use in mining and rural roads
- Environmental Radioactivity monitoring (in water bodies, sub-soil gas) in Damodar River Basin e) Nonlinear Time Series Analysis (FFT, MFDFA, EMD, SOC) of climate data, geochemical data, medical data
- Development of a network of MPGOs (Multi-parametric Geophysical Observatories): Geochemical precursors, Electromagnetic (EM) precursors, seismo-geochemical & seismo-geophysical modeling of earthquake precursors.
- Investigation on Geochemical and Geophysical Aspect for Geothermal Exploration.
- Large scale Extraction of helium from petroleum deposits and hydrothermal gas and its purification

4.14.9 Institute Industry Collaboration

Collaborating Institute Organization	Areas of collaboration	Collaboration Activities
Hydrogen Innovation Pte. Ltd. Singapore	Electrocatalysts for hydrogen production	joint research
Gloster Limited: Jute Burlap, Goods Manufacturer in Kolkata, India	Nanomaterial coating on Geo-Jute	Knowledge Transfer for Nanomaterial coating on Geo-Jute
Ludlow Jute: Jute Manufacturing Factory Eco-Friendly Jute	Nanomaterial coating on Geo-Jute	Knowledge Transfer for Nanomaterial coating on Geo-Jute



4.14.10 Collaboration with Academic and Research Institutions

Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
CSIR-CGCRI	Fuel Cell	Dr.M Pal	Joint Research
RHIC-STAR International Collaboration	High Energy Nuclear Physics	Dr. Arghya Chatterjee	Large-scale international collaboration in high-energy particle physics experiments. Collaboration composed of 74 institutes from 15 countries)
University of Calcutta, India	Electrochemical Studies	Prof. D. Chattopadhyay, Prof. P. Kumbhakar	Joint Research publication
Burdwan University	Nonlinear Dynamics and Chaos	Prof. T. Banerjee	Research work and publication
The University of Burdwan	Nonlinear Optics & Random Lasing	Prof. U. Chatterjee, Prof. P. Kumbhakar	Joint Research Publication
Dipartimento di Fisica e Chimica – Emilio Segrè, Università degli Studi di Palermo, Via Archirafi 36, Palermo 90123, Italy	Random Lasing	Prof. F. Messina, Prof. P. Kumbhakar	Joint Research Publication
University of Calcutta, India	Supercapacitor	Prof. S. Bandyopadhyay, Prof. P. Kumbhakar	Joint Research Publication
RK University, Rajkot-260020, Gujarat, India	Photodegradation of Dye	Dr. R. Ghosh, Prof. P. Kumbhakar	Joint Research Publication
Regional Institute of Education, NCERT Bhubaneswar	Book writing & Popular Science Education	Prof. M. Goswami	Book writing & Popular Science Education
TDB College, Raniganj	Research	Dr. B. Sahoo	Research paper
B. B. College, Asansol	TARE Project, DST-SERB, Govt. of India	Dr. A. Biswas	TARE Project, DST-SERB, Govt. of India
Trident Academy of Technology, Bhubaneswar, Odisha, India	Research work	Dr. C. K. Das	Research work
University of Oulu, Finland	Defects in 2D materials	Dr. Hannu Pekka Komsa	Writing Research Articles together
RGIPT (Jais Campus) India	Catalytic Properties of Nanostructured Materials	Dr. Arshad Aijaz	Writing Research Articles together
IIT Bhubhubaneswar	Catalytic Properties of Nanostructured Materials	Prof. Umaprasana Ojha	Writing Research Articles together
Indian Institute of Technology (Indian School of Mines) Dhanbad	Research Collaboration	Prof. A. K. Nirala	Research Activity
Asansol Engineering College, Asansol	Research	Dr. Ranjita Sinha	PhD student working jointly
Nistarini College, Purulia	Research	Dr. Kajal Gupta	PhD student working jointly
Moffitt Cancer Center and Research Institute, Tampa, FL, U.S.A	Origin of Life research	Dr. Robert Gatenby	Publication
University of Petroleum and Energy Studies (UPES), Dehradun	Semiconductor device	Dr. Rajeev K. Gupta	Device Characterization

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Collaborating Institute Organization	Areas of collaboration	Faculty Members Involved	Collaboration Activities
Manipal University Jaipur	Semiconductor device	Dr. Nilanjan Halder	Device Characterization
International center for theoretical physics	Biophysics	Jacoppo Grilli	Academic visit
Jadavpur University	sensors	Prof. Bipan Tudu	publication of joint research papers
Jagadish Bose National Science Talent Search, Kolkata	lead free solder joint	Dr. Abhijit Kar	publication of joint research paper
Maulana Abul Kalam Azad University of Science & Technology, Kolkata	lead free solder joint	Dr. Monalisa Char	publication of joint research
VNIT Nagpur	energy storage materials and devices	Dr. Pradyumna Chaturvedi	joint research project
IIT Bombay	energy storage materials and devices	Prof. Sagar Mitra	joint research project
IIT Bombay	supercapacitors	Prof. Sumit Saxena	publication of joint research paper
University of Tyumen, Russia	BRICS NU Project and BRICS STI Project-Water Pollution	Dr. Evgeniya Soldatova,	Collaborative Research and Joint Research Proposal and Joint Publication
East China University of Technology, Nanchang, China	BRICS STI Project- Water Pollution	Prof. Sun Zhanxue	Collaborative Research and Joint Research Proposal and Joint Publication
Tomsk Polytechnic University, Tomsk, Russia	BRICS NU Project-Water Pollution	Dr. Natalia Guseva	Collaborative Research and Joint Research Proposal
Sidho-Kanho-Birsha University, Purulia, WB,	Environmental Radioactivity	Dr. Chiranjib Barman	Collaborative Research and Joint Research Proposal
Far Eastern Federal University, Vladivostok, Russia	Extraction of metals from fly ash	V. Taskin	Collaborative Research and Joint Research Proposal
Federal University of Rio de Janeiro, Brazil	BRICS STI Project-Climate Change	Prof. Otto Corrêa Rotunno Filho,	An interdisciplinary approach for assessment of the impacts of climate change on socio-ecological systems
Central University of Technology, South Africa	BRICS STI Project-Climate Change	Prof. Yali Edessa Woyessa,	An interdisciplinary approach for assessment of the impacts of climate change on socio-ecological systems
Jadavpur University, Kolkata, India	BRICS STI Project-Climate Change	Prof. (Dr.) Pankaj Kumar Roy,	An interdisciplinary approach for assessment of the impacts of climate change on socio-ecological systems

4.14.11 Innovations and Technology Transfer

Title	Inventors	Application Nos	Date Of Filing
Hydrothermally Grown Zn Nanorod Coated Glass Capillary For Light Emitting Source	Prof. Pathik Kumbhakar, Mr. Arindam Dey, Dr. Rajat Sarkar	202531044761 A	2025-05-08



Jute Geotextile For Overburden Dump Height Increment With Stability At Open Cast Mines And Method Thereof	Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Hirok Chaudhuri, Tapabrata Chakraborty	202431064290	2024-08-26

4.14.12 Workshops/Seminars Organized

Name of Key Speaker(s)	Name of the Programme	Date of the Programme
Dr. Sangram Bagh	Prof. M. S. Sinha Colloquium 2025	2025-02-10
Dr. P M Sarun, Dr. Mukul Kumar Das	Advancements on Semiconductor Materials and Devices	2024-12-09
Dr. Gopal Mukherjee, Senior Scientific Office, VECC, DAE, Govt. of India	One day outreach programme for the undergraduate and postgraduate students of NIT Durgapur to explore the job opportunity at the Department of Atomic Energy, Govt. of India by Dr. Gopal Mukherjee, Senior Scientific Office, VECC, DAE, Govt. of India (Worked as Coordinator)	2025-01-15

4.14.13 Journal: Published in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
Sahinur Rahaman Mondal, Tapabrata Chakraborty, Rajib Ghosh Chaudhuri, Mrinal Kanti Mandal, Hirok Chaudhuri, Supriya Pal	Nanocomposite-Modified Jute Geotextile as a Sustainable Solution for Subgrade Strength in Low-Traffic Roadways: A Performance Analysis	Journal of Materials in Civil Engineering Publisher (American Society of Civil Engineers)	Volume:37 Issue No:3 Page No:04024535 Year:2025 Month:
Manas Kumar Mandal, Santanu Dey, Soumen Basu	Investigation on borohydride oxidation performance of activated charcol supported palladiumbismuth nanoparticles electrocatalyst for fuel cell application	Journal of Applied Electrochemistry	Volume:55 Issue No:1 Page No:95-107 Year:2025 Month:Jan
Kajal Maji, Kousik Mukherjee, Mrinal Kanti Mandal	All optical half adder and subtractor using single 2D photonic crystal structure	Natural Computing	Volume:10.1007/s11047-024-10003-8 Issue No: Page No:1-20 Year:2024 Month:Oct
Punam Tiwary, Rajat Mahapatra & Amit K. Chakraborty	Pyramid-like zinc oxide microstructures as humidity sensor	Journal of Materials Science: Materials in Electronics	Volume:35 Issue No: Page No:1425 Year:2024 Month:Jul
Punam Tiwary, Amit K. Chakraborty, Holly J. Edwards, Vinod R. Dhanak & Rajat Mahapatra	Graphene Oxide Humidity Sensor: Effect of Substrates	Journal of Electronic Materials	Volume:54 Issue No: Page No:321 Year:2024 Month:Nov

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Author(s) Name	Paper Name	Journal Name	Others Info
S Kumar, S Bera, D Mandal, AK Chakraborty	Transforming waste red mud and fly ash to wealth by designing a hybridAl alloy composite with improved mechanical and tribologicalproperties	Materialwissenschaft und Werkstofftechnik	Volume:56 Issue No:1 Page No:122 Year:2025 Month:Jan
Arindam Karmakar, Supriya Pal, Kamal Bhattacharya, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Hirok Chaudhuri	Performance evaluation of cementstabilized coalmine overburdenfurnace slag-fly ash mixes as economical and sustainable base course material for flexible pavement	Clean Technologies and Environmental Policy Publisher Springer Berlin Heidelberg	Volume: Issue No: Page No:1-19 Year:2024 Month:
Ankita Dawn, Hirok Chaudhuri	Radiation profile mapping and health impact assessment due to ^{222}Rn exposure fromgroundwater in coal mining city Asansol, West Bengal, India	Journal of Radioanalytical andNuclear Chemistry (ISSN:0236-5731) (Publisher: Springer Netherlands)	Volume:333 Issue No:3 Page No:1611 - 1625 Year:2024 Month:
Santanu Dey, Manas Kumar Mandal, Subhamay Pramanik, Chandan Kumar Raul, Arghya Chatterjee, Soumen Basu	Exploring the efficiency of borohydride electro-oxidation performance for borohydride fuel cell application using carbon-supported silver-nickel (Ag-Ni/C) nanospheres: emphasizing catalyst loading (wt%) on the carbon support and sample loading on electrode surface	Applied Physics A	Volume:130 Issue No:10 Page No:678 Year:2024 Month:Oct
M. Mandal, S. Mahata, H. Mahapatra and S. Sahoo	polarization asymmetries of $\Sigma^- \rightarrow \Sigma^+ l^-$ decays in non-universal Z' model	Physics A	Year:2025 Month:Jan
S. Mahata, M. Mandal, H. Mahapatra, S. Biswas and S. Sahoo	Model Dependent Analysis of $D_{(s)}^+ \rightarrow \eta^+ l^+ \nu_l$ Decays in Beyond Standard Model	Chinese Physics C	Volume:48 Issue No:09 Page No:093106 Year:2024 Month:Sep
M. Mandal, S. Biswas, S. Mahata and S. Sahoo	Searching for new physics in $c \rightarrow u$ transitions with non-universal Z' model	International Journal of Modern Physics A	Volume:39 Issue No:17 & 18 Page No: 2450063 Year:2024 Month:Jul
Arindam Dey, Ashim Pramanik, Subrata Biswas, Pathik Kumbhakar, Udit Chatterjee	Employment of nonlinear optical properties of GO/Ag nanocomposite scatterer materials for achieving random lasing in the visible region in the gain medium of a commercially available dye	Optical Materials	Volume:152 Issue No: Page No:115400 Year:2024 Month:Jun



Author(s) Name	Paper Name	Journal Name	Others Info
Partha Kumbhakar, Subhendu Mishra, Pathik Kumbhakar, Ranjan Kumar Barik, Chandra Sekhar Tiwary and Abhishek Kumar Singh	Strain-Induced Tribocatalytic Activity of 2D ZnO Quantum Dots	The Journal of Physical Chemistry C	Volume:128 Issue No:25 Page No:10733- 10741 Year:2024 Month:Jun
Nabarun Mandal, Partha Kumbhakar, Arindam Dey, Pathik Kumbhakar, Udit Chatterjee, Christiano JS de Matos, Thakur Prasad Yadav, Nilay Krishna Mukhopadhyay, Krishanu Biswas, Vidya Kochat, Chandra Sekhar Tiwary	Optical Resonator- Enhanced Random Lasing using Atomically Thin Aluminium-based Multicomponent Quasicrystals	Optics & Laser Technology	Volume:175 Issue No: Page No:110746 Year:2024 Month:Aug
Koushik Mondal, Amit Halder, Ashim Pramanik, Rashbihari Layek, Dipanjan Banerjee, Venugopal Rao Soma, Shovon Pal, Pathik Kumbhakar	Enhanced Femtosecond Nonlinear Optical Susceptibility and Terahertz Conductivity in MoSe ₂ -Noble Metal Nanocomposites	Advanced Optical Materials	Volume:12 Issue No:23 Page No:2401138 Year:2024 Month:Aug
Chandan Ghorui, Partha Kumbhakar, Arjun Vs Kidavu, Pathik Kumbhakar, AK Chaudhary	Terahertz-based optoelectronic properties of ZnS quantum dot- polymer composites: For device applications	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	Volume:321 Issue No: Page No:124697 Year:2024 Month:Nov
Rashbihari Layek, Pathik Kumbhakar	Tailoring of Time for Hydrothermal Synthesis of 2D MoSe ₂ with Enhanced Adsorption and Electrocatalytic Efficiency for Applications in Self- Cleaning and Hydrogen Energy Generation	Advanced Sustainable Systems	Volume:9 Issue No:1 Page No:2400585 Year:2025 Month:Jan
B. E. Aboona, ..., A. Chatterjee, et al., [STAR Collaboration]	Electric-charge-dependent directed flow splitting of produced quarks in Au + Au collisions	Physics Letters B	Volume:862 Issue No:2025 Page No:139245 Year:2025 Month:Jan
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Energy Dependence of Polarized gamma + gamma to e ⁺ e ⁻ in Peripheral Au+Au Collisions at RHIC	Physical Review C	Volume:111 Issue No:2025 Page No:014909 Year:2025 Month:Jan
Nandita Padhan, Ashutosh Dwivedi, Arghya Chatterjee, Sabyasachi Ghosh	Effect of Coriolis force on electrical conductivity tensor for the rotating hadron resonance gas	Physical Review C	Volume:110 Issue No:2024 Page No:024904 Year:2024 Month:Aug
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Reaction plane correlated triangular flow in Au+Au collisions at $\sqrt{s_{NN}} =$ 3 GeV	Physical Review C	Volume:109 Issue No: Page No:044914 Year:2024 Month:Apr

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Author(s) Name	Paper Name	Journal Name	Others Info
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Observation of the Antimatter Hypernucleus Anti-H4Lambda	Nature	Volume:632 Issue No: Page No:1026– 1031 Year:2024 Month:Aug
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Strangeness Production in $\sqrt{s_{NN}} = 3$ GeV Au+Au Collisions at RHIC	Journal of High Energy Physics	Volume:10 Issue No:2024 Page No:139 Year:2024 Month:Oct
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Measurement of flow coefficients in high- multiplicity p+Au, d+Au and 3He+Au collisions at $\sqrt{s_{NN}} = 200$ GeV	Physical Review C	Volume:110 Issue No:6 Page No:064902 Year:2024 Month:Dec
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Exclusive J/Psi, Psi(2s), and e+e- pair production in Au+Au ultraperipheral collisions at RHIC	Physical Review C	Volume:110 Issue No:1 Page No:014911 Year:2024 Month:Jul
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Observation of strong nuclear suppression in exclusive J/Psi photoproduction in Au+Au ultraperipheral collisions at RHIC	Physical Review Letters	Volume:133 Issue No:5 Page No:052301 Year:2024 Month:Jul
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Upper Limit on the Chiral Magnetic Effect in Isobar Collisions at the Relativistic Heavy-Ion Collider	Physical Review Research	Volume:6 Issue No:3 Page No:L032005 Year:2024 Month:Jul
M.I. Abdulhamid, ..., A. Chatterjee, et al., (STAR Collaboration)	Imaging shapes of atomic nuclei in high-energy nuclear collisions	Nature	Volume:635 Issue No:8037 Page No:67- 72 Year:2024 Month:Nov
Arindam Dey, Ashim Pramanik, Srikanta Karmakar, Subrata Biswas, Jeyakumar Karthikeyan, Fabrizio Messina, Udit Chatterjee, Pathik Kumbhakar	Black TiO2 Nanoparticles as Plasmonically Active Scatterers for Random Lasing	ACS Applied Nano Materials	Volume:8 Issue No:7 Page No:3595-3607 Year:2025 Month:Feb
Ashok Das, Aritra Banerjee, Akhil Tayal, Mir Sahanur Ali, Rashbihari Layek, Srikanta Karmakar, Pritam Sinha, Pathik Kumbhakar, Dipankar Chattopadhyay, Sudipta Bandyopadhyay	Local Structure Distortion in Mn, Zn Doped Cu ₂ V ₂ O ₇ : Supercapacitor Performance and Emergent Spin-Phonon Coupling	Advanced Materials MARCH	Volume:37 Issue No:10 Page No:2416644 Year:2025 Month:Mar
Ashim Pramanik, Marco Reale, Laureline Roffi, Simonpietro Agnello, Marco Cannas, Partha Kumbhakar, Pathik Kumbhakar, Alice Sciortino, Fabrizio Messina	Optically coupled bilayered disordered system for spatially controllable dual band random lasing and random number generation	APL Photonics	Volume:10 Issue No:3 Page No:36121 Year:2025 Month:Mar



Author(s) Name	Paper Name	Journal Name	Others Info
Shadab Saifi, Gargi Dey, Renna Shakir, Jeyakumar	Single-Atomic Co–N ₄ Sites with CrCo Nanoparticles for Metal–Air Battery-Driven Hydrogen Evolution	Inorganic Chemistry	Volume:63 Issue No:16 Page No:7218-7232 Year:2024 Month:Apr
Arpan Tewary, Santosh Semwal, Renna Shakir, Jeyakumar, Karthikeyan, Akhoury Sudhir Kumar Sinha, Umaprasana Ojha	Hydroxylamine Promoted In Situ Growth of Fe ₂ O ₃ /Ni ₃ N Nanospikes on a Ni Surface for an Effective Hydrogen Evolution Reaction	ACS Applied Nano Materials	Volume:7 Issue No:14 Page No:15923-15931 Year:2024 Month:Jul
Dolan Acharya, Soumyadeep Bhattacharyya, Renna Shakir, J Karthikeyan	Engineering electronic structures of Nb 6 I x superatomic clusters by metal atom incorporation: a first-principles study	Physical Chemistry Chemical Physics	Volume:27 Issue No:20 Page No:10688-10697 Year:2025 Month:Jan
Arindam Dey, Ashim Pramanik, Srikanta Karmakar, Subrata Biswas, Jeyakumar Karthikeyan, Fabrizio Messina, Udit Chatterjee, Pathik Kumbhakar	Black TiO ₂ Nanoparticles as Plasmonically Active Scatterers for Random Lasing	ACS Applied Nano Materials	Volume:8 Issue No:7 Page No:3595-3607 Year:2025 Month:Feb
Sampath Gayathri, Paulraj Arunkumar, Dipankar Saha, Dolan Acharya, Jeyakumar Karthikeyan, Jong Hun Han	Modulating Coordination-Driven Metal-Oxygen Interaction Triggers Oxygen Evolution in Polymorphic and High-Entropy Phosphate Electrocatalyst	Advanced Functional Materials	Volume:35 Issue No:10 Page No:2416834 Year:2025 Month:Mar
S Suba Viveka, T Logu, N Ahsan, J Karthikeyan, S Kalainathan, Y Okada, K Sethuraman	Investigation on intermediate band formation and photoresponsivity enhancement of spray deposited Sn doped CuGaS ₂ (CuGa _{1-x} Sn _x S ₂) thin films	Materials Science and Engineering: B	Volume:313 Issue No: Page No:117950 Year:2025 Month:Mar
Dolan Acharya, Renna Shakir, J Karthikeyan	Can Iron Be Embedded between Zigzag Mo Chains of the 1T'MoTe ₂ Monolayer To Induce Magnetism?: A First-Principles Study	The Journal of Physical Chemistry Letters	Volume:16 Issue No:11 Page No:2927-2933 Year:2025 Month:Mar
S. Saha, R. Sinha, R. Hatada, W. Ensinger, S. Flege, K. Baba and A.K. Meikap	Effect of doping and preparation parameter on AC conductivity and dielectric modulus formalism of Al doped DLC thin films	Diamond and Related Materials	Volume:146 Issue No:https://doi.org/10.1016/j.diamond.2024.111193 Page No:111193 Year:2024 Month:Jun
B. Das, R. Paul, R. Karmakar, A. K. Meikap, A. Kumar, S. Krishnamurthy and R. Ghosh	A Triboelectric Nanogenerator Based on Waste Plastic and Layered Materials via Modulation of Electrical	ACS Applied Energy Materials	Volume:7 Issue No:16 Page No:7025-7036 Year:2024 Month:Aug

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Author(s) Name	Paper Name	Journal Name	Others Info
	and Dielectric Properties		
Rajeev Gupta, Ajay Kumar, Manoj Kumar, Rajesh Singh, Anita Gehlot, Purnendu Shekhar Pandey, Neha Yadav, Kailash Pandey, Ashish Yadav, Neha Gupta, Ranjeet Brajpuriya, Shalendra Kumar, Ajay Singh Verma, Tanuj Kumar, Yongling Wu, Zheng Hongyu, Abhijit Biswas, Ajay Mittal,	The integration of microelectronic and photonic circuits on a single silicon chip for high-speed and lowpower optoelectronic technology	Nano Materials Science	Volume: Issue No: Page No: Year:2024 Month:
Chiranjib Ghosh, Arka Dey, Iman Biswas, Rajeev Kumar Gupta, Vikram Singh Yadav, Ashish Yadav, Neha Yadav, Hongyu Zheng, Mohamed Henini, Aniruddha Mondal	CuO–TiO ₂ based self-powered broad band photodetector	Nano Materials Science	Volume:6(3) Issue No: Page No:345-354 Year:2024 Month:
Rajib Saha, Soumya Mahapatra, Avijit Dalal, Anirudhha Mondal, Subhananda Chakrabarti	Investigation of dual-wavelength selective self-powered photo response of ZnO/Si heterojunction with insertion of thin TiO ₂ layer	Applied Physics A	Volume:131 Issue No: Page No:11 Year:2025 Month:
Ankita Choudhury, Iman Biswas, Rajeev Gupta, Arka Dey, Aniruddha Mondal	GLAD synthesized Ga ₂ O ₃ nanowire-based photodiode	Applied Physics A	Volume:130(10) Issue No: Page No:752 Year:2024 Month:
Iman Biswas, Arka Dey, Jean Michel Nunzi, Nilanjan Halder, Aniruddha Mondal	Charge transport properties and variable photo-switching of threeterminal Cs ₂ AgBiBr ₆ device	Journal of Semiconductors	Volume:45(11) Issue No: Page No:112801 Year:2024 Month:
Abhijit Das, Avijit Dalal, Aniruddha Mondal, Laishram Robindro Singh, Mitra Barun Sarkar	Effect of Ag nanoparticle texturing on Al ₂ O ₃ nanowires for improved photodetection	IEEE Electron Device Letters	Volume:45 Issue No: Page No:2435-2438 Year:2024 Month:
Susanta Mandal, Abir Bhattacharya, Sayantari Ghosh	Computational bioisosteric investigation of sulindac derivatives for targeted inhibition in Alzheimer's disease: DFT, molecular docking, and ADME/T profiling	The European Physical Journal Plus	Volume:139 Issue No:11 Page No: Year:2024 Month:



