



60th ANNUAL REPORT 2019-20

राष्ट्रीय प्रौद्योगिकी संस्थान दुर्गापुर
NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

Mahatma Gandhi Avenue, Durgapur-713209, West Bengal, India

An Institute of National Importance under Ministry of Education (Shiksha Mantralaya), Government of India

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ANNUAL REPORT
2019-2020

(APRIL 01, 2019 – MARCH 31, 2020)



NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR
Mahatma Gandhi Avenue, Durgapur-713209
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From Director's Desk

It is my pleasure to publish the 60th Annual Report 2019-20 of the Institute highlighting the progress in 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.

NIT Durgapur has consistently been placed among the top 50 NIRF ranking in engineering and 100 overall over the years. The faculty and the students have 662 research articles published/accepted in top peer-reviewed journals in the last year. One hundred and five PhD degrees were awarded. The Institute has also initiated introduction of post-doctoral fellowship, honorary research fellow/scientist scheme and seed grant support for multi-disciplinary research proposals. In its pursuit towards strengthening its common research and academic infrastructure and encourage multi-disciplinary research, it is setting up Utkarsha Bhavan through HEFA loan and established four new advanced centres of research.

A large number of sponsored projects are being executed by the faculty members during the financial year with sponsored projects from DST, DBT, MEITY, DRDO, MoES, DAE, ICMR, UGC-UKIERI, MNRE, CSIR, ICSSR, etc.

The Institute has also made its mark in its outreach activity through participation in Unnat Bharat Abhiyan (UBA) and Rashtiya Avishkar Abhiyan (RAA) programs. Seventy workshop/short-term courses and conferences were organized by various departments of the institute.

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

Professor A. Basu
Director

National Institute of Technology Durgapur

PROGRESS AT A GLANCE (2019-2020)

- The faculty members of the Institute have publication and acceptance of 662 research articles/ reviews in peer-reviewed journals, and also published 370 papers in proceedings of national and international conferences in 2019-20.
- One hundred and thirty two sponsored projects are being executed by the faculty members during the financial year.
- One hundred and five PhD degrees were awarded by the Institute in 2019-20.
- Faculty members acted as reviewers for 284 peer-reviewed journals.
- 514 (UG & PG) students were placed through in-campus interviews in the session 2019-2020. In addition to that 57 (UG & PG) students secured more than one job. 117 companies, including most of the global players, visited the campus to recruit UG students while 39, 17 and 6 companies recruited the M Tech, MCA and MBA students respectively.
- Seventy workshop/ short-term courses and conferences were organized by various departments of the institute.
- Several UG and PG academic programs were accredited by NBA.
- The 15th Convocation was held on September 07, 2019. Padma Bhushan Prof. Bikash Sinha, former Director, Variable Energy Cyclotron Centre and Saha Institute of Nuclear Physics, Kolkata graced the occasion as the Chief Guest. Professor Indranil Manna, former Director, IIT Kanpur and CGCRI Kolkata, was the Guest of Honour. In the convocation, 768 B. Tech., 205 M. Tech., 28 MBA, 33 MCA, 30 MSc, 10 MSW and 79 PhD degrees were awarded. The B Tech and M. Tech programmes of various departments are accredited by NBA committee.
- Various projects such as 1500-capacity auditorium, augmentation of lecture halls and galleries, renovation of Central Library, ramp & toilets for differently abled students, Internal renovation of staff quarters, augmentation of CSE Dept., construction of EE measurement laboratory are in progress.
- The construction of Utkarsha Bhavan was started on a HEFA loan. It will house four centres of advanced research and central research and laboratory facilities
- Under Unnat Bharat Axiyan 2.0, NIT Durgapur has been selected as a Regional Coordinating Institute (RCI) of the eastern region.
- The Institute has been actively participating in the TEQIP