Author(s) Name	Paper Name	Journal Name	Others Info
Umisha Singh, Mitali Patra, Amit K. Chakraborty, Shobha Shukla, Sumit Saxena	α -Fe ₂ O ₃ Nanocubes as High-Performance Anode for Supercapacitor	Advanced Sustainable Systems	Volume:9 Issue No:2 Page No:2400704 Year:2025 Month:Feb
Umisha Singh, Venkatasailanathan Ramadesigan, Amit K. Chakraborty, Shobha Shukla, Sumit Saxena	High-performance α -Fe ₂ O ₃ nano cubes as anode for supercapacitors Author links open overlay panel	Journal of Energy Storage	Volume:102 Issue No:B Page No:114124 Year:2024 Month:Nov
Monalisa Char, Amit Kumar Chakraborty, Kushal Bhattacharyya, Arnab Bhattacharyya, Abhijit Kar	Tin Multilayer-Aided SAC305-Based Lead-Free Solder Joint Interface with Cu: An Investigation of the Stress Distribution by Finite Element Analysis and Nanoindentation Studies	Advanced Engineering Materials	Volume:26 Issue No:22 Page No:2401703 Year:2024 Month:Nov
Dhousendra Mandal, Manas Kumar Garai, Mrinal Kanti Mandal, Sisir Kumar Garai	An alternative approach to design a frequency encoded 3-bit synchronous counter using semiconductor optical amplifier-based polarization switch	Journal of Optics	Volume:53 Issue No:3 Page No:2504-2517 Year:2024 Month:Jul
Maitri Nandasana, Tanawat Imboon, Rashbihari Layek,	Green synthesis of silver and copper-doped zinc oxide nanoflowers using Leucophyllum	Environmental Science: Advances	Volume:4 Issue No:1 Page No:97-114 Year:2024 Month:Oct
Robert A Gatenby, Jill Gallaher, Hemachander Subramanian, Emma U Hammarlund, Christopher J Whelan	On the Origin of Information Dynamics in Early Life	Life	Volume:15 Issue No:2 Page No:234 Year:2025 Month:Jan
Parthasarathi Sahu, Sashikanta Barik, Koushik Ghosh & Hemachander Subramanian	High Nucleotide Skew Palindromic DNA Sequences Function as Potential Replication Origins due to their Unzipping Propensity	Journal of Molecular Evolution	Volume:92 Issue No: Page No:761 Year:2024 Month:Sep
Mobarok Hossain, Bettina Wiegand, Arif Reza, Hirok Chaudhuri, Aniruddha Mukhopadhyay, Ankit Yadav, Pulak Kumar Patra	A machine learning approach to investigate the impact of land use land cover (LULC) changes on groundwater quality, health risks and ecological risks through GIS and response surface methodology (RSM)	Journal of Environmental Management Publisher - Academic Press	Volume:366 Issue No: Page No:121911 Year:2024 Month:
Trina Dutta · Hirok Chaudhuri	Impact of industrial hotspots on Tamla nala and Nunia nala confluence – a tributary of the Damodar river	Journal Environmental Monitoring and Assessment Publisher Springer International Publishing	Volume:196:488 Issue No: Page No:1-16 Year:2024 Month:

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4.14.14 Journal: Accepted for Publication in 2024-2025 SCI/SCOPUS/Web of Science

Author(s) Name	Paper Name	Journal Name	Others Info
B. Dutta, R. Karmakar, C. K. Raul, S. Sinha and A. K. Meikap	Electrical study of PVDF-GO nanocomposite film for fractional order capacitor application	Adv. Nat. Sci.: Nanosci. Nanotechnol	Volume: Issue No: https://doi.org/10.1088/20436262/adc4c5 Page No: Year:2025 Month:Jan

4.14.15 Conference: Published in 2024-2025 DOI/ISBN

Author(s) Name	Paper Name	Conference Name	Others Info
Arghya Pathak, Subhadip Rana, Mrinal Kanti Mandal	Discrete Components-based Electronic Circuit for Multi-Scroll Chaos	COMSYS-2024	DOI/ISBN: --- Volume: Issue No: Page No:--- Year:2024 Month:Dec Presenter:SELF
Subhadip Rana, Arghya Pathak, Mrinal Kanti Mandal	Chaos-Based Image Compression and Encryption using chaotic image for Secure Data Transmission.	COMSYS-2024	DOI/ISBN: --- Volume: Issue No: Page No:--- Year:2024 Month:Dec Presenter:CO-AUTHOR
Subhadip Rana, Hrishikesh Mondal, Arghya Pathak, Mrinal Kanti Mandal	Secure Healthcare Data Management with Lossless Compression and Hyperchaos Encryption	IEEE calcon 2024	DOI/ISBN: --- Volume: Issue No: Page No:-- Year:2024 Month:Dec Presenter:CO-AUTHOR
Nandita Padhan, Ashutosh Dwibedi, Arghya Chatterjee, Sabyasachi Ghosh	Influence of Coriolis Force on the Electrical Conductivity of a Hadron Gas System in Heavy Ion Collisions	DAE Symp. on Nucl. Phys.	DOI/ISBN: ISBN 978-81967453-5-6 Volume: Issue No: Page No:829 Year:2024 Month:Dec Presenter:CO-AUTHOR

4.14.16 Conference: Published in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info
S. Sahoo	Recent Advances in High Energy Physics and Cosmology (Invited Talk)	National Conference on Contemporary Research & New Advances in Frontier Physics (CRNAFP-2025), 21–22 March2025, Department of Physics, Fakir Mohan University, Vyasa Vihar, Balasore – 756089, Odisha	DOI/ISBN: NIL Volume: Issue No: Page No:4 Year:2025 Month:Mar Presenter:SELF
Hrushikesh Mahapatra and Sukadev Sahoo	Probing new physics effects of Z' boson on rare charm baryon Λ_c decay	XXVI DAE-BRNS High Energy Physics Symposium 2024, 19–23 December 2024, Banaras Hindu University, Varanasi, India,	DOI/ISBN: NIL Volume: Issue No: Page No:143–144 Year:2024 Month:Dec Presenter:CO-AUTHOR
Raja Ray and Sukadev Sahoo	Study of transverse polarization asymmetry $\Lambda_b \rightarrow n l^+ l^-$ with nonuniversal Z' model	XXVI DAE-BRNS High Energy Physics Symposium 2024, Banaras Hindu University, Varanasi, India	DOI/ISBN: NIL Volume: Issue No: Page No:137 Year:2024 Month:Dec Presenter:CO-AUTHOR



Author(s) Name	Paper Name	Conference Name	Others Info
Mansi Mandal and Sukadev Sahoo	New physics effects of Z' boson on $D \rightarrow \rho e^+ e^-$ decays	XXVI DAE-BRNS High Energy Physics Symposium 2024, Banaras Hindu University, Varanasi, India	DOI/ISBN: NIL Volume: Issue No: Page No:139 Year:2024 Month:Dec Presenter:CO-AUTHOR
Supravat Mahata and Sukadev Sahoo	Implication of lepton flavour universal and non-universal new physics couplings on $B_s \rightarrow (\eta, \eta') \mu^+ \mu^-$ decay	XXVI DAE-BRNS High Energy Physics Symposium 2024, Banaras Hindu University, Varanasi, India	DOI/ISBN: NIL Volume: Issue No: Page No:140 Year:2024 Month:Dec Presenter:CO-AUTHOR
Rajesh Chakrabarty and Sukadev Sahoo	Longitudinal polarization asymmetry of Ξ_b decays with the effect of non-universal Z' boson,	XXVI DAE-BRNS High Energy Physics Symposium 2024, 19–23 December 2024, Banaras Hindu University, Varanasi, India	DOI/ISBN: NIL Volume: Issue No: Page No:250 Year:2024 Month:Dec Presenter:CO-AUTHOR
Swagata Biswas and Sukadev Sahoo	Lepton flavour violating $\Sigma_b \rightarrow \Sigma_l 1_{l(2)}$ decays in Z' model	22nd Conference on Flavor Physics and CP violation (FPCP 2024) held at Chulalongkorn University, Bangkok, Thailand during 27–31 May 2024	DOI/ISBN: NIL Volume: Issue No: Page No:28 Year:2024 Month:May Presenter:CO-AUTHOR
Mansi Mandal and Sukadev Sahoo	Searching new physics in $c \rightarrow u l^+ l^-$ decays with non-universal Z' model	22nd Conference on Flavor Physics and CP violation (FPCP 2024) held at Chulalongkorn University, Bangkok, Thailand	DOI/ISBN: NIL Volume: Issue No: Page No:19 Year:2024 Month:May Presenter:CO-AUTHOR
Supravat Mahata and Sukadev Sahoo	Possible new physics on $D_{(s)}^+ \rightarrow \eta^{(*)} \bar{l} \nu_l$ decays in scalar leptoquark model	22nd Conference on Flavor Physics and CP violation (FPCP 2024) held at Chulalongkorn University, Bangkok, Thailand during 27–31 May 2024	DOI/ISBN: NIL Volume: Issue No: Page No:16-17 Year:2024 Month:May Presenter:CO-AUTHOR
Rashbihari Layek, Pathik Kumbhakar	Evaluation of Catalytic and Electrocatalytic Activity in Hydrothermally Prepared 2D MoSe ₂ Nanosheets	First International Conference on Sustainable Technologies (ICST-2024)	DOI/ISBN: Nil Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:CO-AUTHOR
P. Kumbhakar	Multifaceted Applications of 2D Materials in Nonlinear Optical Devices and Renewable Energy Production	First International Conference on Sustainable Technologies (ICST-2024)	DOI/ISBN: nil Volume: Issue No: Page No: Year:2024 Month:Dec Presenter:SELF
Soumik Das, Sayan Roy	Simulation studies of tissue equivalent 3-D polymer gel dosimeter	ESMOC2024	DOI/ISBN: NIL Volume: Issue No: Page No:11 Year:2024 Month:Dec Presenter:SELF

4.14.17 Conference: Accepted in Others in 2024-2025

Author(s) Name	Paper Name	Conference Name	Others Info

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Author(s) Name	Paper Name	Conference Name	Others Info
Rashbihari Layek, Pathik Kumbhakar	Chemical synthesis of 2D MoSe ₂ @Au composite for development symmetric supercapacitor	2nd National Conference on Frontiers of Material Science and Photonics: Issues and Developments (NCFMSP-2024)	DOI/ISBN: Nil Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:CO-AUTHOR
P. Kumbhakar, R. Layek	Enhanced Nonlinear Optical Effects and Energy Harvesting in Multifunctional 2D MoSe ₂ and Nanocomposites	3rd International Conference on Energy, Functional Materials/Molecules and Nanotechnology & National Workshop on Solid Waste Management March 20-22, 2025	DOI/ISBN: Nil Volume: Issue No: Page No: Year:2025 Month:Mar Presenter:SELF
P. Kumbhakar	Syntheses of Metal Nanoparticles and 2D MoSe ₂ and their Nanocomposite Materials for Demonstrations of Plasmonic Random Laser, Enhanced Nonlinear Optical Effects and Energy Harvesting	2nd National Conference on Frontiers of Material Science and Photonics: Issues and Developments (NCFMSP-2024)	DOI/ISBN: Nil Volume: Issue No: Page No: Year:2024 Month:Nov Presenter:SELF
Abhijit Ghosh	Analysis of Double Aperture Speckle Interferometer Consisting of Hololens Imaging Configuration	1st International conference on Emerging Trends in Optical Technologies (ETOT-I), at SRM University-AP, India	DOI/ISBN: - Volume: Issue No: Page No: Year:2025 Month:Jan Presenter:SELF
Rahul Mandal, Yashwinder and Abhijit Ghosh	Holographic concentrator designing using multiplexed recording method for tracking wide angular range of illumination	1st International conference on Emerging Trends in Optical Technologies (ETOT-I), at SRM University-AP, India	DOI/ISBN: - Volume: Issue No: Page No: Year:2025 Month:Jan Presenter:CO-AUTHOR

4.14.18 Books Authored

Author Name	Co-Author	Title of the Book	Title of the Chapter	Publication Details
A K Meikap	K. Gupta, P. C. Jana	Next Generation Wireless Communication, Part III	Advances in Materials for Optical Spectrum Applications	Publisher: Springer Nature, Switzerland Publication Date: 2024-07-01
Aniruddha Mondal	Paulsamy Chinnamuthu, Iman Biswas,	Hybrid Nanostructures as Solid-State Sensors for IoT	Preparation of Metal Oxide Semiconductor Nanostructure and Their Structural Properties	Publisher: Taylor and Francis Publication Date: 2024-12-27

4.14.19 Seminars, Summer/Winter Schools, Short Term Courses Attended

Name of the Programme	Organized By	From Date	To Date	Organizing Country
COMSYS-2024	BITS Pilani	2024-12-13	2024-12-15	India
10th Asian Triangle Heavy-Ion Conference	IISER Berhampur	2025-01-13	2025-01-16	India
ESMOC 2024	NIT Durgapur	2024-12-11	2025-09-14	India
1st International conference on Emerging Trends in Optical Technologies (ETOT-I)	SRM University-AP, India	2025-01-02	2025-01-04	India



Name of the Programme	Organized By	From Date	To Date	Organizing Country
International Seminar on "Recent Advancements in Materials Science and Engineering"	Vivekananda Mahavidyalaya, Burdwan	2025-01-30	2025-01-30	India
2nd National Conference on Frontiers of Material Science and Photonics: Issues and Developments (NCFMSP-2024)	Department of Physics, Sidho-Kanho-Birsha University, Purulia, West Bengal - 723104	2024-11-13	2024-11-13	India
3rd International Conference on Energy, Functional Materials/Molecules and Nanotechnology (ICEFN 2025) & National Workshop on Solid Waste Management (NWSWM)	Kumaun University, Nainital	2025-03-20	2025-03-22	India
Advancements in Semiconductor Materials and Devices	National Institute of Technology Durgapur	2024-12-09	2024-12-10	India
First International Conference on Sustainable Technologies (ICST 2024)	National Institute of Technology Durgapur	2024-12-12	2024-12-15	India
Gene Regulation to Clean Energy	Odisha University of Agriculture and Technology, Bhubaneswar	2025-03-19	2025-03-20	India
8th International Conference ICONN-2025	SRM Institute of Science and Technology, Chennai	2025-03-24	2025-03-26	India
ICTS school Decision games evolution	ICTS	2025-03-10	2025-09-21	India

4.14.20 Ph.D. Supervisor

Topic Name	Scholar	Supervisor	Status	Status Date
Investigation of Electrocatalytic Performance of Bimetallic Nanocatalysts for Borohydride and Glucose Fuel Cell Application	Manas Kumar Mandal	Dr Soumen Basu	SUBMITTED	2024-12-08
Ferrite material based VOC gas sensor	Mita Karmakar	Dr. soumen Basu	ONGOING	null
Studies on some all optical logic processors effective for WDM-based data communication system	Manas Kumar Garai	Dr. M. K. Mandal & Dr. S. K. Garai	DEGREE AWARDED	2024-08-26
Studies on Sparse Representation for Data Processing and Applications	Arghya Pathak	Dr. M. K. Mandal	DEGREE AWARDED	2024-08-27
Studies on Data Encryption Algorithm based on Hyperchaotic System.	Subhashish Pal	Dr. M. K. Mandal	DEGREE AWARDED	2024-08-27
Studies on Design and Analysis of All Optical Logic Gates and Processors Utilizing Nonlinear Properties of Semiconductor Optical Amplifiers.	Kajal Maji	Dr. M. K. Mandal & Dr. K. Mukherjee	DEGREE AWARDED	2025-02-06
Studies on AI-based Image Cryptosystems	Subhadip Rana	Dr. M. K. Mandal	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Studies on Development of Visible Random Lasers by Employment of Different Nanostructured Scatterer Materials	Arindam Dey	Prof. P. Kumbhakar	SUBMITTED	2025-02-14
Investigations on Syntheses, Optical, Catalytic Properties of Some Nanocomposite Materials of MoSe ₂ and Energy Harvesting Applications	Rashbihari Layek	Prof. P. Kumbhakar	ONGOING	null
Study of B meson decays in Beyond Standard Model	Supravat Mahata	Dr. S. Sahoo	SUBMITTED	2024-11-22
Theoretical investigation of possible new physics with B and D meson decays in non-universal Z' model	Mansi Mandal	Dr. S. Sahoo	ONGOING	null
Theoretical investigation for new physics with B and K meson decays	Raja Ray	Dr. S. Sahoo	ONGOING	null
Phenomenological study of B and D meson decays	Hrushikesh Mahapatra	Dr. S. Sahoo	ONGOING	null
High Energy Nuclear Physics	Nandita Padhan	Dr. Arghya Chatterjee	ONGOING	null
Computational Design and Optimization of Single-Atom and Multi-Atom Catalysts for CO ₂ Reduction Reaction	Renna Shakir	Prof. A. S. K. Sinha Co-Supervisor: Dr. Karthikeyan Jeyakumar	DEGREE AWARDED	2025-05-26
Theoretical Design From Density Functional Theory Approach To Tailor Electronics And Magnetic Properties In Low-Dimensional Materials	Dolan Acharya	Dr. Karthikeyan Jeyakumar	ONGOING	null
Imaging and non-imaging applications of holographic optical elements	Rahul Mandal	Dr. Abhijit Ghosh	ONGOING	null
Holography in optical elements fabrication and optical information processing	Yashwinder	Dr. Abhijit Ghosh	ONGOING	null
Role of asymmetric cooperativity in DNA replication	Parthasarathi Sahu	Hemachander Subramanian	ONGOING	null
Kinetic Insights into genome editing and DNA repair	Sashikanta Barik	Hemachander Subramanian	ONGOING	null
Preserving information fidelity in DNA using asymmetric cooperativity	Koushik Ghosh	Hemachander Subramanian	ONGOING	null
Development of Multiwalled Carbon Nanotube based Nanocomposites with enhanced Dielectric and Electrocatalytic performance for energy application	Chandan Kumar Raul	Prof. A. K. Meikap	ONGOING	null
Development of ferroelectric polymer based Nanocomposites for solid state fractional order capacitors and memory device applications	Bilwadal Dutta	Prof. A. K. Meikap	ONGOING	null



Topic Name	Scholar	Supervisor	Status	Status Date
The study of electrical transport properties of nanostructured yttrium chromite composites	Kripasindhu Kumar	Prof. A. K. Meikap & Dr. R. Sinha	ONGOING	null
Tailoring of 2D dichalcogenide (MoS ₂ , WSe ₂ , CoSe ₂) embedded spinel composites for next generation high performance supercapacitor	Dibyaranjaan Nayak	Prof. A. K. Meikap	ONGOING	null
Experimental Condensed Matter Physics	Priyo Gopal Kabiraj	Prof. A. K. Meikap & Dr. K. Gupta	ONGOING	null
Characterisation and Electrochemical studies of some materials for energy application	Koushik Pakhira	Prof. A. K. Meikap	ONGOING	null
Studies on the opto-electronic properties of low dimensional GeO ₂ and Ga ₂ O ₃ materials	Ankita Chaudhuri	Dr. Aniruddha Mondal, Dr. Soumik Das	DEGREE AWARDED	2024-12-12
Studies on optoelectronic properties of leadfree halide perovskites	Iman Biswas	Dr. Aniruddha Mondal	ONGOING	null
Synthesis of phase transition metal oxide thin film and nanostructures for emittance and optical switching applications	Subrata Saha	Dr. Aniruddha Mondal, Dr. Arjun Dey	ONGOING	null
Not yet decided	Subhasish Chanda	Dr. Aniruddha Mondal	ONGOING	null
Not yet decided	Brijesh Chaudhuri	Dr. Aniruddha Mondal	ONGOING	null
Study of Social Contagions in homogeneous and heterogeneous synthetic societies	Dibyajyoti Mallick	Sayantari Ghosh	ONGOING	null
Computational drug discovery for Alzheimer's disease	Susanta Mandal	Sayantari Ghosh	ONGOING	null
Cellular motility in Cancer Metastasis	Ranu Kundu	Sayantari Ghosh	ONGOING	null
Development of highly efficient, low-cost electrodes for Sodium ion Hybrid Capacitor (SIHC)	Mitali Patra	Amit K Chakraborty	ONGOING	null
Investigation on the environmental radioactivity profile of Asansol-Durgapur industrial zone and Bakreswar hot spring by experimental techniques and statistical approaches	Mrs. Ankita Dawn	Dr. Hirok Chaudhuri	SUBMITTED	2024-11-08
Investigation on climate science data using statistical physics and nonlinear analysis	Miss Debapriya Nandi	Dr. Hirok Chaudhuri and Dr. Sayantari Ghosh	ONGOING	null
Investigation on antibiotic pollutants at the Damodar river basin and the state-of-the-art development of nanomaterials for the degradation of antibiotics	Miss Rajalaxmi Nath	Dr. Hirok Chaudhuri	ONGOING	null
Microplastic: Transport and riddance through various bioremediation processes	Miss Rupsa Biswas	Prof. Gopinath Halder and Dr. Hirok Chaudhuri	ONGOING	null

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Topic Name	Scholar	Supervisor	Status	Status Date
Investigation on Synthesis and characterization of High- Grade Geopolymer using Fly ash.	Mr. Rahul Rewani	Dr. Hirok Chaudhuri	ONGOING	null
Investigation on radon profile in the environment of the Damodar river basin	Mr. Swarupananda Paramanik	Dr. Hirok Chaudhuri and Prof. Rajnarayan Saha	ONGOING	null

4.14.21 Ongoing Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Synthesis of Semiconductor and Metal Nanostructures and the Investigation of Their Role as Active or Passive Scatterer in Random Laser Generation	Prof. P. Kumbhakar	DST West Bengal	1478800.0	2019
Development of Some 2D Transition Metal Dichalcogenide Semiconductor Nanostructures and Nanocomposites For Photocatalytic Dye Degradation, Light Energy Harvesting and Hydrogen Production	Prof. P. Kumbhakar	CSIR, GOI	2261874.0	2020
High Throughput Density Functional Calculations to Develop Electrochemically Active Cluster Compounds for Multifarious Applications.	Karthikeyan Jeyakumar	Department of Science and Technology	3500000.0	2020
A model for determination of DNA sequence from experimental data of DNA double-strand unzipping kinetics	Hemachander Subramanian	SERB - MATRICS	660000.0	2022
FIST Physical Sciences – Project	Dr. Mrinal Kanti Mandal (HOD), Dr. Aniruddha Mondal, Dr. Soumen Basu, Dr. Pathik Kumbhakar, Dr. Karthikeyan Jeyakumar, Dr. Sukadev Sahoo	DST, Govt. of India	17800000	2024
Thermo-Chromic Variable Emittance Coating	Dr. Aniruddha Mondal	ISRO	2178000.0	2022
Sustainable Technology for Smart Off-Grid Renewable Energy Transformation and Electrochemical Storage Management	Amit K Chakraborty, Sagar Mitra (IITB) and Pradyumn Chaturvedi (VNIT Nagpur)	ANRF	50000000	2022
An interdisciplinary approach for assessment of the impacts of climate change on socio-ecological systems of some selected regions of BRICS countries	Hirok Chaudhuri, Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Rajnarayan Saha	BRICS STI (DST)	1.0	2024



Title of the Project	Investigator	Sponsor Authority	Amount(in Rs.)	Starting Year
Investigation on helium extraction at Bakreswar hot spring, West Bengal	Hirok Chaudhuri	Mangalswastik Imperial SSR Construction & Development Private Limited	765000.0	2024
Investigation on bulk utilization of fly ash (from energy enterprises and steel industries of the Damodar river basin) for sustainable product development	Hirok Chaudhuri and Kankana Seal	Mangalswastik Imperial SSR Construction & Development Private Limited	100000.0	2024
Study on bulk utilization of fly ash deposition (from energy enterprises and steel industries) and cold dust (from coal mines) of Jharkhand state for sustainable product development	Hirok Chaudhuri and Kankana Seal	MS Traders	50000.0	2024
Development of an IoT Based Organic/Inorganic Contaminants Removal System (CRS) for Purifying Domestic Wastewater through Constructed Wetland using Durable, Nano-Composite Jute-Geotextile Sandwiched LECA Cartridges.	PI: Dr. M. K. Mandal Co PI:, Dr. Supriya Pal,, Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri, Dr. T. K. Bera	Mission Steering Group (MSG)- National Technical Textile Mission (NTTM)Ministry of Textiles, Govt. of India	9996000.0	2023
Education Application under NTTM	PI: Dr. Supriya Pal, Co-PI: Dr. M. K. Mandal, Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri, Dr. T. K. Bera	National Technical Textile Mission (NTTM)-Ministry of Textiles, Govt. of India	84720000	2024
Development of nano-composite jutegeotextile for high-speed railway embankment system to enhance the durability and its remotely health monitoring using Internet of Things (IoT.)	PI: Dr. Supriya Pal, Co-PI: Dr. M. K. Mandal, Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri	Mission Steering Group (MSG)- National Technical Textile Mission (NTTM)Ministry of Textiles, Govt. of India	9970000.0	2023
Performance Evaluation of Fly Ash–Cement Stabilized Coal Mine Overburden as a Potential Sub-base and Base Course Material in Flexible Pavement Systems (p380-395/C)	Hirok Chaudhuri, Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Rajnarayan Saha	National Rural Infrastructure Development Agency (NRIDA), Govt. of India	1892000.0	2023
Nano technological Intervention on jutegeotextile to adapt long term sustainability and enhanced durability for its cost effective and wide application in flexible pavement systems	PI: Dr. Supriya Pal, Co-PI: Dr. M. K. Mandal, Dr. Hirok Chaudhuri, Dr. Rajib Ghosh haudhuri, Dr. T. K. Bera	National Jute Board (NJB), A Statutory Body, Ministry of Textiles, Govt. of India	6952000.0	2021
Development of guidelines to adopt the process of height increment of overburden dumps at open cast coal mines in India using jute-geotextile as reinforcing material	PI: Dr. Supriya Pal, Co-PI: Dr. M. K. Mandal, Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri	National Jute Board (NJB), A Statutory Body, Ministry of Textiles, Govt. of India	7172000.0	2021

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4.14.22 Completed Sponsored Projects Details

Title of the Project	Investigator	Sponsor Authority	Complete Year
Some novel phenomenologies of Multi Higgs Doublet Models and higher dimensional operators in the light of Naturalness	(i) Dr. Ambalika Biswas, B. B. College, Asansol (ii) Dr. Sukadev Sahoo , NIT Durgapur	SERB, DST, Govt. of India	2025
Computational quantification of mutagenic potential of palindromic sequences in prokaryotic and eukaryotic genomes	Hemachander Subramanian	SERB - CRG	2025
Development and Characterization of Functionalized	Prof. A. K. Meikap	WB-DST & BT	2025
Titanium dioxide (TiO ₂)/Vanadium oxide (VO ₂) NWs heterostructure as a stable optical switch	Dr. Aniruddha Mondal	DST (SERB)	2025
Nonlinear dynamics (NLD) of long range anticorrelated chaotic oscillation in plasmas and application of nonlinear dynamics to condensed matter and dark matter research, geo-chemical oscillations from hot springs and chaos control”	Co-PI: Dr. Hirok Chaudhuri Implementing Institution: Prof. Sekar Iyengar SINP, Kolkata and NIT Durgapur	ANRF (formerly SERB)	2024

4.14.23 Reviews of Manuscripts for Publication in Journal

Reviewer	Name of the Journal	Publisher	Date of Final Review
Sukadev Sahoo	Indian Journal of Physics	Springer	2024-06-26
Sukadev Sahoo	International Journal of Modern Physics A	World Scientific	2024-05-08
Arghya Chatterjee	International Journal of Modern Physics A	World Scientific	2024-04-19
Pathik Kumbhakar	The Journal of Physical Chemistry	RSC	2024-10-01
Pathik Kumbhakar	Photonics Research	OPTICA	2024-12-02
Pathik Kumbhakar	Optics Letter	OPTICA	2024-12-02
Pathik Kumbhakar	Optics Express	OPTICA	2024-06-23
Pathik Kumbhakar	Optics Letter	OPTICA	2024-06-06
Pathik Kumbhakar	Nanotechnology	IOP	2024-05-30
Pathik Kumbhakar	ACS Omega	ACS	2024-12-30
Pathik Kumbhakar	Optical Materials	Elsevier	2024-06-26
Pathik Kumbhakar	Advanced Optical Materials	Wiley	2024-06-22
Ajit Kumar Meikap	Ceramics International	Elsevier	2024-12-14
Ajit Kumar Meikap	Journal of Alloys and Compounds	Elsevier	2024-09-25
Ajit Kumar Meikap	Physica B	Elsevier	2024-11-04
Ajit Kumar Meikap	Polymer Bulletin	Springer	2024-11-04
Ajit Kumar Meikap	Journal of Alloys and Compounds	Elsevier	2024-11-26



Reviewer	Name of the Journal	Publisher	Date of Final Review
Ajit Kumar Meikap	Ionics	Springer	2024-04-28
Ajit Kumar Meikap	Materials Research Bulletin	Elsevier	2024-11-04
Ajit Kumar Meikap	Journal of Physics Chemistry of Solids	Elsevier	2024-07-06
Ajit Kumar Meikap	Physica B	Elsevier	2024-12-01
Ajit Kumar Meikap	Materials Letters	Elsevier	2024-12-14

4.14.24 Invited Examiners/Paper-Setters/Board of Studies

Name of the Faculty	Name of the Examination	University/Institute	From Date	To Date
Sukadev Sahoo	JEE MAIN 2025	NTA Office, New Delhi	2024-10-14	2024-10-19
Sukadev Sahoo	Post Graduate Teachers (PGT)- 2023-24, Examination	Odisha Public Service Commission, Cuttack, Odisha	2024-10-20	2024-11-10
Arghya Chatterjee	PG, UG Physics	Kazi Nazrul University	2023-01-30	2025-02-07
Karthikeyan J	Doctoral Committee Meeting	Vellore Institute of Technology	2024-01-19	2024-01-19
Pathik Kumbhakar	PhD Thesis Viva-Voce Examination of Mr Ashish K Paul	IIT Kharagpur	2024-11-18	2024-11-18
Pathik Kumbhakar	Examiner for the PhD Defence of Mr Pankaj Sarkar, Dept of Physics	SKBU, Purulia	2024-11-29	2024-11-29
Ajit Kumar Meikap	Ph.D. Committee meeting	Vidyasagar University, Midnapur	2024-07-03	2024-07-03
Ajit Kumar Meikap	External Expert for 4th sem PG project examination	Kazi Nazrul University, Asansol	2024-09-10	2024-09-09
Ajit Kumar Meikap	External Expert for Ph.D. Viva- voc examination	IACS Kolkata	2024-11-24	2024-11-24
Ajit Kumar Meikap	Question Moderator	Kazi Nazrul University, Asansol	2025-02-24	2025-02-24
Ajit Kumar Meikap	Ph.D. Thesis Examiner	Biju Patnaik University and Technology, Odisha	2024-10-14	2024-10-14
Ajit Kumar Meikap	Ph.D. Thesis Examiner	NIT Andhra Pradesh	2024-10-25	2024-10-25
Ajit Kumar Meikap	Ph.D. Thesis Examiner	IACA Kolkata	2024-10-08	2024-10-08
Ajit Kumar Meikap	Ph.D. Thesis Examiner	University of Calcutta	2024-12-12	2024-12-12
Ajit Kumar Meikap	Ph.D. Thesis Examiner	Jadavpur University	2024-04-15	2024-04-15
Amit Kumar Chakraborty	BOS member, UG, PG and research in Physics	Kazi Nazrul University	2024-01-01	2025-11-04
Amit Kumar Chakraborty	UG & PG studies in Physics	Netaji Subhash Open University	2019-01-01	2025-11-04

4.14.25 Invited Expert in Selection Committees

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Name of the Faculty	Discipline	University/Institute	From Date	To Date
Sukadev Sahoo	Expert in the interview for selection of Assistant Professor in Physics department	Bengal College of Engineering and Technology (BCET) Durgapur	2024-09-28	2024-09-28
Pathik Kumbhakar	Physics	DAV Model School	2025-03-02	2025-03-02
Ajit Kumar Meikap	Physics	NIT Raipur	2024-09-17	2024-09-17
Amit Kumar Chakraborty	Physics	Jagadish Bose National Science talent Search	2024-04-01	2025-03-31

4.14.26 Invited Lectures

Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Karthikeyan J	Research Methodology: The Art of Scientific Writing	Guest Lecture	Madurai (Online)	2025-02-12	2025-02-12
Pathik Kumbhakar	Syntheses of Metal Nanoparticles and 2D MoSe ₂ and their Nanocomposite Materials for Demonstrations of Plasmonic Random Laser, Enhanced Nonlinear Optical Effects and Energy Harvesting	2nd National Conference on Frontiers of Material Science and Photonics: Issues and Developments (NCFMSP-2024)	Department of Physics, Sidho-Kanho-Birsha University, Purulia, West Bengal - 723104	2024-11-13	2024-11-14
Pathik Kumbhakar	Introduction to 0D-2D Nanomaterials and Their Applications in Photonics and Degradation of Dyes from Water	Refresher Course in Environmental Studies and Sustainability 2024- 2025 conducted by the MMTTC, BU (erstwhile UGC-HRDC) from 25.07.2024 to 07.08.2024	The University of Burdwan	2024-07-27	2024-07-27
Pathik Kumbhakar	Techniques of Syntheses and Fascinating Linear and Nonlinear Optical Properties of Some 2D Nanostructured Materials	International Seminar on Recent Advancement in Materials Science and Engineering	Vivekananda Mahavidyalaya, Burdwan	2025-01-30	2025-01-30
Pathik Kumbhakar	Enhanced Nonlinear Optical Effects and Energy Harvesting in Multifunctional 2D MoSe ₂ and Nanocomposites	3rd International Conference on Energy, Functional Materials/Molecules and Nanotechnology (ICEFN 2025) & National Workshop on Solid Waste Management (NWSWM)	Kumaun University Sleepy Hollow, Nainital-263001 Uttarakhand, India.	2025-03-20	2025-03-22
Pathik Kumbhakar	Synthesis of some nanostructured materials for development of random lasers	ESMOC 2024 4 th Energy System Modeling and Optimization Conference, Dec. 9-11, 2024	NIT Durgapur, India	2025-12-09	2025-12-09
Abhijit Ghosh	Analysis of Double Aperture Speckle Interferometer Consisting of Hololens Imaging Configuration	1st International conference on Emerging Trends in Optical Technologies (ETOT-I)	SRM University-AP, India	2025-01-02	2025-01-04



Name of the Faculty	Title of the Lecture	Programme	Place	From Date	To Date
Hemachander Subramanian	Asymmetric Cooperativity in DNA	Annual Meeting of the Indian Society of Human Genetics and International Conclave on Neurogenetics	Bengaluru	2025-01-20	2025-01-22
Ajit Kumar Meikap	Electrical Transport Properties of Soft Semiconducting Nanocomposites	ATAL Faculty Developed Programme	Abacus Institute of Engineering and Management	2025-01-27	2025-03-01
Ajit Kumar Meikap	Low temperature anomalous electrical transport behaviour in 2D and 3D materials	Advancements in Semiconductor Materials and Devices	National Institute of Technology Durgapur	2024-12-09	2024-12-10
Ajit Kumar Meikap	Anomalous dephasing rates in disordered and lower dimensional materials at low temperature	8th International Conference ICONN-2025	SRM Institute of Science and Technology, Chennai	2025-03-24	2025-03-26
Ajit Kumar Meikap	MWCNT-Based Bimetallic Electrocatalysts and Nanocomposite Films: A Dual Approach for Clean Energy Conversion and Storage	Gene Regulation to Clean Energy	Odisha University of Agriculture and Technology, Bhubaneswar	2025-03-19	2025-03-20
Aniruddha Mondal	Thermochromic Materials and Devices	PG	Department of Physics, Manipal University Jaipur	2024-12-19	2024-12-19
Amit Kumar Chakraborty	Dopant induced nanoscale engineering of transition metal hydroxides/oxides for high-performance electrochemical energy storage	8 th International Conference on Nanoscience and Nanotechnology - ICONN 2025	SRM University Chennai	2025-03-24	2025-03-26

4.14.27 Session Chair/Convenor

Name of the Faculty	Programme	Place	Session	From Date	To Date
Sukadev Sahoo	National Conference on Contemporary Research & New Advances in Frontier Physics (CRNAFP–2025)	Department of Physics, Fakir Mohan University, Vyasa Vihar, Balasore – 756089, Odisha	Chaired a session in the conference	2025-03-22	2025-03-22
Pathik Kumbhakar	One day seminar on "Integrating Chemical Engineering and Material Science: Recent Breakthroughs for Sustainable Technology"	The Institution of Engineers (India) Durgapur Local Centre, Durgapur	Chief Guest Inaugural Session	2024-12-07	2024-12-07

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Name of the Faculty	Programme	Place	Session	From Date	To Date
Ajit Kumar Meikap	First International Conference on Sustainable Technologies (ICST 2024)	National Institute of Technology Durgapur, Room No. 206	5B	2024-12-12	2024-12-15
Ajit Kumar Meikap	8th International Conference ICONN-2025	SRM Institute of Science and Technology, Chennai	8A	2024-12-24	2024-12-26
Sayantari Ghosh	Comsys 2024	BITs Pilani	Computational biology	2024-12-13	2024-12-15
Amit Kumar Chakraborty	International Conference on Sustainable Technologies (ICST 2024)	NIT Durgapur	Organising Chairman of the conference	2024-12-12	2024-12-14

5. Centers

5.1 Center for Advanced Research on Energy (CARE)

5.1.1 Information regarding Center:

In the wake of environmental concerns and the global uproar about rapidly-declining reserves of fossil fuels the development of alternative fuels is crucial for the sustenance and development of human civilization. Climate change, pollution, and energy insecurity are significant problems, and addressing them requires major changes to energy infrastructures. Renewable energy technologies are essential contributors to the energy supply portfolio, as they contribute to world energy security, reduce dependency on fossil fuels, and provide opportunities for mitigating greenhouse gases. Climate-disrupting fossil fuels are being replaced by clean, climate-stabilizing, non-depletable sources of energy. Today, renewables are seen not only as sources of energy, but also as tools to address many other pressing needs, including: improving energy security; reducing the health and environmental impacts associated with fossil and nuclear energy; mitigating greenhouse gas emissions; improving educational opportunities; creating jobs; reducing poverty; and increasing gender equality. Renewables have entered the mainstream.

Due to the growing environmental concerns and depleting reserves of fossil fuels along with their expensive extraction and processing, more emphasis is being laid on finding alternative fuels which are non-polluting and renewable/abundant. Solar energy, being the most abundant of the renewable energy sources, is being sought after to cater to the increasing global power demand in order to minimise environmental damage. The average solar power received by the earth's surface stands at 173000 terawatts. This enormous amount of energy can act as source of energy if we can successfully convert and store it as electrical energy as per our requirement. One can achieve this by photovoltaic devices which can convert the solar photons into electrons to create a current or can hydrolyse water (another abundant resource) by the means of a photo-catalyst through photo-electro-chemical water splitting. Both these approaches have enormous potential as alternative and renewable energy technology for the future generation.

In view of the above, and due to rapid urbanisation of Indian economy, the demand for alternative energy has been ever increasing in India. Durgapur being an industrial city, and due to Govt. of India's look east policy, need for developing technologies that can provide energy in a sustainable way for long term economic growth of the eastern India, it is high time that researchers at NIT Durgapur, take proactive role in transforming this growth process within the region. It is with these objectives, that a group of researchers as underlined below from several departments of NIT Durgapur, a premier technological institute,



have come together to work jointly to develop technologies that can contribute significantly to the sustainable growth of the eastern region of India.

To establish a **Center for Advanced Research on Energy (CARE)** at NIT Durgapur is to promote multidisciplinary activities focused to various facets of energy technology and systems in the form of research, teaching and consultancy. The research activities in the centre will be in the form of research-based projects funded by various national and international funding agencies. Faculty members from various departments of the institute will be associated with the centre for the promotion of interdisciplinary research for sustainable energy. To support the research work in the projects, the centre will start academic programmes - Doctor of Philosophy (PhD) and M. Tech by Research.

5.1.2 Centre at a glance

- To carry out advanced interdisciplinary research activities in the area of energy to the needs of the society.
- To conduct training programmes in the related areas for professional skill development.
- To facilitate incubation of business ideas from students and mentor them to develop as entrepreneurs in relevant areas.
- To introduce post graduate courses in energy with certain specializations that will focus on emerging areas of energy devices Design and Development, sensors, smart materials, etc.
- To provide a platform for interaction between industry fraternity with scientists and management experts from neighbouring institutions interested to work in identified topics by organizing regular seminar series.
- To provide customized/flexible PhD Program to student(s) of any department of the institute on specific problems in energy.
- To enter into collaborative research engagements with Extra-mural funding agencies and Industrial Organizations for better understanding of issues of scientific and technological management between different stakeholders.

5.1.3 Faculty & Staff details

Name	Designation	Email id (Institute & other id)
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Dr. T. K. Bera	Assistant Professor	tusharkanti.bera@ee.nitdgp.ac.in

5.1.4 Papers/Projects/Books/Book Chapters/Patents

Journal Papers (No.)	Conference Papers (No.)	Projects (for 2024-25) (No.)		Book Chapters (No.)	Books/Edited Volume (No.)	Patents (No.)
		Ongoing	Completed			
22	28	06	03	04	02	01

5.1.5 Doctoral Programme (No. Only)

Ongoing	02
Completed	NIL

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5.1.6 Facilities available

- High speed Internet facility with Wi-Fi connectivity.
- Workshop for any fabrication, model making requirements and design software.
- Simulation software.
- Computers with necessary software
- Solar Simulator
- Water and Electricity for 24 hours
- Library – books, journals (Hardcopy), unlimited journals, conference papers download, plagiarism Checking facility.

5.1.7 Equipment

Sl. No.	Name of the equipment	Date of Purchase	Amount
1	Solar Simulator I-V System with IPCE	23-03-2022	4803387.06

5.1.8 Future Plans

Future Plans are as follows:

- ❖ Introduce post graduate courses on energy with certain specializations that will focus on emerging areas of energy devices, design and development, sensors, smart materials, etc.
- ❖ Start PhD Program to student(s) on specific problems on energy.
- ❖ Purchase Equipment which will be multi-disciplinary. Experimental set-up for PG course will be developed. Those purchased equipment will be helpful and useful for PG students, PhD scholars to perform multidisciplinary research.
- ❖ Conduct workshop, seminar, Conference and training programmes in the related areas for professional skill development.
- ❖ Collaborative research engagements with Extra-mural funding agencies and Industrial Organizations for better understanding of issues of scientific and technological management between different stakeholders.
- ❖ Promote multidisciplinary activities focused to various facets of energy technology and systems in the form of research, teaching and consultancy.

5.2 Centre of Biomedical Engineering & Assistive Technology (BEAT)

5.2.1 Centre at a glance

The Centre of Biomedical Engineering & Assistive Technology (BEAT) is focused on specific research to solve complex biomedical problems that are crucial to human welfare and society, in general. It invites /aims at multidisciplinary perspective that include engineering sciences, physical sciences mathematical, and biological sciences. This centre is determined to enhance interdisciplinary engineering education & research, training of paramedical and medical skills of personnel in the field /application. The thematic focus areas for research under the BEAT are:

- (i) Biomaterials & Biofabrication,
- (ii) Biomechanics & Biomechanical Engineering,
- (iii) Biomedical Devices, Bio-Instrumentation & Bio-sensors,
- (iv) Assistive Technology & Rehabilitation Engineering.

At present, the center is having one professional category and one full-time PhD /research scholar supported by Institute fellowship, who are working in the interdisciplinary domain under the guidance of multiple Faculty members from different academic departments.

5.2.2 Faculty & Staff details

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Monidipa Ghosh	Asso Professor	Molecular Immunology, Biosensor development, Host-pathogen interaction	monidipa.ghosh@bt.nitdgp.ac.in



National Institute of Technology Durgapur

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Supriya Bera	Asso Professor	Phase Transformation, Materials Characterization, Biomaterials,	supriya.bera@mme.nitdgp.ac.in
Manab Mallik	Asstt Professor	Structure property correlation of Biomaterials	manab.mallik@mme.nitdgp.ac.in
Madan M. Ghosh	Asso Professor	Simulation for Designing Structural Materials Nanomaterials - Nanoparticles, Nanocomposites	madanmohan.ghosh@mme.nitdgp.ac.in
Tushar K. Bera	Asstt Professor	Biomedical Instrumentation, Sensors and Actuators, Medical Electronics, EIHM	tusharkanti.bera@ee.nitdgp.ac.in
Ashis K. Dhara	Asstt Professor	Computer-aided Diagnosis System, AI & Machine Learning, Deep Learning in Med Image Analysis.	ashis.dhara@ee.nitdgp.ac.in
Suman Halder	Asstt Professor	Biomedical Instrumentation, Biomedical Modeling	suman.halder@ee.nitdgp.ac.in
Chiranjib Koley	Professor	Signal Processing, Pattern Recognition, Soft Computing, Process Control & Instrumentation	chiranjib.koley@ee.nitdgp.ac.in
NB Hui	Professor	Robotics, Soft Computing, Multi Agent Systems, Design Optimization	nirmal.hui@me.nitdgp.ac.in
K Khan	Asso Professor	Composite materials, bimodular composite, Finite element method, Functionally graded materials	kallol.khan@me.nitdgp.ac.in
SS Roy	Professor	Additive Manufacturing & 3D Printing, CAD/CAM, Robotics	shibendu.roy@me.nitdgp.ac.in
RN Barman	Asstt Professor	Computational Fluid Dynamics (CFD), Modeling and Simulation	rn.barman@me.nitdgp.ac.in
Bibhash Sen	Asso Professor	Embedded System & its application in medical science, Assistive Technology	bibhash.sen@cse.nitdgp.ac.in
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Suchismita Roy	Professor	FPGA based Embedded System design	suchismita.roy@cse.nitdgp.ac
Aniruddha Mondal	Asso Professor	Fabrication of 1d metal oxide semiconductor nanostructure, hybrid semiconductor detectors, Bio sensor	aniruddha.mondal@phy.nitdgp.ac.in
Nilanjan Chattaraj	Asstt Professor	Smart materials based devices and Structronic Systems, Electromechanical systems, Flexible-Mechatronics System Engineering	nilanjan.chattaraj@ece.nitdgp.ac.in
Diptesh Das	Asso Professor	Passive, Semi-active and Hybrid Vib Control, AI and Soft Computing Offshore Struct. Engineering	diptesh.das@ce.nitdgp.ac.in
Dakshina Ranjan Kisku	Associate Professor	Biometrics, Machine Learning, Deep Learning, Image Processing, Pattern Classification, Affective Computing	drkisku@cse.nitdgp.ac.in
Debashis Nandi	Professor	Image Processing, Medical Imaging, Communication Security, Chaos and Security, Bio-inspired Optimization, Deep Learning in Computer Vision	debashis@cse.nitdgp.ac.in
Amiya K. Samanta	Professor	Comp. & exp. Mechanics, simulation of composite structures, innovative materials.	amiyak.samanta@ce.nitdgp.ac.in

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5.2.3 R&D Activities

5.2.4 Papers/Projects/Books/Book Chapters/Patents:

Journal Papers (No.)	Conference Papers (No.)	Projects (for 2024-25) (No.)		Book Chapters (No.)	Books/Edited Volume (No.)	Patents (No.)
		Ongoing	Completed			
0	02	0	--	0	-	0

Conf. paper details:

1. P. R. Das, A. K. Samanta and T. K. Bera, "Enhancing Arrhythmia Classification with LSTM : A Deep Learning Approach for ECG Signal Analysis", Advancing Digital Innovations for Sustainability in Energy, Environment, Health, and Agriculture (ADI-SEHA 2025), 18-19 Jan, 2025.
2. A. Banerjee, A. Basu, C. Jadav, I. Dutta, S. Halder and B. Sen, "Exploring the Distinguishable Characteristics of EEG Signals of Visually impaired Persons (VIPs): Cognitive Load Perspective," *2nd International Conference on Trends in Engineering Systems and Technologies (ICTEST 2025)*, Ernakulam, India, 2025, pp. 1-6, doi: 10.1109/ICTEST64710.2025.11042339.

5.2.5 Doctoral Programme (Number Only)

Ongoing	02
Completed	NIL

5.2.6 Future Plans

Centre of Biomedical Engineering & Assistive Technology (BEAT) wishes to widen its research perspective in the thematic areas along with the following future plans

- (i) Sponsored R&D project proposal submission.
- (ii) Initiate procurement of equipment and setting up of dedicated laboratory under HEFA proposal as soon as lab area /space in Utkarsh Bhavan is received /handed over.
- (iii) Floating proposal for interdisciplinary MTech programme in BME.

5.3 Centre for Research on Environment and Water (CREW)

Ministry of Education, GoI through HEFA has approved the fund of Rs. 4 Crore to set up a Centre for Research on Environment and Water (CREW) at NIT Durgapur. This centre will be equipped with high valued analytical instruments with an aim to develop expertise to assist industries and municipal bodies in developing and implementing evaluation, remediation and management strategies for pollution related issues using sole and/or integrated treatment strategies and develop technologies to convert waste to value added products. As Durgapur is a rapidly developing city with a burgeoning population, increasing use of fossil fuels and generation of municipal wastes are associated with its development. In this localized scenario as well as in the national scenario, a state of the art centre for studies and research on such environmental issues is extremely relevant. As the Centre is interdisciplinary in nature and made by multiple departments like Earth and Environmental Studies, Physics, Chemistry, Mathematics, Chemical Engineering, Biotechnology, Civil Engineering, Mechanical Engineering, Management Studies and Computer Science and Engineering to implement for ensuring total environmental compliance by industrial houses and municipal bodies. Finally, UG, PG students and research scholar are benefitted through such advanced centre for their better understanding with their interdisciplinary curriculum.

5.3.1 Centre at a glance

A centre with a multidisciplinary approach towards advanced research on environment and water in an institute of national importance, such as National Institute of Technology Durgapur can play a very effective role in this regard. Such a centre would need precision high value analytical instruments for this activity. The centre would aim to develop the expertise to assist industry and civic administrations in developing and implementing evaluation, remediation or management strategies for contamination issues and develop technologies to convert wastes to value-added products wherever feasible. Hybrid treatment technologies encompassing chemical, biological and physico-chemical treatment schemes would be a viable and practical option to substitute inadequate conventional treatment systems. As the Centre is interdisciplinary in nature and made by multiple departments like Department of Earth and Environmental Studies, Physics, Chemistry, Mathematics, Chemical Engineering, Biotechnology, Civil Engineering, Mechanical Engineering, Management Studies and Computer Science & Engineering to implement for ensuring total environmental compliance by industrial houses and municipal bodies.



5.3.2 Faculty & Staff details

Name	Designation	Email id (Institute & other id)
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Dr. Kalyan Adhikari	Professor	kalyan.adhikari@ees.nitdgp.ac.in
Dr. Apurba Dey	Professor (HAG)	apurba.dey@bt.nitdgp.ac.in
Dr. Kaustav Aikat	Professor	kaustav.aikat@bt.nitdgp.ac.in
Dr. Dalia Dasgupta Mandal	Professor	dalia.dasgupta@bt.nitdgp.ac.in
Dr. Surabhi Chaudhuri	Professor	surabhi.chaudhuri@bt.nitdgp.ac.in
Dr. Sufia Kazy	Associate Professor	sufia.kazy@bt.nitdgp.ac.in
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5.3.3 Papers/Projects/Books/Book Chapters/Patents

Journal Papers (No.)	Conference Papers (No.)	Projects (for 2024-25) (No.)		Book Chapters (No.)	Books/Edited Volume (No.)	Patents (No.)
		Ongoing	Completed			
09	03	NIL	NIL	3	1	NIL

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5.3.4 Doctoral Programme (No. Only)

Ongoing	03
Completed	NIL

5.3.5 Facilities available

Centre procured Geotechnical Centrifuge and AlphaGuard Radon Monitor

5.3.6 Future Plans

(i) Development of low cost technological solutions of industrial effluent treatment, particulates and gaseous emission control system and solid waste management system.

(ii) Precise assessment of contamination and transport mechanism of contaminants in soil and groundwater system and development of control mechanism.

(iii) Development of low cost highly sensitive environmental monitoring equipment, particularly electronic sensors with data logger.

(iv) Development of strategies to monitor environmental radioactivity and to provide feasible solutions.

(v) Development of processes for bioremediation of wastes to convert them to harmless/less harmful forms or to yield value-added products

(vi) Direct interfacing with industries to solve their specific pollution control problemsMonitoring of water quality, water geochemistry, and antibiotics in the surface water andgroundwater of the Damodar basin

(vii) Monitoring of radioactive radon 222 in ambient air, the surface water, and thegroundwater of the Damodar basin

(viii) Synthesis of nanomaterial photocatalyst for the degradation of antibiotics fromwastewater

5.4 IoT and Intelligent Systems (IoTIS)

Centre of Excellence on IoT and Intelligent Systems (IoTIS), funded by Higher Education Financing Agency (HEFA), MoE, Govt. of India.

5.4.1 Centre at a Glance

The proposed Centre of Excellence for Advanced Research on IoT and Intelligent Systems (IoTIS) will focus on cutting-edge interdisciplinary research in the field of Internet of Things (IoT) and assistive technologies related to Intelligent Systems, addressing societal needs. A key objective of IoTIS is to tackle national challenges by promoting research and entrepreneurship across interdisciplinary domains, integrating engineering, science, and social sciences. The centre will actively engage with universities, research institutions, and industries through periodic continuing education programs to ensure optimal utilization of national resources. In terms of academic offerings, IoTIS will provide Masters and PhD programs in Advanced Networking and Intelligent Systems. Looking ahead, the centre aims to establish collaborations with national and international research institutes, as well as partnerships with social organizations and industry, to effectively achieve its mission of advancing technology, innovation, and societal impact.

5.4.2 Faculty & Staff details



Name	Designation	Email id (Institute & other id)
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Tushar Kanti Bera	Asst prof	tkbera.ee@nitdgp.ac.in

5.4.3 R&D activities

- Developed a low-cost wearable air-writing digit recognition interface using a 6DoF MPU6050 IMU with an integrated Digital Motion Processor (DMP) for motion capture at 50 Hz and augmented with custom self-diagnostic drift checks—an initial offset calibration, exponential-moving-average filtering to ensure reliable operation. The system employs a dual-sensing architecture with two parallel pipelines for digit estimation: one reconstructs the 2D trajectory on a virtual canvas and classifies it via a MobileNetV2-based CNN, while the other directly predicts digits from raw IMU time-series data. The deep-learning models were trained on a 2,000-sample, multi-user air-writing dataset, achieving 89.5–90 % accuracy, and the trained models were deployed in Python for real-time inference on IMU data, with validation performed using a custom Pygame motion-emulation rig to assess digit classification accuracy and drift resilience under varied user and environmental conditions. Overall, this generic digit classification platform demonstrates potential for applications such as ICU patient monitoring systems, assistive-technology interfaces, and power-efficient contactless text entry in AR/VR environments.
- Developed a low-cost air quality monitoring device equipped with sensors for fine particulate matter (PM_{2.5}), carbon monoxide (CO), temperature, and humidity, along with built-in self-diagnostic checks to ensure reliable operation. The device uses a dual-sensing approach with two parallel methods for estimating air quality: one directly calculates the Air Quality Index (AQI) from sensor data, and the other uses an on-device machine learning model to predict AQI. A novel algorithm named Intercept compares these two results in real time to detect any faulty or drifting sensors. The machine-learning models were trained on data from eight cities across India, achieving roughly 69–89% accuracy for dust (PM_{2.5}) and 76–95% for CO; these models were then optimized into a compact format suitable for use on the embedded device. Additionally, the team built a custom low-cost test chamber to evaluate sensor performance and drift under controlled conditions. Overall, this work provides a scalable, reliable, and cost-effective solution for long-term air quality monitoring, especially in urban and industrial areas.
- Study of cognitive load using eye-tracking software in conjunction with EEG.

5.4.4 Papers/Projects/Books/Book Chapters/Patents

Journal Papers (No.)	Conference Papers (No.)	Projects (for 2024-25) (No.)		Book Chapters (No.)	Books/Edited Volume (No.)	Patents (No.)
		Ongoing	Completed			
06	01	NIL	NIL	NIL	NIL	NIL

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5.4.5 Doctoral Programme (No. Only)

Ongoing	04
Completed	NIL

5.4.6 Facilities available

An eye-tracking software has been procured and is currently being used in conjunction with EEG to study cognitive load. Based on the research agenda related to IoT, the list of required equipment has been finalized, and the procurement process is expected to be completed soon. The facilities required for IoT test beds need permanent space, which is expected to become available soon. Meanwhile, the faculty team is conducting research on related problems using general facilities available at the Institute, including those supported by sponsored and RIG projects.

5.4.7 Equipments

Sl. No.	Name of the equipment	Date of Purchase	Amount
1	Eye tracker device	05.01.2021	12 lakhs

5.4.8 Future Plans

The primary objective is to establish a state-of-the-art facility and test-bed for advanced interdisciplinary research in the area of Internet of Things (IoT) and related Intelligent and Smart Systems, addressing the evolving needs of industry and society. This facility will support cutting-edge research projects, enabling collaboration with industry and other research bodies to drive innovation. It will also serve as a platform for conducting training programs and Master's level courses aimed at professional skill development in emerging areas of IoT and intelligent systems. In addition, the facility will focus on generating Intellectual Property through patents and high-quality technical publications. It will actively engage in consultancy services for industries across diverse sectors such as transportation, manufacturing, healthcare, and agriculture. Furthermore, the center will provide guidance and support to start-ups working in relevant domains, promoting entrepreneurship and technology transfer. This will ensure a continuous cycle of research, development, and real-world application.

6. Centralised Services

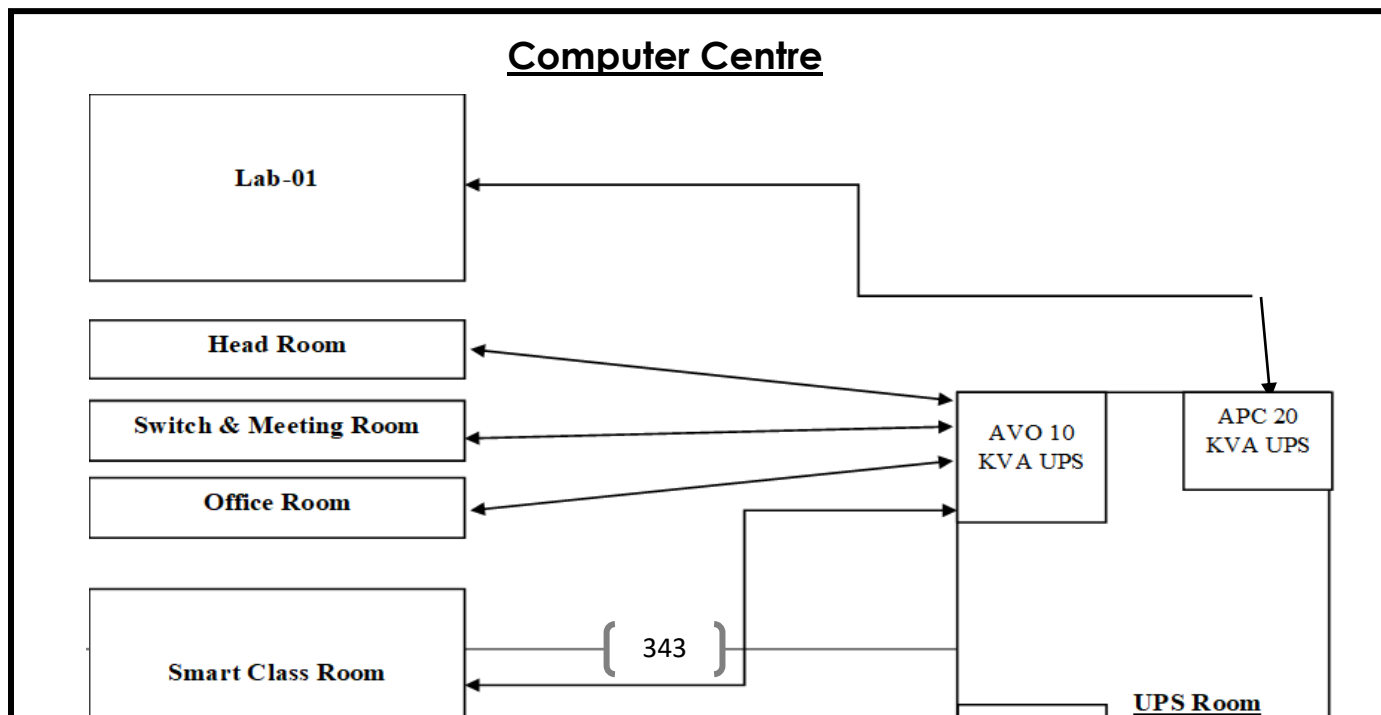
6.1 Computer Centre

Name of the Lab	Area of the Lab	Number of System	Configuration of the System	Software Used
LAB-01	40X24 sq.ft	Total capacity 68 Nos. system. System present 68 Nos., CCTV -- 02 Nos., Projector -- 01 No., APC 20 KVA UPS – 01 No. (PC-001 to PC-068)	Acer Veriton - Intel core i5-8 th Gen. 1TB HDD; 16 GB RAM. -- 68 Nos.	Windows 10 Pro, Ubuntu, Dev c++, Java, winrar, adobe reader, LibreCAD, Mars, Codeblock, MySql, Xampp.
LAB-02	34X24 sq.ft	Total capacity 44 Nos. system. System present 44 Nos., CCTV -- 02 Nos., Projector -- 01 No. VERTIV 10 KVA UPS – 01 No. (PC-069 to PC-112)	Acer Veriton - Intel core i5-8 th Gen. 1TB HDD; 16 GB RAM. -- 12 Nos. HP Pro TWR 400 G9 - Intel core i5-12 th Gen., 1TB HDD, 8 GB RAM. -- 32 Nos.	Windows 10 Pro, Ubuntu, Dev c++, Java, winrar, adobe reader, LibreCAD, Codeblock, MySql, Xampp.



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Name of the Lab	Area of the Lab	Number of System	Configuration of the System	Software Used
LAB-03	34X24 sq.ft	Total capacity 44 Nos. system. System present 44 Nos., CCTV -- 02 Nos., Projector -- 01 No. APC 10 KVA UPS – 01 No. (PC-113 to PC-156)	HP Pro TWR 400 G9 - Intel core i5-12 th Gen. 1TB HDD, 8 GB RAM. -- 42 Nos. Acer Veriton - Intel core i5-8 th Gen. 1TB HDD; 16 GB RAM. --02 Nos.	Windows 10 Pro, Ubuntu, Dev c++, Java, winrar, adobe reader, LibreCAD, Codeblock, MySql, Xampp.
LAB-04	34X24 sq.ft	Total capacity 44 Nos. system. System present 44 Nos., CCTV -- 02 Nos., Projector -- 01 No. AVO 10 KVA UPS – 01 No. (PC-157 to PC-200)	HP Elite Desk 800G – Intel core i5; 3.5 GHz; 500GB HDD 8 GB RAM. -- 02 Nos. HP Pro Tower 400 G9 - Intel core i5-12 th Gen. 512GB SDD, 8 GB RAM—42 Nos.	Windows 10 Pro, Ubuntu, Dev c++, Java, winrar, adobe reader, LibreCAD, Codeblock, MySql, Xampp.
LAB-05	36X15 sq.ft	Total capacity 36 Nos. system. System present 30 Nos., CCTV -- 01 No., APC 10 KVA UPS – 01 No. (PC-201 to PC-236)	Lenovo Thinkcentre Intel core i5 Vpro, 3.3 GHz; 6GB RAM. --05 Nos. (System are not working) HP Elite Desk 800G – Intel core i5; 3.5 GHz; 500GB HDD 8 GB RAM. -- 25 Nos.	Windows 10 Pro, Ubuntu, Dev c++, Java, winrar, adobe reader, LibreCAD, Codeblock, MySql, Xampp.
LAB-06	23X15 sq.ft	IOTIS Project Lab.		
Smart Class Room	24X23 sq.ft	Total capacity 36 Nos. system. System Present 30 Nos. CCTV - 01 No. Projector -- 01 No. AVO 10 KVA UPS – 01 No.	HP Elite Tower 600 G9 - Intel core i7-13th Gen. 1TB SDD, 16 GB RAM—25 Nos. HP Elite Desk 800G – Intel core i5; 3.5 GHz; 500GB HDD 8 GB RAM. -- 05 Nos.	Windows 11 Pro, Ubuntu, Dev c++, Java, winrar, adobe reader, LibreCAD, Codeblock, MySql, Xampp.



6.2 Library

6.2.1 About Us

The Library, as one of the important central facilities of the Institute, supports the study, teaching, research and development programmes of the Institute. It is housed in a separate building with three floors on a plinth area of 1000 sq. metres. The library has a collection of 1.7 lakh volumes of Print books, including Text Books, Reference Books & Bound volumes of Journals, Standards, etc. The Library subscribes to current Journals, E-Books, Databases & and Software. Library operations have been automated with the help of an integrated library software package, LIBSYS-10. The book database is accessible through the OPAC (Online Public Access Catalogue). Circulation Services are executed through the Barcode System (Scanning). It has a good collection of Electronic resources in its Digital Library. The library has introduced a Wi-Fi Internet facility inside it to facilitate the free flow of information to the users.

The library is an institutional One Nation One Subscription (ONOS) member, which provides 30 leading publishers' e-resources. It is also a member of e-Shodh Sindhu: Consortium for Higher Educational Electronics, which provides an Online e-Resource Requisition System. The library is an institutional member of Shodhganga: a reservoir of Indian Theses @ INFLIBNET.

The library is also a member of the National Digital Library of India (NDLI), which provides access to content from some leading publishers' books to the members. It has a good collection of Learning Resources. It also has a collection of several thousand E-Books on Computer Science, Chemical Engineering, Physics, Mathematics, Biochemistry, Genetics and Molecular Biology, Civil Engineering, Electrical Engineering, Mechanical Engineering, etc., published by leading publishers.



6.2.2 Facilities & Teaching and Learning Resources

Central Library extends various facilities to the students, faculties and researchers. The UG/PG students are supported with the Book-Bank, which allows them to borrow 6 (six) books in each semester. Moreover, they can also borrow reference books (limited in numbers). The Research Scholars can borrow more books for their references. Faculties and staff are also avail this facility.

Central Library has been subscribing various e-services which include e-Journals and e-Database and e-Services. All the electronic services are licensed on the Institute IP, hence users can access those services seamlessly within the local network. We also provide off-campus access through INFLIBNET portal.

6.2.3 Access to the Resources

Central Library is providing two types of services – the circulation and online service. The circulation includes all print book, reference books and study materials. The students of the institute, faculties and staff can avail the circulation facility. There is a collection of ‘children book’. This facility is availed by the employees of the institute.

All online services are available on the Institute local network. There is no user login required. However, some e-Services are login based – iThenticate, Grammarly, etc.

Library subscribes to leading publishers’ 4000+ online journals and databases, and has 28,197+ e-books. The library has over 1.7 lakh volumes of print books and 120 National and International Print Journals. It has also subscribed to the Archives, Journals, Periodicals etc. The users can avail the reading room facility during the library hour. The reading room is wifi enable and temperature controlled.

Online learning resources are accessible throughout the campus on the intranet (LAN), and print resources are open access in the Central Library. Availability of the resources can be checked through the OPAC (Online Public Access Catalogue).

6.2.4 Centre for Digital Learning (CDL) Studio(Lecture Recording System)

Central library has recently developed a studio for learning material development. The studio is equipped with interactive devices like digital board, Wacom, 50 seater student capacity, faculty and student microphones, etc. The studio is also supported with the editorial team. The editorial office is equipped with the required devices and the software to produce the final product. The studio can be used to produce teaching learning contents for the NPTEL and MOOC courses.

6.2.5 List of e-resources provided by One Nation One Subscription (ONOS) Scheme:

The following resources can be accessed through One Nation One Subscription (ONOS): <https://www.onos.gov.in/publishers>

Sl. No.	Name of E-Journals	URL
1	AAAS - Science	https://www.science.org/journal/science
2	ACM Digital Library	http://dl.acm.org/
3	American Chemical Society Journals	http://pubs.acs.org/
4	American Institute of Aeronautics and Astronautics (AIAA) Journals	http://www.aiaa.org/journals/
5	American Institute of Physics Journals	https://pubs.aip.org/
6	American Mathematical Society Journals	http://www.ams.org/journals
7	American Physical Society-ALL	http://publish.aps.org/browse.html
8	American Society for Microbiology Journals	https://journals.asm.org/
9	Annual Reviews Journals	https://journals.asm.org/
10	ASCE Journals Online	http://ascelibrary.org/
11	ASME Journals Online	http://asmedigitalcollection.asme.org/
12	Bentham Science Journals	http://benthamscience.com/
13	BMJ Journals	https://journals.bmj.com/home
14	Cambridge University Press Journals	https://www.cambridge.org/core

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Sl. No.	Name of E-Journals	URL
15	Cold Spring Harbor Laboratory Press Journals	https://www.cshlpress.com/
16	Elsevier Science Direct Journals	http://www.sciencedirect.com/
17	Emerald Publishing Journals	https://www.emerald.com/insight/
18	ICE Publishing Journals	http://www.icevirtuallibrary.com
19	IEEE Journals	http://ieeexplore.ieee.org/
20	IndianJournals.com	http://indianjournals.com/
21	Institute of Physics Journals	http://iopscience.iop.org/journals
22	Lippincott Williams & Wilkins (Wolters Kluwer) Journals	https://oce.ovid.com/
23	Oxford University Press Journals	https://academic.oup.com/journals/
24	Project Muse	http://muse.jhu.edu/
25	Sage Publishing Journals	http://journals.sagepub.com/
26	SPIE Digital Library	https://www.spiedigitallibrary.org/
27	Springer Nature Journals	https://link.springer.com/
28	Taylor and Francis Journals	https://www.tandfonline.com/
29	Thieme Journals	https://www.thieme-connect.com/products/all/home.html
30	Wiley Journals	https://onlinelibrary.wiley.com/
31	Web of Science Lease Access (20-year back files Citation Database)	http://www.webofknowledge.com/
32	Indian Open Access Society Journals* CSIR-NIScPR	https://nopr.niscpr.res.in

6.2.6 List of e-resources other than ONOS

Sl. No.	B.1. E-Journals	URL
1	Journal of Pension Economics and Finance	https://www.cambridge.org/core/journals/journal-of-pension-economics-and-finance
2	Proceedings of the National Academy of Sciences (PNAS Tier-3)	https://www.pnas.org/
3	American Concrete Institute (ACI Journals)	https://www.concrete.org/publications/typesofpublications/periodicals/acimaterialsjournal.aspx
4	ASTM Standards and Engineering Digital Library	https://compass.astm.org/
5	RSC Gold Journals	https://pubs.rsc.org/en/journals/journalissues/an#!recentarticles&adv
B.2. Open Access E-Journals		
1	Directory of Open Access Journals (DOAJ)	https://doaj.org/
B.3. Database		
1	EPWRF India Time Series	https://epwrfits.in/



Sl. No.	B.1. E-Journals	URL
2	Prowess IQ (CMIE)	https://prowess.cmie.com/
3	Institute for Studies in Industrial Development (ISID)	https://isid.org.in/
4	JSTOR	https://www.jstor.org/
5	Indian Standards (IS)	https://standards.bsb.co.in/home.aspx
6	Scopus	https://www.scopus.com/search/form.uri?display=basic#basic
7	J-Gate	https://jgatenext.com/

6.2.7 List of E-Books (perpetual) subscribed by the NITD Central Library

Sl. No.	E-Books	URL
1	Cambridge eBooks (1165 titles)	https://nitdgp.ac.in/uploads/userfiles/files/Cambridge%20University%20Press__1165%20Titles%20with%20URL.pdf
2	Elsevier eBooks (2418 titles)	https://nitdgp.ac.in/uploads/userfiles/files/elsevier_2148.pdf
3	Mc-Graw Hill eBooks (640 titles)	https://nitdgp.ac.in/uploads/userfiles/files/Mcgraw%20Hill_640%20Titles%20with%20URL(1).pdf
4	Taylor & Francis eBooks (2823 titles)	https://nitdgp.ac.in/uploads/userfiles/files/Taylor%20and%20Francis_2823%20Titles%20with%20URL.pdf
5	Springer Nature eBooks (11,842+8270)=20,112 titles	https://nitdgp.ac.in/uploads/userfiles/files/Update%20Springer%20Nature_20,112%20Titles%20with%20URL.pdf
6	Wiley eBooks (174+340=514 titles)	https://nitdgp.ac.in/uploads/userfiles/files/wiley174_welie340_merged(1).pdf
7	Wiley IEEE eBooks 525 titles	https://nitdgp.ac.in/uploads/userfiles/files/Wiley-IEEE%20_525%20Titles%20with%20URL.pdf

6.2.8 List of Archives

Sl. No.	Archives Collection	URL
1	NITD Semester Question Paper	https://nitdgp.ac.in/p/semester-question-papers
2	Gale Cengage Learning India	https://link.gale.com/apps/menu?u=nitdgp
3	South Asia Archive (SAA)	https://southasiacommons.net/?from=www.SARF/

6.2.9 List of Software & Tools

Sl. No.	Software & Tools	URL
1	Grammarly	https://www.grammarly.com/edu
2	iThenticate	https://nitdurgapur.turnitin.com/
3	URKUND Plagiarism Detection Software	https://secure.arkund.com/account/auth/login

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6.2.10 List of Useful Links

Sl. No.	Useful Links	URL
1	Digital elib4u (e-Textbooks)	https://digital.elib4u.com/home
2	e-Shodh Sindhu	https://ess.inflibnet.ac.in/
3	e-Shodh Ganga (Electronic Theses and Dissertations)	https://shodhganga.inflibnet.ac.in/
4	Indian Access Management Federation (INFED Remote Access)	https://idp.nitdgp.ac.in/
5	National Digital Library of India (NDLI)	https://ndl.iitkgp.ac.in/
6	National Programme on Technology Enhanced Learning (NPTEL)	https://nptel.ac.in/
7	One Nation One Subscription (ONOS)	https://onos.gov.in/

6.2.11 Print Collection

The Central Library has a good collection of print resources consists of books, standards, journals etc. collection are as below (up to 31.03.2025):

Sl. No.	Name of Resources	No. of Resources
1	Textbooks & Reference Books	1,91,485+
2	e-books	27,672+
3	Journals	117 Print
4	e-Journals/database/Archive	12 Library subscribes + 32 ONOS (One Nation One subscription)
5	Periodicals	8 Nos

6.2.12 Library Schedule

Day	Library Hours:	Circulation Hours:	Reading Room Hours:		
			Reading Room 1 & 1.1 (Ground Floor)	Reading Room 2 (1st Floor)	Reading Room 3 (2nd Floor)
Weekdays	8:30 AM to 9:00 PM	9:00 AM to 7:00 PM	8:45 AM to 8:50 PM	9:15 AM to 8:45 PM	9:00 AM to 8:40 PM
Weekends	9:00 AM to 5:00 PM	9:30 AM to 4:30 PM	9:15 AM to 4:50 PM	9:30 AM to 4:45 PM	9:30 AM to 4:40 PM
During Exam	8:30 AM to 10:00 PM	9:00 AM to 7:00 PM	8:45 AM to 9:50 PM	9:15 AM to 9:45 PM	9:00 AM to 9:40 PM
During Vacations	8.30 AM to 5.30 PM	9:00 AM to 5:00 PM	8:45 AM to 5:25 PM	9:15 AM to 5:20 PM	9:00 AM to 5:15 PM
* During the Institute Holidays Library will remain closed					



6.3 SRCC

6.3.1 Projects

Research Projects (Total: 120)	Completed		Ongoing	
	No.	Value	No.	Value
	19	1,18,06,776.67	101	19,55,72,379.01

6.3.2 Consultancy

	Completed No
Consultancy & Testing Projects (Total: 180)	180 (Value= Rs. 2,18,37,085.00)

6.4 Training and Placement Cell

6.4.1 Placement

Training & Placement Cell of the institute provides employment opportunities to the final year students and training to the 3rd year students after 6th semester. 595 UG students have been placed in the session 2024-2025. Apart from that few students have opted for higher studies in various IITs and IISc. 210 companies (UG+PG) visited the campus including APPLE INDIA, MICROSOFT, AMAZON, ORACLE, GOLDMAN SACHS, BNY MELLON, J.P. MORGAN, AMDOCS, IBM, L&T, TCS, WIPRO, CESC, HSBC, PWC, HPCL, BPCL, EIL.

126 no of students from the different PG courses have been placed in the academic session 2024-2025. Rest of the students have gone for higher studies.

Training and Allied Activities

Industrial Training/ Vocational Training is provided to the students of 3rd year after passing 6th semester.

Along with training the department organizes seminars entitled from classroom to boardroom by reputed global players such as TCS, Wipro and IBM.

Student's development activities such as communication and interpersonal skills by reputed organizers are also conducted. Each year 5 no of students go for Internship in CERN (European Council for Nuclear Research, Switzerland). Foreign universities like ANUS, Singapore also allows NIT students for internship.

The UG & PG statistics for placement respectively are:

PLACEMENT RECORDS

UG: 2024-25

[0- Considered but not selected, (-) Not considered.]

UG PLACEMENT RECORDS: 2024-25

Sl. No.	COMPANY NAME	Number of Students PLACED (BRANCH WISE)								TOTAL
		BT	CE	CHE	CSE	ECE	EE	ME	MME	
1	Accenture	1	2	0	8	1	4	4	0	20
2	Aditya Birla	0	0	2	0	0	0	4	2	8
3	Adobe India	0	0	0	1	0	1	0	0	2
4	Aegis Vopak	0	0	0	0	1	2	1	0	4

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UG PLACEMENT RECORDS: 2024-25

Sl. No.	COMPANY NAME	Number of Students PLACED (BRANCH WISE)								
		BT	CE	CHE	CSE	ECE	EE	ME	MME	TOTAL
5	AFCONS	0	1	0	0	0	0	0	0	1
6	AMAZON	0	0	0	1	1	0	0	0	2
7	Amazon	0	0	0	1	0	0	0	0	1
8	Amdocs	0	0	0	8	7	0	0	0	15
9	APL Apollo	0	0	0	0	0	0	1	0	1
10	Apple India	0	0	0	2	0	2	0	0	4
11	ARM	0	0	0	2	2	0	0	0	4
12	Ashiana Housing	0	3	0	0	0	0	0	0	3
13	Avanti Fellows	1	3	0	0	0	0	0	0	4
14	Axxela	0	0	0	0	0	1	0	0	1
15	Bajaj Auto	0	0	0	0	0	1	1	0	2
16	Bakliwal Tutorial	0	0	1	0	0	0	0	2	3
17	BEL	0	0	0	0	9	0	0	0	9
18	Berger Paints	0	0	0	0	0	1	0	0	1
19	BlackBuck	0	1	0	0	1	0	1	1	4
20	BNY	0	0	0	4	0	0	0	0	4
21	BPCL	0	0	0	0	0	6	5	0	11
22	BT Group	0	0	0	3	0	0	0	0	3
23	Capgemini	0	0	0	2	1	0	0	0	3
24	Carrier Global	0	0	0	0	0	0	2	0	2
25	CESC	0	0	0	0	0	2	1	0	3
26	CISCO	0	0	0	5	0	1	0	0	6
27	Crompton Greaves	0	0	0	0	0	1	1	0	2
28	CVRS	1	0	0	1	1	0	0	1	4
29	DCM Shriram	0	0	1	0	0	0	0	1	2
30	Deal Share	0	0	0	0	0	0	1	0	1
31	Dezerv	0	0	0	2	0	0	0	0	2
32	EIL	0	0	0	0	0	0	1	0	1
33	EPAM	0	0	0	1	0	0	0	0	1
34	Essar Oil & Gas	0	0	0	0	0	0	1	0	1
35	Esyasoft holding	0	0	0	0	0	1	0	2	3
36	Fidelity International	0	0	0	1	0	0	0	0	1
37	Flipkart Neev	0	1	0	0	0	1	1	0	3
38	Futures First	0	0	0	0	0	0	0	1	1
39	Gainwell Commosales	0	0	0	0	0	0	1	0	1
40	GeekforGeeks	0	0	0	0	0	0	1	0	1
41	GlobalLogic	0	0	0	1	3	5	0	0	9



UG PLACEMENT RECORDS: 2024-25

Sl. No.	COMPANY NAME	Number of Students PLACED (BRANCH WISE)								
		BT	CE	CHE	CSE	ECE	EE	ME	MME	TOTAL
42	GreyB Research	2	1	2	0	0	0	1	1	7
43	Haldia Petrochemicals	0	0	4	0	0	0	2	0	6
44	Hexaware Technologies	0	0	0	1	0	0	0	0	1
45	Hind Rectifiers	0	0	0	0	1	0	0	0	1
46	Hitachi Energy	0	0	0	0	0	0	1	0	1
47	HPCL	0	0	0	0	0	2	2	0	4
48	IBM	0	0	1	0	0	0	0	0	1
49	ICICI Bank	0	0	2	2	1	1	4	0	10
50	IDBI Bank	0	3	0	0	0	2	0	0	5
51	Infosys SE	7	1	0	1	0	1	0	0	10
52	ITC Limited	0	0	0	0	0	1	0	0	1
53	ITD Cementation	0	4	0	0	0	0	0	0	4
54	Jindal SAW	0	0	0	0	0	0	0	2	2
55	JKTECH	0	0	0	2	0	0	0	0	2
56	JPMC	0	0	0	5	3	0	0	0	8
57	JSL	0	0	1	0	0	2	7	3	13
58	JSW	0	0	2	0	0	0	14	4	20
59	Knowteq Equipcare	0	0	0	0	0	1	3	1	5
60	Larsen & Toubro	0	7	2	0	1	5	19	0	34
61	Maco Group	0	0	0	0	0	0	1	0	1
62	Mahindra and Mahindra	0	0	0	0	1	2	0	1	4
63	Maq Software	0	0	0	2	0	0	0	0	2
64	MathWorks	0	0	0	1	0	0	0	0	1
65	Matix Fertilisers	0	0	3	0	0	0	0	0	3
66	Micron Semiconductor	0	0	0	0	4	1	0	0	5
67	Microsoft	0	0	0	7	0	0	1	0	8
68	mJunction	0	0	0	0	0	0	0	1	1
69	Mphasis	0	0	0	0	0	2	0	0	2
70	Narayana Group	1	0	2	0	1	0	0	0	4
71	Nation With Namo	1	1	0	1	0	0	0	1	4
72	Nvidia	0	0	0	2	2	0	0	0	4
73	ODA Class	1	2	0	0	0	0	2	3	8
74	Oracle India	0	0	0	4	0	0	0	0	4
75	Orientallbas Retail	2	0	0	0	0	0	0	0	2
76	PepsiCo	0	0	0	7	0	0	0	0	7
77	Physics Wallah	0	0	2	1	0	2	2	2	9
78	PRADAN	1	0	0	0	0	0	0	0	1

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UG PLACEMENT RECORDS: 2024-25

Sl. No.	COMPANY NAME	Number of Students PLACED (BRANCH WISE)								
		BT	CE	CHE	CSE	ECE	EE	ME	MME	TOTAL
79	Publicis Sapient	0	0	0	4	0	0	0	0	4
80	PwC	0	0	9	12	9	6	11	0	47
81	Quantiphi	0	0	0	1	0	0	0	0	1
82	Quicksell	1	0	0	0	0	0	0	0	1
83	Rashmi Group	0	0	0	0	0	0	2	4	6
84	RHI Magnesita	0	0	0	0	0	0	1	5	6
85	RIL	0	3	6	0	0	2	7	6	24
86	SA Infra	0	5	0	0	0	0	0	0	5
87	Salesforce	0	0	0	0	1	0	0	0	1
88	Samsung Delhi	0	0	0	0	0	1	0	0	1
89	Serko	0	0	0	1	0	0	0	0	1
90	Shree Cement	0	3	4	0	0	1	5	0	13
91	Siemens Limited	0	0	0	0	0	0	1	0	1
92	Sigmoid	0	0	0	2	1	2	0	0	5
93	Skipper Limited	0	0	0	0	0	1	1		2
94	Sri Chaitanya	2	0	0	0	1	0	0	0	3
95	SRI-Bangalore	0	0	0	11	2	0	0	0	13
96	Sun Pharma	0	0	0	0	0	0	3	0	3
97	Tata Chemicals	0	0	2	0	0	0	1	0	3
98	Tata Power-DDL	0	0	0	0	0	1	0	0	1
99	TCE	0	1	0	0	0	0	1	1	3
100	TCS Digital	0	0	0	1	1	0	1	0	3
101	TCS INE	0	0	0	1	0	0	0	0	1
102	TCS Ninja	2	1	1	4	3	2	2	0	15
103	TCS Prime	1	0	0	2	1	1	0	0	5
104	Texas Instruments	0	0	0	4	1	0	0	0	5
105	Titagarh Rail Systems	0	0	0	1	0	0	3	0	4
106	Tredence Analytics	4	2	0	0	0	1	3	2	12
107	Tudip Technologies	1	2	1	2	0	0	1	2	9
108	TVS Motor	0	0	0	0	0	0	1	0	1
109	Uber	0	0	0	0	0	1	0	0	1
110	Verizon	0	0	0	2	0	0	0	0	2
111	Vesuvius India	0	0	0	0	0	0	0	2	2
112	Viraj Profiles	0	0	0	0	0	0	0	2	2
113	Visa Steel	0	0	0	0	0	0	1	0	1
114	Wacker Metroark	0	0	1	0	0	0	0	0	1
115	Wakefit	0	0	0	1	0	0	0	0	1



National Institute of Technology Durgapur

UG PLACEMENT RECORDS: 2024-25

Sl. No.	COMPANY NAME	Number of Students PLACED (BRANCH WISE)								
		BT	CE	CHE	CSE	ECE	EE	ME	MME	TOTAL
116	Wells Fargo	0	0	0	4	3	3	0	0	10
117	WTW	0	0	0	3	0	0	0	0	3
118	ZS Associates	0	1	1	2	2	2	3	1	12
119	Zscaler	0	0	0	2	0	0	0	0	2

	BT	CE	CHE	CSE	ECE	EE	ME	MME	Total
ELIGIBLE STUDENTS	47	61	68	158	85	81	162	57	719
STUDENTS PLACED	29	48	50	139	66	75	134	54	595
PERCENTAGE PLACED	61.7	78.6	73.5	87.97	77.64	92.5	82.7	94.7	82.7

PG: 2024-25

[0- Considered but not selected, (-) not considered]

PG PLACEMENT RECORDS: 2024-25																						
M.Tech & Other PG Courses																						
Sl. No.	COMPANY	BT			CE			CSE			ECE			EE			ME			MATH	EES	DUAL DEGREE
		BT	GE	SE	CSE	VLSI	NECN	PE	PS	IC	MD	FM	TE	OR	EST	BT	CHE	MSW	MBA	M.Sc	Int. M.Sc	TOTAL
1	Alstom	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	AMD	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3	Amdocs	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4	Aryaka Networks	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	Avanti Fellows	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Azim Premji	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
7	Bajaj Auto	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Bosch	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9	Capgemini	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	C-DAC	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
11	CVRS	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
12	EIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Factspan Analytics	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
14	GMR Institute	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
15	HCL	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
16	Hind Rectifiers	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1

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PG PLACEMENT RECORDS: 2024-25																						
M.Tech & Other PG Courses																						
Sl. No.	COMPANY	BT	CE		CSE	ECE		EE			ME			MATH	EES	DUAL DEGREE		HSS	MBA	M.Sc	Int. M.Sc	TOTAL
		BT	GE	SE	CSE	VLSI	NECN	PE	PS	IC	MD	FM	TE	OR	EST	BT	CHE	MSW	MBA	M.Sc	Int. M.Sc	
17	HSBC	0	0	0	2	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5
18	IBM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	ICICI Lombard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
20	Infosys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
21	Intel	0	0	0	7	18	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	26
22	Knowteq Equipcare	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
23	Larsen & Toubro	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4
24	MathWorks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	McDermott	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
26	Narayana Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7
27	Novac Technology	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
28	Oracle India	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	ODA Class	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Parul University	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
31	Philips India Ltd	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
32	PRADAN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
33	PwC	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3
34	Renault Nissan	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
35	SA Infra	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
36	Saint Gobain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
37	Samsung Semiconductor	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
38	Siemens	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
39	Sri Chaitanya ST Microelectronics	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	10
40	Tata Elxsi	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
41	Tata Motors	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
42	TCE	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5



National Institute of Technology Durgapur

PG PLACEMENT RECORDS: 2024-25																						
M.Tech & Other PG Courses																						
Sl. No.	COMPANY	BT	CE		CSE	ECE		EE			ME			MATH	EES	DUAL DEGREE		HSS	MBA	M.Sc	Int. M.Sc	TOTAL
		BT	GE	SE	CSE	VLSI	NECN	PE	PS	IC	MD	FM	TE	OR	EST	BT	CHE	MSW	MBA	M.Sc	Int. M.Sc	
44	TCS Digital	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
45	TCS INE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	TCS Ninja	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	4
47	TCS Prime	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Texas Instruments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	The Federal Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
50	Titagarh Rail Systems	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
51	Vodafone Idea Limited	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
52	Volvo Group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	ZF Group	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Eligible Students		10	6	18	39	18	14	4	9	2	1	4	1	4	2	1	5	12	23	63	17	253
Students Placed		3	4	8	32	24	3	2	4	2	1	0	0	4	1	0	5	0	11	18	4	126

6.5 Medical Unit

6.5.1 About Us

Institute's Medical Unit takes care of both physical and mental health of all bonafide persons of N.I.T Durgapur community.

Medical Unit runs 24×7, provides round the clock Emergency Medical services and Morning and Evening Outdoor services.

The prime beneficiaries are all the students (including UG, PG, and PhD), teaching and non- teaching employees along with their dependent family member. The pensioners and their spouse and persons working under service providers also get medical help.

6.5.2 Facilities Available

- Morning and evening outdoor patient consultation except Sundays and Holidays.
- Round the clock medical emergency services.
- Pharmacy.
- Dressing room.
- Visiting Physicians of different fields on specific days of the week.

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- Male and female wards with observatory beds.
- Isolation wards for the students.
- Nebulization, ECG, Multi Parameter Monitor.
- Autoclave facility for sterilization.
- 24 hours two ambulance services with four drivers.
- Outsourced sample collection centre in the Medical Unit.
- Tie up with various super-speciality hospitals in Durgapur and Kolkata where the patients (employees and their dependent) get referred in case of necessity and treated on credit basis as per CGHS rates.
- Students are covered under insurance and are treated in referral hospitals if necessary. ☐ Students Insurance Help Desk.

6.5.3 Manpower working in Medical Units

Ambulance No.	No. of Doctors.	No. of Clinical Psychologist	No. of Pharmacist	No. of Nurses	No. of Assistant
02(Two) round the clock with 04 (Four) Drivers.	Total 06 (Six) Medical Officers Permanent-03(Three). Under Service provider-03 (Three). Visiting Physicians of different field: 04(Four). Psychiatrist for Counselling Centre: 01(One).	Total-02 (Two) (Contractual).	Total-01 (One). (Permanent).	Total 06 (six). Permanent-01(One). Under Service provider-05(Five).	Total 11 (Ten). Senior attendant- 01(One) (Permanent). Multi Task Assistants- 10(Ten) (Under Service Provider).

6.5.4 Brief Statistics of activity of medical unit from 01.04.2024 to 31.03.2025

Counselling Centre	Isolation Unit	Specialist Clinic	No. of beds	Ramp for PWD	Total No. of patients attended in OPD and Emergency
Yes. 491 number of patients were served by the Counselling Centre.	Yes. For Chicken Pox & Measles. Total 16 number of patient were admitted in Isolation ward.	Yes. Total-751 Patient attended Specialist Clinic. Medicine OPD 287 no of Patient attended. Gynae. &Obs. OPD 221 no of Patient attended. Ophthalmology OPD 176 no of Patient attended. Psychiatric OPD 67 no of Patient attended.	06(Six) observatory beds. Total 211 number of patients were treated in Observation ward.	Available. With wheelchair facility.	22,403 number of patients attended. 17,097 number of patients attended OPD. 5,306 number of patients attended Emergency.
Total Number of Patients served by Medical Unit and Counselling Centre.				22,894 (Twenty two ThousandsEight Hundred ninety four)	



6.5.5 Notable Activities

- Partial digitalization of the Medical Unit.
- Processing and Verification of the Medical Bills.
- Weekly Hostel visit by Institute's Clinical Psychologist for mental wellbeing of the students.
- Provide medical support in different events organized by the Institute.

6.6 Hostels

Hostels	Boys/ Girls	No. of Room s	Actual student Capacity	Number of students accommodat ed	Facilities						
					Special Toilet for PwD Student s	Ramp for PwD Student s	Game s	Water Purifie r	Lift	Wi- Fi	Mess/Cantee n
Hall-1	Boys	148	444	436	NIL	NIL	YES	YES	NO	YES	Student run mess
Hall-2	Boys	146	438	393	NIL	NIL	YES	YES	NO	YES	Vendor run mess
Hall-3	Boys	82	246	246	NIL	NIL	YES	YES	NO	YES	Student run mess
Hall-4	Boys	252	248	229	NIL	NIL	YES	YES	NO	YES	Student run mess
Hall-5	Boys	252	01.01.2025 Renovation work started by Maintenance Section								
	Extension Block (with 2 ofc room)	128	126	70	NA	NA	YES	YES	NA	YES	NA
Hall-6	Girls	120	120	86	NIL	NIL	YES	YES	NIL	YES	Vendor run mess
Hall-7	Girls	71	125	113	YES	NIL	YES	YES	NIL	YES	Vendor run mess
Hall-8	Girls	125	125	67	NIL	NIL	YES	YES	NIL	YES	Vendor run mess
Hall-9	Boys	124	360	259	NIL	NIL	YES	YES	NIL	YES	Vendor run mess
Hall-10	Girls	83	82	211	05	YES	YES	YES	YES	YES	Vendor run mess
Hall-11	Boys	239	41x3x5=61 5 34x4=136 Total -751	724	YES	YES	YES	YES	YES	YES	Vendor run mess
Hall-12	Boys	164	164	114	NIL	NIL	YES	YES	YES	YES	Vendor run mess
Hall-13	Girls	250	750	717	YES	YES	YES	YES	YES	YES	Vendor run mess
Hall-14	Boys	446	1250	1078	YES	YES	YES	YES	YES	YES	Vendor run mess

6.7 STUDENT ACTIVITY CENTRE (SAC):

The Student Activity Centre is one of the Central facilities of the Institute conducted student's choice based Co-Curricular Activities in Yoga & Martial Art (Taekwondo) as compulsory subjects to all first year B-Tech, B-Tech/M-Tech (Dual Degree) and integrated MSc students with one credit point in a semester.

Beside academic activities the Centre lays emphasis on promotion of Games & Sports activities of the Institute. The Centre has been sincerely guiding both UG/PG, PhD students and the employees of the Institute in different areas of Games & Sports activities. The Centre organized various sporting events throughout the year, be Intra NIT or Inter NIT Tournaments. Regular practice in every major games is carried out under the guidance and supervision of the Centre. Institute teams are picked, trained and exposed to various level of tournaments throughout the country.

Ministry guided programmes like International Day of Yoga, Celebrations of Olympic day, Fit India movement, Celebrations of National Sports Day etc. also be conducted in a befitting manner in promotion of unity, health and excellence in sports to the students, employees and the residence of the Institute.

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6.7.1 Games & Sports Facilities:

The Student Activity Centre has adequate infrastructure facilities for both outdoor and indoor games. The Centre has one central air condition Gymnasium equipped with sufficient number of equipment's. Different slots are provided to all the users as students (Male & Female), Employees and their spouses. The Institute play grounds (Oval & Lords) always bubble with outdoor activities like football, cricket, handball, athletics, hockey, cultural and technical activities. Turf and concrete courts with flood light facilities are also available in volleyball, basketball tennis, badminton etc.

Student Activity Centre has an air condition indoor auditorium, which accommodated 500 seating capacity multi activity auditorium includes Badminton synthetic court, Table Tennis boards and Chess facilities.

Beside central sports facilities, most of the halls of residence equipped with Volleyball and concrete Badminton courts. Indoor games like Table Tennis, Carom boards & Chess are also available.

6.7.2 Games & Sports Participation:

In the year 2024-25 Institute participated in the following All India Inter NIT Tournaments

1. All India Inter NIT Football & Lawn Tennis (Men) tournaments organized by NIT Rourkela during October 18-20, 2024.
2. All India Inter NIT Faculty & Staff Cricket & Chess (Men) tournaments organized by NIT Silchar during December 14-17, 2024
3. All India Inter NIT Cricket & Chess (Men) tournaments organized by NIT Silchar during December 20-23, 2024
4. All India Inter NIT Swimming, Athletics (Men & Women) & Power sports (Men) tournaments organized by NIT Surathkal during January 10-12, 2025
5. All India Inter NIT Badminton (Men & Women) & Kabaddi (Men) tournaments organized by NIT Tiruchirappalli during January 24-26, 2025
6. All India Inter NIT Basketball & Table Tennis (Men & Women) tournaments organized by NIT Jalandhar during February 07-09, 2025.
7. All India Inter NIT Volleyball, Yoga (Men & Women) & Handball (Men) tournaments organized by NIT Warangal during February 21-23, 2025
8. All India Inter NIT Kho-Kho (Men & Women) & Hockey (Men) tournaments organized by NIT Calicut during March 07-09, 2025.

6.7.3 Achievement in 2024-2025:

1. Secured Two Gold and One Silver medals in All India Inter NIT Body-Building Competition (Men) organized by NIT Surathkal during January 10-12, 2025.
2. Secured Two Silver medals in Women Swimming Championship Organized by NIT Surathkal during January 10-12, 2025.
3. Secured One Bronze Medal in Track & Field Meet (Women) organized by NIT Surathkal during January 10-12, 2025.

6.8 Workshop

The Department of Workshop of the institute consists of seven different shops, namely (1) Machine shop, (2) Fitting Shop, (3) Electrical Shop, (4) Carpentry shop & Pattern shop, (5) Black smithy shop, (6) Welding shop and (7) Foundry shop. In this Department, there are several equipment such as Conventional Lathe, Conventional Milling, Shaper Machine, Cylindrical Surface Grinding Machine, Radial Drilling Machine, Electro Chemical Machine (Non-conventional machining done), CNC Milling Machine (Capable of cutting any profile with high accuracy), Sheet Shearing Machine, Electric Resistance Furnace for melting non-ferrous metals & alloys, Sand Mixing Muller, Sand Testing Equipment, Manual Metal Arc Welding Machine, Power Saw, Spring loaded Power Hammer, Roller Bender, Band Saw, Wood Working Lathe etc. Workshop is befitting place for teaching and training UG students for sessional classes. Apart from teaching to UG students in sessional class as per UG curriculum, the trained Workshop staff helps the students of all the departments to complete their Project works in Under Graduate and Post Graduate level using the above-mentioned Workshop facilities. They also help to manufacture the Experimental Set Ups of Research Scholars of various Departments. Some experimental set ups for UG Laboratory such as 'Viscometer to determine absolute Viscosity of any fluid' in Hydraulics and Fluid Mechanics Laboratory and a Set up for 'Determination of Young modulus and poisson ratio of a given metal by using strain gauge' in Metrology Laboratory in Mechanical Engineering Department are manufactured and assembled in Workshop. At present the Workshop is capable of doing any kind of Engineering work starting from pattern making, moulding, casting, forging, machining (both conventional and non-conventional), high surface finishing, welding and finally to fitting and assembling to produce the final product.



6.9 Estate

6.9.1 About Us

Estate Office plays an instrumental role in the management of assets of the Institute. The Estate Office is entrusted with the work of Estate Management and Civic amenities. The Estate Section of the Institute mainly looks after all the infrastructure related works, security services, cleaning services, water & electricity supply, garden maintenance, horticulture and landscaping, allotment of quarters, transport services, service on lease and others allied works.

6.10 Scholarship/Assistance

The UG and PG students of the Institute are eligible to apply to various scholarship schemes being administered by the various Central Government Ministries/Departments/PSUs and State Governments. The students can also apply for various scholarship/reward schemes being offered by several private companies/organizations/trusts. The MTech students who have qualified GATE are eligible for monthly fellowships which at present is Rs. 12,400/= per month. The Dual Degree students of the Department of Chemical Engineering and Department of Biotechnology, who have either scored a minimum of 8.0 CGPA or have qualified GATE are eligible to receive monthly fellowships which at present is Rs. 12,400/= per month for the duration of their 9th and 10th semesters. The Institute Research Scholars are eligible to receive monthly fellowships which at present is Rs. 37,000/= per month for JRF and Rs. 42,000/= per month for SRF. The CSIR and UGC PhD scholars who have registered with the Institute are eligible to receive monthly fellowships which at present is Rs. 37,000/= per month for JRF and Rs. 42,000/= per month for SRF, from their respective funding agencies i.e. CSIR and UGC.

7. Student Activities

7.1 NCC

A unit of National Cadet Corps (NCC) Army wing (open vacancy) among UG students (Boys & Girls) under the supervision of 10 Bengal Bn, NCC Asansol. The cadets have participated regular training programme including attend camps, appearing 'B' 'C' Certificate Examination and actively involved in several extension activities through-out the year. This unit also observed and participated various important days like environment day, Voters day, organized rallies, Swachhta programme, tree plantation etc.

Achievements:

1. Enrolment of 'B' Certificate courses, total 14 cadets out of which SD-08 Cadets and SW 06 Cadets..
2. NCC 'B' Certificate awarded 09 SD Cadet with all 'A' Grade.
3. NCC 'B' Certificate awarded 04 SW Cadets with all 'A' Grade.



NATIONAL CADETS CORPS
National Institute of Technology Durgapur
Unit

7.2 NSS

7.2.1 Introduction

National Service Scheme (NSS), NIT Durgapur, functions under the guidance of the Dean of Students' Welfare, NIT Durgapur. It is a voluntary organization of young students at the college, university, and +2 level, dedicated to fostering campus–community linkage and nurturing personality development through community service. Guided by the motto "*Not Me, But You*", NSS organizes a wide range of activities such as *Har Ghar Tiranga*, *Hindi Pakhwada*, *Swachhta Pakhwada*, *Run for Unity*, and many more on a regular basis.

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At present, NSS NIT Durgapur has nearly 1000 active members from diverse disciplines, working collectively towards building a better society. The primary objective of NSS is to provide students with hands-on experience in community service while encouraging them to contribute towards national integration and social harmony.

7.2.2 Team Description

For the session 2024-25, the team consisted of:
NSS Coordinator: Dr. Shri Krishan Rai Contact
Details: +91-9434788019 Email id – skrai.hu@nitdgp.ac.in

7.2.3 Functioning of the Organization

The National Service Scheme (NSS) was established with the primary objective of developing the personality and character of student youth through voluntary community service, guided by the principle “Education through Service.” NSS identifies the needs and challenges of the community, engages students in addressing them, and fosters in them a strong sense of social and civic responsibility.

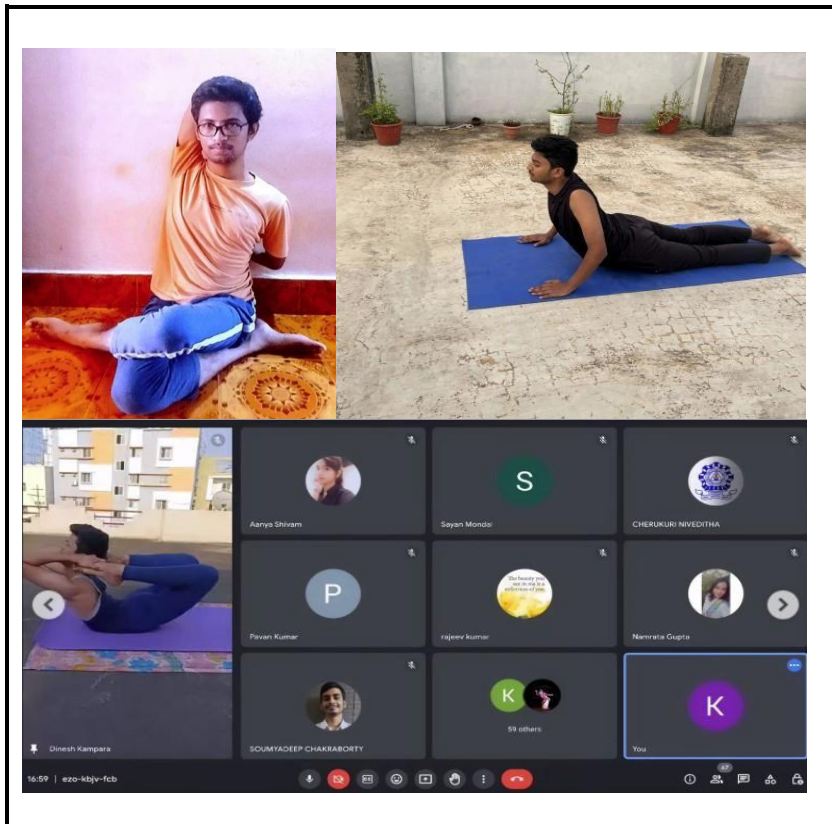
During special camps, NSS volunteers actively participate in various initiatives aimed at serving the people. The organization’s efforts also extend to activities such as promoting small-scale industries to support the upliftment of nearby rural areas. To effectively manage its diverse range of initiatives, NSS is structured into multiple cells, each dedicated to specific activities.

The following report presents an overview of the key activities and initiatives undertaken by NSS NIT Durgapur during the academic year 2024–25

7.2.4 Initiatives (For the year 2024-25)

International Yoga Day(21st June 2024):

International Yoga Day is celebrated to promote physical, mental, and spiritual well-being through the practice of yoga. At NIT Durgapur, NSS organized speeches, yoga demonstrations, and a quiz competition to engage students. Participants performed various yoga poses, showcasing their understanding and practice of the discipline. The event encouraged a healthy lifestyle and raised awareness about the benefits of yoga.



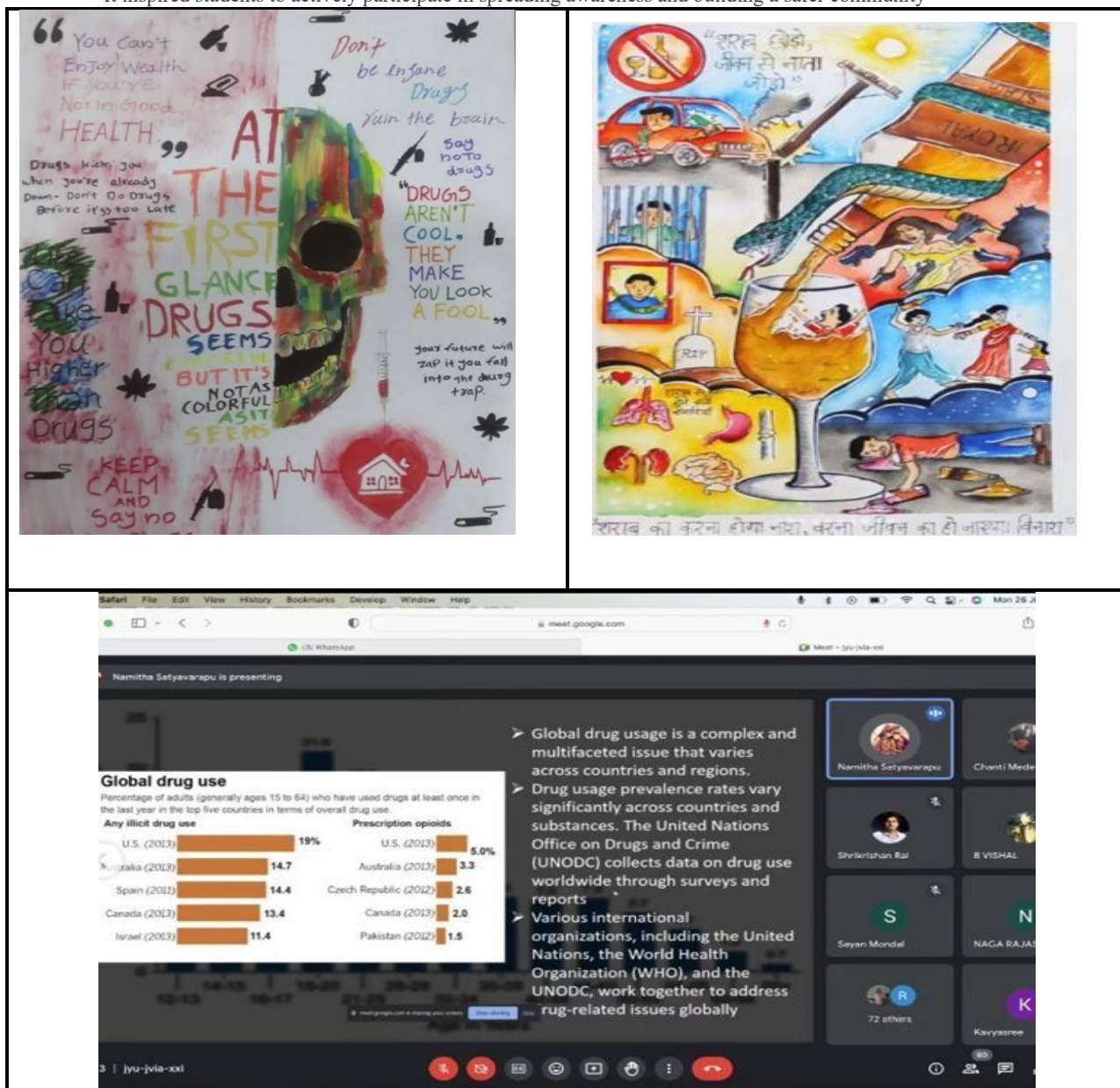
International Anti-Drug Day(26th June 2024):

International Anti-Drug Day is observed to raise awareness about the dangers of drug abuse and promote a healthy,



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drug-free lifestyle. At NIT Durgapur, NSS organized presentations, speeches, quiz competitions, and art activities to engage students. The event highlighted methods of drug prevention and control while encouraging responsible choices. It inspired students to actively participate in spreading awareness and building a safer community



National Space Day (23rd August 2024)

Education, Govt of India celebrated National Space Day on 23rd August 2024. Director, registrar, faculties and students attended the event from Institute Auditorium by joining the live streaming at Bharat Mandapam, New Delhi which was graced by the Honourable presence of Draupadi Murmu, President of India. An online lecture session was also organized where Dr P. RamKumar, Ex. Scientist of ISRO and an alumni of NIT Durgapur delivered an online lecture on the topic "Materials and Processes for Space Programme Opportunities and Challenges". Nearly 1000 students attended the program. A quiz competition was organized by students on Space Technology churning their knowledge base.

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Har Ghar Tiranga(13th – 15th August 2024)

National Institute of Technology Durgapur celebrated Har Ghar Tiranga during 13th – 15th August 2024. Prabhat Pheri, Ek Ped Maa Ke Naam campaign and a series of events like parade, art and craft works were organized at the institute. NIT Durgapur members participated in Prabhat Pheri including Director, Registrar, Deans, Professors, staffs and hoisted tiranga at their respective homes during the independence week from 13th to 15th August 2024. In this process students, NSS members of NIT Durgapur were actively participated and also created awareness about the main motto of Har ghar tiranga through Prabhat Pheri in the premises of the College that led to fulfilment of this campaign.



Partition Horror Remembrance Day (14th August 2024)

Partition Horrors Remembrance Day is an annual national memorial day observed on 14 August in India, commemorating the victims and sufferings of people during the 1947 partition of India.

National Institute of Technology Durgapur, an institute of National Importance under Government of India observed Partition Horrors Remembrance Day on 14th August 2024 by holding an exhibition at Institute Administrative Block followed by an essay competition by NSS students at institute Senate Hall.



Exhibition on Partition Horrors Remembrance Day at institute



Director addressing audience

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Swachhata Pakhwada(1 – 15 September 2024), & Swachhta Hi Sewa (14th September – 1st October 2024):

National Institute of Technology observed Swachhata Hi Sewa campaign during 14th September – 1st October 2024. Various events were organized under Swachhta Ki Bhaagidari like pledge taking, rallies, Ek Ped Maa Ke Naam where students along with faculties and staffs turned up in large numbers. Director, Registrar were flagbearers of the events and they inspired all NITD fraternities to maintain clean and hygienic campus. NIT Durgapur concludes with Slum sanitation camp at Ranchi Colony under Sampoorana Swachhata through Shramdaan including Swachhata Lakshit Ekayi. Prof Arvind Choubey leads NITD students, faculty and officers in the cleaning and awareness drive on Gandhi Jayanti.

Swachhata Hi Sewa 2024 campaign started with a pledge taking event under where students and staff members of NIT Durgapur took part and pledged to maintain cleanliness and inspire others also in doing so. NSS volunteers performed awareness rally around the campus encouraging residents to keep their surrounding clean, not to litter plastic bags around and encouraged them to use jute bags. Campus cleaning drive was also carried out time to time with faculties, Registrar joining hands with Safai Karmacharis as a tribute to Safai Karmacharis who give their toil throughout the year.

NIT Durgapur concludes with Slum sanitation camp at Ranchi Colony under Sampoorana Swachhata through Shramdaan including Swachhata Lakshit Ekayi. Prof Arvind Choubey leads NITD students, faculty and officers in the cleaning and awareness drive on Gandhi Jayanti. Littering plastics were collected in and around the slum area and bleaching powder was sprayed in open drains and near water areas. The local residents also joined hands in cleanliness drive and it fulfilled the motto of community participation encouragement. A cloth donation drive was also organized where clothes were distributed amongst slum children who participated in Swachhta Drive to motivate them to continue the good works





National Institute of Technology Durgapur



Hindi Pakhwada(14th – 28th September 2024):

Hindi Pakhwada is celebrated to promote the use of Hindi and highlight its cultural importance. At NIT Durgapur, NSS organized essay writing, quiz competitions, poetry recitation, and speeches, which saw enthusiastic student participation. The events encouraged creativity, strengthened appreciation for Hindi, and showcased its unifying role in our diverse nation.



Fire Safety Training (19th October 2024)

National Institute of Technology Durgapur, an institute of National Importance under Ministry of Education, Govt of India organized a Fire Safety Training for NSS students of the institute. Dr Shri Krishan Rai, NSS Coordinator, & PRO of the institute delivered the welcome address and introduced the CISF teams of SAIL DSP Durgapur who had visited the institute for conducting the training. In front of the Main Academic Building, the team demonstrated the different types of Fire Extinguishers along with the different ways to control fire in presence of students, security staffs and faculties of the institute.

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Constitution Day (26th November 2024)

Constitution Day (Samvidhana Divasa), also known as "National Law Day", is celebrated in India on 26 November every year to commemorate the adoption of the Constitution of India. National Institute of Technology Durgapur, an institute of National Importance under Ministry of Education, Govt of India organized Constitution Day on 26th November 2024. The occasion was started by reading out the preamble by Registrar (I/c) of NIT Durgapur. Thereafter, the NSS Team of NIT Durgapur also organized a quiz competition on Constitution Day.





National Institute of Technology Durgapur

Celebration of Jan Jatiya Gaurav Diwas (15th November 2024)

November 15 is celebrated as Janjatiya Gourav Diwas or Tribal Pride Day to honour tribal freedom fighter, Birsa Munda. Birsa Munda led a rebellious movement against British colonial rule and conversion activities in the areas of the Bengal Presidency, which today are part of Jharkhand.

National Institute of Technology Durgapur also organized Janjatiya Gourav Diwas on 15th of November 2024 at the Institute Senate Room by arranging a seminar. The NSS Team of NIT Durgapur also organized an essay competition.



NSS parade for Republic Day(26th January 2025):

Republic Day is celebrated to honor the adoption of the Indian Constitution and the nation's democratic values. NSS volunteers of NIT Durgapur marked the day with enthusiasm and pride. After 18 days of parade practice, the final parade was presented before the Director and audience. Volunteers also showcased their creativity and patriotism through art and craft exhibits.



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Medical Camp:

NSS NIT Durgapur organizes medical camps to provide basic health services and raise awareness about well-being. Blood donation camps are also conducted to support hospitals and save lives. Volunteers actively participate in these initiatives, offering medical guidance and assistance. These efforts reflect NSS's commitment to community service and social responsibility.





Yuva Samvad:

Yuva Samvad is an initiative to encourage dialogue, exchange of ideas, and active participation among youth on social, cultural, and national issues. NSS NIT Durgapur organized sessions where students could voice their opinions and engage in meaningful discussions. The program aimed to develop leadership, critical thinking, and a sense of responsibility among participants. It also provided a platform to inspire youth towards positive action and community engagement.



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Why it should be included in co-curricular activities?

Apart from participating in early morning parade practice three times a week, students actively engage in various social and community activities. These experiences are valuable, helping first-year students develop discipline, teamwork, social responsibility, and overall personal growth. Including NSS in the curriculum offers practical exposure beyond academics, making it both meaningful and beneficial for students' holistic development.

7.3 Games & Sports Facilities:

The Student Activity Centre has adequate infrastructure facilities for both outdoor and indoor games. The Centre has one central air condition Gymnasium equipped with sufficient number of equipment's. Different slots are provided to all the users as students (Male & Female), Employees and their spouses. The Institute play grounds (Oval & Lords) always bubble with outdoor activities like football, cricket, handball, athletics, hockey, cultural and technical activities. Turf and concrete courts with flood light facilities are also available in volleyball, basketball tennis, badminton etc.

Student Activity Centre has an air condition indoor auditorium, which accommodated 500 seating capacity multi activity auditorium includes Badminton synthetic court, Table Tennis boards and Chess facilities.

Beside central sports facilities, most of the halls of residence equipped with Volleyball and concrete Badminton courts. Indoor games like Table Tennis, Carom boards & Chess are also available.

7.3.1 Games & Sports Participation

- In the year 2024-25 Institute participated in the following All India Inter NIT Tournaments:
 1. All India Inter NIT Football & Lawn Tennis (Men) tournaments organized by NIT Rourkela during October 18-20, 2024.
 2. All India Inter NIT Faculty & Staff Cricket & Chess (Men) tournaments organized by NIT Silchar during December 14-17, 2024
 3. All India Inter NIT Cricket & Chess (Men) tournaments organized by NIT Silchar during December 20-23, 2024
 4. All India Inter NIT Swimming, Athletics (Men & Women) & Power sports (Men) tournaments organized by NIT Surathkal during January 10-12, 2025
 5. All India Inter NIT Badminton (Men & Women) & Kabaddi (Men) tournaments organized by NIT Tiruchirappalli during January 24-26, 2025
 6. All India Inter NIT Basketball & Table Tennis (Men & Women) tournaments organized by NIT Jalandhar during February 07-09, 2025.
 7. All India Inter NIT Volleyball, Yoga (Men & Women) & Handball (Men) tournaments organized by NIT Warangal during February 21-23, 2025
 8. All India Inter NIT Kho-Kho (Men & Women) & Hockey (Men) tournaments organized by NIT Calicut during March 07-09, 2025.
- Achievement in 2024-2025:
 1. Secured Two Gold and One Silver medals in All India Inter NIT Body-Building Competition (Men) organized by NIT Surathkal during January 10-12, 2025.
 2. Secured Two Silver medals in Women Swimming Championship Organized by NIT Surathkal during January 10-12, 2025.
 3. Secured One Bronze Medal in Track & Field Meet (Women) organized by NIT Surathkal during January 10-12, 2025.



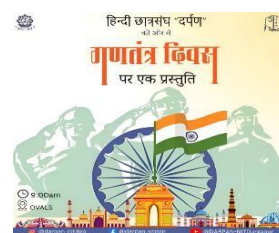
7.4 Clubs/Body/Centres

Name of the Club/Body/Centre: Centre for Cognitive Activities (CCA)			
About us:CCA is the focal point where convergence of all technical and scientific endeavours of the students materialises. As the technical gymkhana of the institute, this club is the revolution which bridges the gap between knowledge and application. Bulk of the extracurricular activities held in the college all the year round are organised by the CCA, with the objective of probing the dark recesses of human mind so that the grey cells are stimulated to create, conceptualise and evolve, triggering a rebellion of the new age mind against baseless conventions and meek acceptance.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Partha Sarathee Bhowmik Dr. Hirok Chaudhuri Dr. Aashish Kumar Bohre	Anish Kalita	Anirudh Sharma	Link: https://www.ccanitd.in
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details	Corresponding Photograph	
1.	Blood Donation Drive (16th March, 2025) This event aimed to raise awareness of blood donation's importance and encourage participation from students, faculty, and staff. Over 100 people had donated blood and been part of this initiative towards society.		
2.	Robozido 3.0(25th-26thJanuary, 2025) An autonomous robotics workshop designed to spark inventive and creative skills in the domain of robotics. The event drew over 200 students, resulting it to be a great successful event.		
3.	Youth Parliament (15thFebruary, 2025) This event featured an engaging parliamentary debate simulation that encouraged open dialogue. The event aimed to strengthen participants' grasp of democratic processes, offer insights into policymaking, and inspire them to effect positive change.		
For Other Activities: https://www.ccanitd.in/			

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Name of the Club/Body/Centre: Dance Club			
About us (within 100 words): Dance Club, NIT Durgapur is the official dance club of NIT Durgapur which actively takes part in all the activities including festivals, Independence Day, Republic Day, Global Alumni Meet, Aarohan ,Recstacy and all other major events in the college ,also conduct our own events which are totally executed by us. We also go to different colleges like IIT Kharagpur, IIM Calcutta, ISM Dhanbad, etc. to participate in different competitions organized by them for dance during their fests and bring laurels to our college by winning.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Deb Ranjan Banerjee & Dr. Rajashree Das	Sathwik Kasoju	Chiluvuru Bala Shanmuka Sri Krishna	Link: DanceClub-Instagram
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	Spring Fest 2023 (24/01/2025) We participated in Spring Fest'25 at IIT-KHARAGPUR- Dance competition 'Centrifuge' on the theme –'GTA Vice City'.		
2.	Step It Up 4.0 (28/01/2025) This is an independent event organized by the club which is focused on bringing out the dance talents from our college. This event has been solely created and conducted by us.		
3.	Moove & Groove 2025 (24/02/2025) The Dance Club successfully organized a vibrant Solo , Duo, Crew members Dance Showdown in RECSTACY 2025. The events invites Participants to showcase their rhythm and energy on stage.		
For Other Activities: Dance Club NIT Durgapur - YouTube			



Name of the Club/Body/Centre: Hindi Chhatra Sangh Darpan			
Our mission is to promote the appreciation and love for the Hindi language and its rich cultural heritage within our college community. By organizing events that celebrate shayari, poems, and other forms of Hindi literature, we aim to foster creative expression, cultural enrichment, and community building. We strive to create an inclusive environment where students can explore, appreciate, and preserve the beauty of Hindi literature, while developing their literary and public speaking skills.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President	Further Information
1. Dr. Manoj Ozha 2. Dr. Ratnesh Kumar	Shashank Sekhar Tiwari	Divyanshu Chaturvedi	1. https://darpannitd.vercel.app/ 2. https://www.instagram.com/darpan_nitdgp/
Five Notable Activities			
S.No.	Name of the Activities, Date and Details	Corresponding Photograph	
1.	Event Name: Independence Day Date: 15 August 2024 Description: On Independence Day, the Darpan club delivers powerful messages in Hindi through poetry and skits. Our members recite patriotic poems and present short plays that reflect India's struggle for independence. Through Hindi expression, we aim to ignite a sense of pride and patriotism in the audience.		
	Event Name: Kahani MeMod Date: 28-31 December 2024 Description: Darpan presents <i>Kahani MeMod</i>, a creative storytelling event where participants are given the opening lines of a story and asked to complete it with their own twist. It's a fun and imaginative space to explore storytelling, express ideas, and enjoy unique narratives shaped by different perspectives. <i>Kahani MeMod</i> celebrates creativity, connection, and the magic of unexpected endings.		
	Event Name: Chai Pe Charcha Date: 20-22 January 2025 Description: Darpan invites all students to <i>Chai Pe Charcha</i>, a special event that brings the warmth and charm of a traditional tea stall to life. On a chilly winter evening, enjoy steaming cups of tea while engaging in lively discussions on a wider range of topics from current issues to everyday challenges. Whether you're looking to debate, learn, or simply enjoy some good company, <i>Chai Pe Charcha</i> promises to be a memorable and enriching experience.		
	Event Name: Republic Day Date: 26 January 2025 Description: On Republic Day, the Darpan club honors the Indian Constitution through performances in Hindi. We highlight the values of justice, equality, and unity with meaningful poetry and stage acts. Each act is thoughtfully crafted to connect students emotionally with the essence of the Republic.		

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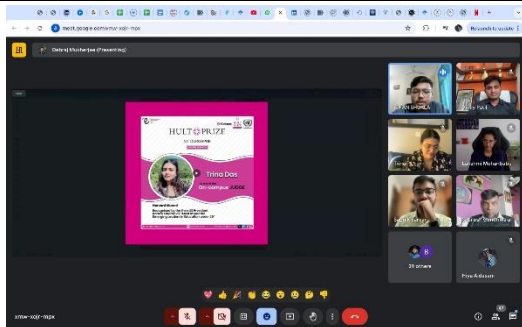
EventName:DarpanAuditions Date:15-17February Description:Darpanconducteditsannualauditi onstodiscovertalentedindividuals across various art forms including drama, music, poetry, anddance. The event served as a platform for students to showcase theircreativity and passion, while also offering them the opportunity tobecome part of the Darpan family. With enthusiastic participation andvibrant performances, the auditions laid the foundation for the cultural	



National Institute of Technology Durgapur

Name of the Club/Body/Centre: Debating Society			
About us (within 100 words): The Debating Society is the official debating club of NIT Durgapur. At its core, this club is an ideological interest group that aims to promote the culture of debating on campus and remove the phobia associated with public speaking. We distinguish ourselves from most other debate clubs at a variety of institutions across the country by emphasizing the use of technology in our practices.			
Name of the Faculty Advisor(s) or equivalent post		Name of the President or equivalent post	Name of Vice President or equivalent post
Asst. Prof. Angshu Jajodia Asst. Prof. Sutanuka Banerjee		Sunil	Shiwani Jain
Further Information Link: https://debsocnitdg p.com			
Three Notable Activities			
S I N O .	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	Vistaar (28 th Mar to 30 th Mar 2025) It is eastern India's first debating fest, offering intense debates and engaging events. Its logo represents the dynamic multifaceted identity of a debater.		
2.	Out House Debates (Tentative Oct to Jan) Representing NIT Durgapur in inter college debates, promoting our college while engaging in competitive thought provoking discussions.		
3.	Reverberate & What-If (25 th Jan 2025) These workshops focused on public speaking and debating, helping students build confidence and improve their skills through hands-on learning and real time practice.		
Name of the Club/Body/Centre: Entrepreneurship Development Cell			
About us (within 100 words): The Entrepreneurship Development Club (EDC) is where creativity and collaboration take shape on campus. It is known for hosting interactive events and competitions that bring students together throughout the year. Its flagship event, E-Summit, is the second-largest entrepreneurship fest in Eastern India, featuring talks, panels, and contests with speakers and professionals. EDC creates an engaging platform for participation and meaningful campus experiences.			

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Name of the Faculty Advisor(s) or equivalent post		Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Prof. Rajat Mahapatra Dr. Manas Kumar Mondal Dr. Debojyoti De		Swastik Banerjee	Ritu Raj Shagun Agarwal	Link:
Three Notable Activities				
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)		
1.	E-Summit(28th Feb – 2nd March): E-Summit, organized by Team EDC, is the second-largest entrepreneurship fest in Eastern India, featuring competitions, speaker sessions, and workshops that inspire innovation and celebrate the spirit of entrepreneurship.			
2.	Hult Prize (5th – 15th December): The Hult Prize is the world’s largest student social entrepreneurship competition in collaboration with the UN. EDC hosts the On-Campus Round, where teams build startups tackling UN SDGs under the guidance of mentors and the evaluation of esteemed judges. Winners move to the Regional Summits, with top teams advancing to the Accelerator and the \$1M grand prize.			
3.	BizCup(9th – 12th Jan): BizCup is a three-round business quiz by EDC, NIT Durgapur, designed to engage students with challenging questions, foster competitive spirit, and reward winners with exciting prizes and recognition.			
For Other Activities: Provide the Link (Institute home page link of each club) https://www.edcnitd.co.in				
For Other Activities: Provide the Link (Institute home page link of each club)				



Name of the Club/Body/Centre: Enteract

About us (within 100 words): Enteract is the official dramatics club of NIT Durgapur, known for its vibrant theatre culture and impactful stage performances. The club actively represents the institute in prestigious cultural festivals across IITs, including **Srijan** at IIT (ISM) Dhanbad, **Spring Fest** at IIT Kharagpur, and many more, showcasing its creativity. Within the campus, Enteract takes a leading role in organizing and performing during important occasions such as Independence Day, Republic Day, and B. R. Ambedkar Jayanti, combining art with patriotism and social awareness. Through street plays, stage play, Monoact, Nukkad natak and thought-provoking performances, the club not only entertains but also spreads strong social and cultural messages, making it one of the most dynamic student bodies of NIT Durgapur.

Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Sujoy Saha / Prof. Rajnarayan Saha	Nidesh Regmi	Ayush Mishra / Sneha Singh	Link: https://www.instagram.com/enteractclub?igsh=Mnd60DFvb mhtMzB0

Three Notable Activities

Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)
1.	Ventures IIT Patna- Anwasha 8th February IIT Dhanbad- Srijan 1st February Enteract Club performed a thought provoking nukkad natak at IIT's raising awareness through powerful street theatre.	
2.	Republic Day: 26th January Independence Day: 15th August , the club presents impactful Nukkad Natak and acts that honor India's freedom struggle and inspire pride among the audience.	

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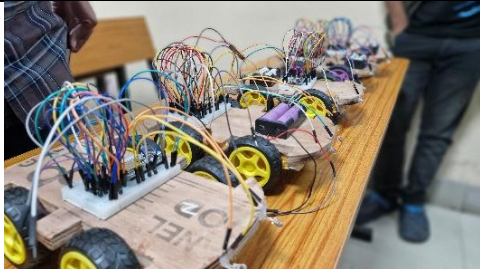
3.	Stage play:Its stage plays bring together powerful scripts, ensemble acting, and impactful direction, leaving audiences engaged and inspired. Monoact:showcase intense story-telling, highlighting deep emotionsand strong socialmessages.	

Name of the Club/Body/Centre: GNU/Linux Users' Group			
About us: The GNU/LinuxUsers Group,NIT Durgapur is a community that promote the use of Free and Open-Source Software. We are aplethora of designers, contributors and developers that believe in learning and sharing through opening up your mind to Open Source. Our contributions include maintaining the college website, building the placement portal, developing the medical unit app .			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Ankush Acharyya Dr. Suvrojit Das	Akash Gupta	Yoshitha Reddy	https://nitdgplug.org
Three Notable Activities			
Sl No.	Name of the Activities, DateAnd its Details	Corresponding Photograph	
1.	The Free and Open Source Conference on 18th January featured a thrilling 12-hour hackathon with 100+ participants and two insightful speakersessions, fostering innovation, collaboration, and knowledge- sharing in the open-source ecosystem.		
2.	On 14th January 2025, we organized the Open Source Starter Pack with 200+ participants, covering Gitcommands,contributionworkflows, and Linux installation, empowering them with essential open-source skills to confidently begin their journey.		



3.	Ten Days of Code, held from 12th December 2024, was a 10-day event with 200+ participants building projects from scratch across five tech stacks: Java, Machine Learning, C++, Python, and Blockchain.	
For Other Activities: ProvidetheLink(Institutehomepagelinkofeachclub) https://nitdgplug.org		

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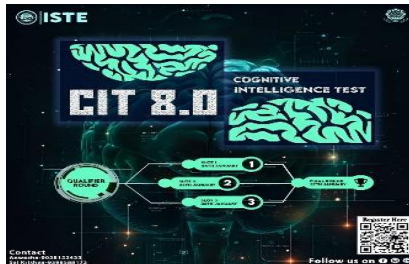
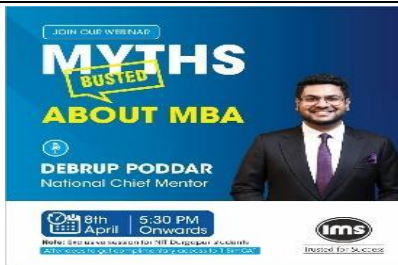
Name of the Club/Body/Centre: IEEE Student Branch, NIT D			
About us (within 100 words): The IEEE Student Branch, NIT Durgapur is a community of innovators passionate about technology and its applications. It offers students a platform to explore IoT, AI, robotics, and embedded systems through workshops, hackathons, and seminars. The branch emphasizes technical growth, leadership, teamwork, and networking, while engaging with industry experts and alumni. Beyond technology, it nurtures management and communication skills, shaping members into future-ready professionals and impactful contributors to society.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Aashish Kumar Bohre and Mamata Dalui Chakraborty	Atish Kumar Singh	Nitu Kumari Mahato	Link:
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	EVENT: NVISION DATE: 18 th & 19 th JANUARY 2025 DETAILS: Nvision guides juniors to build voice-command robots, introducing them to IoT, sensors, and embedded programming through hands-on learning.		
2.	EVENT: CREALTE DATE: 9 th NOVEMBER 2024 DETAILS: CreAlte is an IEEE SB NIT Durgapur event where expert speakers guide juniors on AI/ML, offering insights into fundamentals, applications, and career opportunities in emerging technologies.		
3.	EVENT: ARCANE DATE: 27 th OCTOBER 2024 DETAILS: Arcane is an online treasure-hunt by IEEE SB NIT Durgapur, featuring riddles, puzzles, and mystery themes like "Cicada 3301." Open to students nationwide, it tests creativity and problem-solving through progressive rounds, with winners earning exciting rewards.		
For Other Activities: Provide the Link (Institute home page link of each club)			



National Institute of Technology Durgapur

Name of the Club/Body/Centre: Indian Institute of Metal (IIM), Students' Chapter, NIT Durgapur			
About us (within 100 words): IIM aims to provide a source of in-depth knowledge for the students and guide them in modelling a better perspective in their professional career in the field of Metallurgical and Materials Engineering.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Manab Mallik Dr. Supriya Bera	Soumili Ghosh	Shiva Mani Manthri	Link: https://nitdgp.ac.in/p/iim-student-chapter
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	Meta-Wiz (Quiz Competition)		
2.	Meta-Talk (Online Seminar)		
3.	Meta-Conclave (Poster Making competition)		
For Other Activities: https://nitdgp.ac.in/p/iim-student-chapter			

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Name of the Club/Body/Centre: ISTE			
INDIAN SOCIETY FOR TECHNICAL EDUCATION STUDENTS' CHAPTER, NIT DURGAPUR The Indian Society for Technical Education(ISTE) is the leading National Professional non-profit making Society for the Technical Education System in our country with the motto of Career Development of Teachers and Personality Development of Students and overall development of our Technical Education System.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Sabyasachi Biswas Dr. Nilanjan Biswas	Rupam Kumar	Anwesha Roy Oishi	Link:- www.istenitdgp.com
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	COGNITIVE INTELLIGENCE TEST (CIT 8.0) DATE: 24th January, 2025 to 27th January, 2025 MODE: Online DETAILS: This online event simulated the screening process of top companies, allowing participants to showcase their skills in basic math aptitude, verbal and logical reasoning, and data interpretation. It provided an opportunity to test their abilities and gain insights into competitive exams like the CAT. PARTICIPATION:500+		
2.	ISTE AUDITIONS DATE: 3rd February, 2025 to 10th February, 2025 MODE: Offline DETAILS: ISTE auditions for 1st and 2nd years began on 3rd February at 6:00 PM. The event covered domains including Web Development, Graphic Design, Video Editing, Event Management, and Content Writing. PARTICIPATION: 100+		
3.	WEBINAR(Myths Busted About MBA) DATE: 8th April, 2025 MODE: Online DETAILS: A webinar on “Myths Busted About MBA” was conducted exclusively for NIT Durgapur students by Debrup Poddar, National Chief Mentor. The session provided valuable insights into MBA preparation . PARTICIPATION: 250+		
For Other Activities: Webinars (in collaboration with IMS and Top One Percent)			



National Institute of Technology Durgapur

Name of the Club/Body/Centre: Literary Circle

About us : The Literary Circle is one of the active student bodies of NIT Durgapur, dedicated towards encouraging creativity and thought. Through events like NITMUN, or Verve, which is East India's largest youth cum literary festival, and Literati (annual creative writing competition), it helps students to engage in healthy debate and bring out their creative side. It also organizes TEDxNITDurgapur, which resonates with TED's mission of discovering "ideas worth spreading". It publishes The Yearbook, presented to the batch passing out, which is a condensation of their time spent in the college. During Recstasy, it also organizes StarTalks.

Name of the Faculty Advisor(s) or equivalent	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Angghita Bhattacharjee Debayyan Das	Melita Saha	Srijan Chowdhury	Link: https://lcnitd.co.in/

Notable Activities

Name of the Activities, Date And its Details	Corresponding Photograph (one for each activity)
NITMUN-XIII: The 13 th edition of NITMUN was held from the 25th to the 26th of January 2025 . We saw participation of 150+ from the campus and beyond who turned into delegates navigating complex global issues. NITMUN has been instrumental in fostering public speaking, global awareness, cooperation, problem-solving, and leadership abilities. Committees: UNODC, UNSC, AIPPM	
VERVE-XX: The 20 th edition of Verve, the annual youth-cum-literary fest, was held from 13-16th March 2025 . We saw participation from 280 individuals across events like Literati (creative writing competition), Open Mic, Velmora, Chronorate and Treasure Hunt, that aimed to promote self-expression and tested their critical thinking acumen.	
YEARBOOK 2025 The Yearbook is a gifted possession from the Literary Circle to the graduating batch of B.Tech students every year. Photoshoot for the Batch of 2025 were held at the Basketball Court during the month of March, 2025 and we were successful in ensuring that the Yearbook not only served the purpose of class photographs but to serve as a time machine encapsulating their NIT Durgapur journey.	

Other Activities: Provide the Link : <https://lcnitd.co.in/>

Name of the Club/Body/Centre: Maths N Tech Club

Annual Report 2024-25

The Maths N Tech Club (MNTC) of NIT Durgapur is a dynamic hub of innovation, logic, and leadership. Contributing to Aarohan, Eastern India's second-largest tech fest, MNTC fuels curiosity through workshops and its magazine, Anveshan. Weekly gems like Finance Friday and Monday Mint simplify finance and spotlight trending tech and business insights. From bridging classroom concepts with real-world challenges to encouraging problem-solving and creativity, MNTC empowers students to grow, lead, and thrive. It's not just a club—it's where ideas ignite and futures are forged.

Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
1.Dr..Pinaki Pal 2.Dr..Lakshmi Kanta Dey	Shreyansh Agrahari	Koushik Kumar Paul	https://share.google/QLzLORC75yp3Hx31d

Notable Activities

SI No.	Name of the Activities, Date And its Details	Corresponding Photograph
1.	Event Name: Graphic Design Workshop Date: 19-20 January 2025 Description: MNTC's Annual Graphic Design Workshop brought together budding designers and creative minds for an inspiring journey through the world of design. Participants explored the power of Photoshop, Illustrator, InDesign, and Figma, mastering the fundamentals and transforming ideas into stunning visual projects. Perfect for beginners and enthusiasts alike, the workshop was a celebration of creativity, skill-building, and design innovation.	
2.	Event Name: Key Talks 2.0 Date: 9 February 2025 Description: Key Talks 2.0 featured Sumersingh K Rajpurohit, founder of Last Moment Tutions and ed-tech trailblazer, who turned last-minute learning into a movement through innovation, creativity, and powerful insights on entrepreneurship.	
3.	Event Name: Audition and Induction Date: 31 January 2025 Description: The Maths N Tech Club audition took participants through an electrifying five-round journey—starting with self-introduction, followed by task evaluation, a challenging group discussion, and wrapping up with gripping personal interview rounds. The Induction session is a welcoming experience where new members receive certificates, discover various opportunities within the MNTC family, and get to know their clubmates through fun and interactive activities.	



Name of the Club/Body/Centre: The Official Music Club Of NIT Durgapur			
About us (within 100 words): Mu-C, the Music Club of NIT Durgapur is a platform for students to explore and perform every kind of music. From Indian classical to Western and experimental, it celebrates musical diversity. It fosters creativity through performances, workshops, and jam sessions and build vibrant community where every artist finds their voice.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Debayan Das Dr. Tushar Kanti Bera	Satwik Bhowmick	Utkarsh Upadhyay	Link:
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	LIVEWIRED – Date – 11/02/2025 Livewired is the Music Club's annual showcase, a cozy, campus-wide evening where every member takes the stage, bringing together soulful performances and a shared love for music.		
2.	RECSTACY – Date – 24/02/2025 Recstacy, the college's annual cultural fest, features a special performance by the official Music Club, bringing music, rhythm, and energy to the heart of the celebration.		
3.	AAROHAN – Date – 21/03/2025 At Aarohan, the Music Club transforms the tech fest experience, blending vibrant performances with innovation-driven energy, creating a unique harmony of music and technology on campus.		
For Other Activities: Provide the Link (Institute home page link of each club)			

Annual Report 2024-25

Name of the Club/Body/Centre: PRAKRITI, The Techno Environmental Club of NIT Durgapur

About us:

We strive to make a difference and inculcate the seed of awareness and action in the minds of prospective engineers to make this environment a sustainable place for every living being. Our motto is to change the notion that Engineers do not care for environment into making every individual on campus, a Green Engineer, who minimizes the risk of pollution that might be caused with new inventions or breakthrough research in technology. As a club, we imbibe to the values our Mother Nature has taught us: Perseverance, Sustenance and Progress. Right from its rootage, Team Prakriti has made true those envisions of the founders of our club and crossed many milestones ever since its onset. We conduct our events throughout the year, reminding and awaking the slumbered minds, the importance of environment and its preservation.

Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Prof. Tamal Mandal Prof. Irfan Ahmed	Shubam Kumar	Jaswanth Kandregula	Link- https://www.prakritinitdgp.co.in/
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	RUNIT Organized on March 21, 2025, following the completion of all necessary approvals. RUNIT was 7-kilometer mini-marathon and the flagship event of Club Prakriti. All participants were provided with refreshments and certificates, along with exciting prizes for all winners and runners. This event successfully attracted 360 participants in total, showcasing its promotion of physical activity, fostering community spirit, and raising environmental awareness. Participants enjoyed refreshments, certificates, and exciting prizes, enhancing their experience.		
2.	GREEN-X The Green X event, in collaboration with NSS, promoted sustainability on campus on March 16 th , 2025, through "Roll up Rags," students cleaned non-biodegradable waste around the campus. This activity encouraged responsibility towards maintaining a cleaner environment in "Build the Terrarium" participants showcased creativity using discarded plastic tins. The waste tins were beautifully repurposed into eco-friendly terrariums. Overall, the event blended awareness, cleanliness, and innovation effectively.		
3.	SQUAD HUNT The Squad Hunt was an exciting event conducted on 2nd February 2025 around the campus. It featured a thrilling treasure hunt that engaged participants in solving clues and exploring different spots. Along with this, fun games inspired by Squad Game were organized, focusing on teamwork and strategy. The event not only brought fun and thrill but also strengthened team coordination and bonding among students.		



For Other Activities: <https://www.prakritinitdgp.co.in/>

Name of the Club/Body/Centre: QuizInc

About us: QuizInc, the quiz club of NIT Durgapur, was founded in 2003 by students Harish Mohan and Anup Nair. With a legacy of over two decades, it fosters curiosity, critical thinking, and social responsibility. The club hosts quizzes, treasure hunts, and fandom events, collaborating with institutions nationwide. Through outreach programs, QuizInc promotes learning beyond campus, inspiring a culture of knowledge and intellectual growth.

Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
1.Dr. Parag Kumar Guhathakurta 2.Dr. Debasis Chakraborty	Ankan Kumar Kundu	Souvik Sarkar	Link: https://quizinc.vercel.app

Three Notable Activities

Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)
1.	Quizzitch Cup: Quizzitch Cup 2024, the flagship quiz fest of NIT Durgapur, featured multiple events over three days, uniting top minds nationwide in a showcase of knowledge, strategy, and teamwork.	
2.	Qriosity: Qriosity is QuizInc's annual offline quiz for NIT Durgapur freshers, offering a fun, competitive platform to explore diverse topics and ignite their passion for quizzing.	
3.	Gone Viral Quiz: GoneViral is QuizInc's flagship pop culture quiz held during Recstasy, NIT Durgapur's cultural fest—celebrating memes, movies, music, and everything viral in a high-energy showdown.	

For Other Activities: Provide the Link (Institute home page link of each club)

Annual Report 2024-25

Name of the Club/Body/Centre: RADIONITROZ			
About us (within 100 words): RadioNITroz , the official entertainment club of NIT Durgapur, fosters creativity and student engagement through diverse events and initiatives, serving as a platform to showcase talent and strengthen the campus community.			
Name of the Faculty Advisor(s)	Name of the President	Name of Vice President	Further Information
Dr. Santanu Paul Dr. Soumya Chatterjee	Duvvu Sai Sahil	Sk Raj Ali	www.radionitroz.in
Three Notable Activities			
Sl.No.	Name of the Activities, Date and its Details	Corresponding Photograph	
1.	EVENT NAME -Wave Craze (GLAM-ITUP) Date -10/04/2025 Step Into the Spotlight: Fashion Show Extravaganza. Are you ready to witness the ultimate blend of creativity, style, and glamour? The stage is set, and the runway is calling. We, Radio NITroz, the official entertainment club of NIT Durgapur, presents _GLAM IT UP_, a modelling event where every step down the ramp is filled with the cheering glee of an unbound crowd. Venue : New Auditorium		
2.	EVENT NAME –Movie Mystic Date - 10/04/2025 Experience the Magic on the Big Screen! Don't miss out on this awesome movie night experience. Whether you're a cinephile or just looking for a fun evening, this event is for you. Tell your friends, mark your calendars, and get ready for an amazing time at the movies. We'll see you there! Radio NITroz brings you Blockbuster Fun so chill with this vibe and have fun with friends. Venue : New Auditorium		
3.	EVENT NAME -Talent-X Date -10/04/2025 Introducing TalentX : Unleash Your Inner Star! We, the team of RadioNITroz Calls all performers, dreamers, and doers! TalentX is here, and it's your chance to shine like never before. This is the ultimate platform for students to showcase their incredible talents and leave the audience in awe. Whether you're competing or cheering for your friends, you won't want to miss this high-stopping performance full of talent! So Get ready to unleash your energy, showcase your talent, and be a part of something unforgettable. Venue : New Auditorium		
For Other Activities: www.radionitroz.in			



Name of the Club/Body/Centre: REursion			
About us (within 100 words): We are programming community of NIT Durgapur, with focus on improving coding culture institute wide by conducting regular lectures from beginner to advance topics of programming. Our goal is to increase student's participation in inter-collegiate contest like ACM-ICPC and help them get better.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr.Parag Kumar Guhathakurta, Dr. Sujan Kumar Saha	Prathamesh Mandiye	Richa Shaw	Link: https://recursionnitd.in/
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	REursion Classes for 1st and 2nd years: Classes on Competitive Programming, and Data Structures and Algorithms for 1 st and 2 nd years of our institute, providing the base for their coding journeys.		
2.	Tech talk: We invite speakers from the industry who have had great achievements in the field of Competitive Programming, as well as the tech industry, to share their experience and journey with the students of our institute.		
3.	Tech Town Hall: We invite the final year students of our college who have cracked top MNCs, represented our college at the national level in competitions like ICPC, and SIH, and top GATE/CAT ranks. They share their experiences with the students of our institute and guide them.		
For Other Activities: Provide the Link (Institute home page link of each club): https://recursionnitd.in/			

Annual Report 2024-25

Name of the Club/Body/Centre: SAE INDIA (Society of Automotive Engineers) Collegiate Club NIT Durgapur			
About SAE INDIA Collegiate Club, NIT Durgapur Founded in 2007, the SAE INDIA Collegiate Club of NIT Durgapur aims to immerse students in the world of automotive engineering. We organize a variety of innovative events, webinars, and workshops throughout the year. The club also serves as a competitive platform where the brightest minds come together to achieve excellence. Our mission is to inspire and develop future leaders in automotive technology.			
Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Dr. Jayabrata Dhar Dr. Sandip Kumar Lahiri	Debjit Banerjee	Tanmay Bandhu Jaiswal Souryadip Khan	Website: saenitd.in
Two Notable Activities			
	Name of the Activities, Date and its Details	Corresponding Photograph	
1.	<u>Self-Driving Vehicle (SDV 6.0) Workshop:-</u> Date: 18th & 19th January 2025 Time: 8:30 AM - 12:00 PM and 2:00 PM - 7:00 PM Venue: SAC Auditorium Participants: 215 SAE hosted a workshop on building a self-driving vehicle prototype, focusing on autonomous driving, robotics, and algorithm development. The event explored various levels of automation in vehicles, with participants gaining hands-on experience in navigation, obstacle detection, and decision-making algorithms. The workshop provided valuable insights into the future of autonomous vehicles, sparking interest in advancing self-driving technologies.		
2.	<u>Drag and Drift:-</u> Date: 25th January 2025 Time: 10:00 AM - 8:00 PM and 5:00 PM - 8:00 PM Venue: SAC Auditorium Participants: 120 SAE's Drag and Drift challenged participants to navigate obstacle-filled mazes, testing precision, driving skills, and understanding of vehicle mechanics. The event combined theoretical insights, hands-on practice, and live demonstrations, offering a thrilling introduction to motorsports. With excellent feedback, it inspired participants to explore automotive engineering and pursue careers in motorsports.		
Other Activities: 1) ML Workshop on Automotive Applications: Conducted online on the 9th and 10th of November 2024, this workshop explored the integration of Machine Learning in the automotive sector. With around 100 participants, it offered hands-on insights into cutting-edge technologies driving the future of mobility. 2) CRYPTTECH Video Series: Our club produces CRYPTTECH videos to keep students updated on trending technologies. Topics covered include Slime Robots , Toyota's Hydrogen Combustion Engine , Hyperloop , 3D-Printed Cars and many more, aimed at raising awareness and sparking curiosity about the future of innovation.			

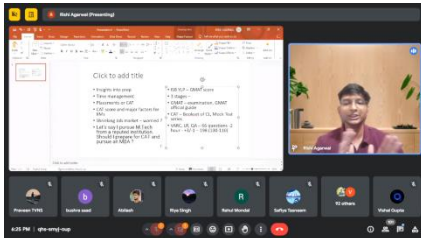


Name of the Club/Body/Centre: Students' Alumni Interaction Cell

About us (within 100 words): The Students' Alumni Interaction Cell (SAIC) of NIT Durgapur serves as a vital bridge between students and alumni, fostering lasting connections and meaningful guidance. Through flagship events like *Alumination*, and initiatives such as the *Students' Alumni Mentorship Programme (StAMP)*, *B-School Chronicles*, and *Pathbreakers*, we provide a platform for mentorship, knowledge-sharing, and career insights. Our mission is to celebrate the achievements of our alumni while empowering students with their experiences, creating a strong, supportive community that extends far beyond the campus.

Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
Prof. Shri Krishan Rai Dr. Manisha Bal	Swarnim Suryansh	Reshmi Saha Bushra Saad	Link:

Three Notable Activities

Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)
1.	StAMP- A mentorship initiative by SAIC, designed to connect students with successful alumni. The program helps students unlock their potential, set meaningful goals, and gain valuable insights to excel in their professional journeys. Date: 28th February 2025	
2.	B-School Chronicles- A podcast series where alumni share their journeys from engineering to top B-schools. With insights on exams, B-school life, and careers, it guides students toward successful management paths. Date: 18th May 2024, 07th November 2024, 07th December 2024	
3.	Alumination- A dynamic series of events — Ideathon, LinkedIn Bootcamp, CaseXpert and more — designed to sharpen skills, unlock career insights, and connect students with inspiring alumni. Date: 29th March 2025-30th March 2025	

For Other Activities: <https://www.alumninitdgp.in/>

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Name of the Club/Body/Centre: SPIC MACAY HERITAGE CLUB			
Society for the Promotion of Indian Classical Music And Culture Amongst Youth promotes intangible aspects of Indian cultural heritage through Indian classical music, dance, yoga, meditation, crafts and other forms of Indian culture.			
Name of the Faculty Advisor(s)	Name of the President	Name of Vice President	Further Information
1. Prof Amit Kumar Chakraborty 2. Dr. Subhas Ghosal	Ananya Chatterjee	Durba Sinha	Link:
Three Notable Activities			
Sl No.	Name of the Activities, Date And its Details (within 30 words)	Corresponding Photograph (one for each activity)	
1.	Anubhav(22/09/2024) The annual art and craft workshop organised for the underprivileged children.		
2.	Uttarayan(12/01/2025) Annual Kite festival, organised every year on the day of Makar Sankranti		
3.	Virasat(27/01/2025 - 8/02/2025) The annual cultural extravaganza that celebrates Indian culture and heritage through intensives and performances by eminent awardees.		
For Other Activities: Provide the Link (Institute home page link of each club)			



Name of the Club/Body/Centre: STROKES

About us: STROKES, the official art, photography, and film club of NIT Durgapur, believes creativity is the spark that ignites personal growth. We empower students to delve into the world of artistic expression, from the photographer's eye to the storyteller's voice. Through vibrant events and campus murals, STROKES fosters a community where creativity thrives and leaves a lasting mark. STROKES aspires to be a vibrant hub on campus where NIT Durgapur students can ignite their creativity and explore artistic expression through various mediums like photography, painting, and storytelling.

Name of the Faculty Advisor(s) or equivalent post	Name of the President or equivalent post	Name of Vice President or equivalent post	Further Information
1. Dr. Manoj Ozha 2. Dr. Durbadal Mandal	Swapnil Das Athoy	Rishavdeep Maity	https://strokes-steel.vercel.app/ https://www.instagram.com/wearestrokes

Three Notable Activities

Sl No.	Name of the Activities, Date And its Details	Corresponding Photograph (one for each activity)
1.	Event Name: Kalakriti Date: 21, 22, 23 February Venue: Ovals Description: The flagship event of STROKES, Kalakriti is our most awaited annual art and photography exhibition, where you'll get a smash of imagination garnished with creativity and a dash of nostalgia as well as reality checks. As we carry a huge sack of expectations and pressure on our shoulders, Strokes lend us their hands as it leads us to a different reality, a reality where there's no monotony, no melancholy, no rat race, just a world filled with colors and creativity that reigns in our hearts.	
2.	Event Name: Face Painting Date: 21, 22, 23 February Venue: Ovals Description: Get ready to capture the memories of a lifetime at Recstasy's most exciting attraction - The Photobooth! From goofy faces to trendy poses, this experience is sure to put a smile on your face and leave you with stunning photographs that will last a lifetime. Team Strokes will dive into what makes The Photobooth so special and why it's an absolute must-visit during Recstasy.	
3.	Event Name: Photo Booth Date: 21, 22, 23 February Venue: Ovals Description: Ever wonder what goes on behind the scenes of this colorful attraction? From intricate designs that electrify your eyes and give a magical iridescent look in the spotlight of the stage, get ready to be dazzled by the artistry and skill that goes into creating those eye-catching masterpieces on your visage. So flaunt your dazzling face designs painted by Team Strokes.	

For Other Activities: <https://nitdgp.ac.in/p/clubs-1#:~:text=spicmacay.vercel.app/-,Strokes,-Description>

Annual Report 2024-25

7.5 Gymkhana

The Students' Gymkhana at NIT Durgapur holds a pivotal position in addressing the various issues that students encounter on a daily basis. This apolitical student body dedicates its efforts to understanding and resolving the challenges faced by the student community. Through an executive council, the Gymkhana remains actively engaged throughout the year, focusing on domains that directly impact students' lives. Acting as a crucial bridge between the administration and the students, the Gymkhana ensures that student voices are heard and considered in decision-making processes. It advocates for student rights, well-being, and academic concerns, making it an instrumental platform for communication and collaboration.

While the Gymkhana is known for organizing the grand annual cultural festival, Reestacy, its primary focus lies in addressing student issues. It takes a proactive approach to create a conducive learning environment, enhancing facilities, and implementing student-friendly policies. From academic matters to extracurricular activities and amenities, the Gymkhana tirelessly works to enrich the college experience for every student.

Introduction of the food festival, Recrave, yet another initiative that aimed to foster a sense of community and cater to student preferences. However, it is the Gymkhana's unwavering dedication to addressing student issues that truly sets it apart and makes it an invaluable asset for the entire student body at NIT Durgapur.

National Institute of Technology Durgapur Students' Gymkhana, colloquially known Gymkhana is the only representative body of the students of National Institute of Technology, elected by all the regular students of UG and PG courses of the Institute.

The Gymkhana at NIT Durgapur is a non-sectarian, non-communal and non-political body that indulge in normal functioning of the Institute including academic activities and strive for a peaceful ecosystem which supports the growth and advancement of students individually and as a body. It upholds liberty of thought and freedom of expression, equality of status and of opportunity, fostering and developing all co-curricular activities, and creation of a sound and healthy Student-Administration relationship.

8. Annual Accounts

8.1 Information Related to Annual Accounts:

8.1.1 Analysis of Plan and Non-Plan Grants (2024-25)

Plan (General Component) Grants	2667.00 [Rs. In Lakh]
Non-Plan Grants	18654.32 [Rs. In Lakh]

8.1.2 Sources of Grants

Till Financial Year 2002-03	From Financial Year 2003-04 Onward
Govt. of India & Govt. of WB	Govt. of India

8.1.3 Expenditure Position for Last 5 Years

Plan head Expenditure		Non-Plan head Expenditure	
2020-21	Rs. 1801.55	2020-21	Rs. 13417.44
2021-22	Rs. 2317.63	2021-22	Rs. 15323.96
2022-23	Rs. 3272.44	2022-23	Rs. 14982.31
2023-24	Rs. 1836.01	2023-24	Rs. 16545.63
2024-25	Rs. 3529.13	2024-25	Rs. 21371.28

8.1.4 Details of Annual Accounts and Separate Audit Report (SAR)

Grant Received

2024-25 Plan Grant - Rs. 2667.00 Lakh

2024-25 Non-Plan Grant - Rs. 18654.32 Lakh

Expenditure

2024-25 Plan Head Rs.3529.13 Lakh

2024-25 Non-Plan Head Rs. 21371.28 Lakh

Detail Annual Accounts and SAR are provided as an addendum for the ready reference.



National Institute of Technology Durgapur

65th
Annual Accounts
2024-25

(April 01, 2024 – March 31, 2025)

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Annual Report 2024-25

**Scanned Copy of
Separate Audit Report
Of the Annual Account
For the year
2024-25**



65th Annual Report 2024-2025

(APRIL 01, 2024 - MARCH 31, 2025)

राष्ट्रीय प्रौद्योगिकी संस्थान दुर्गापुर

**NATIONAL INSTITUTE OF TECHNOLOGY
DURGAPUR**

M. G. Avenue, Durgapur -713209, West Bengal, India



An Institute of National Importance under Ministry of Education, Government of India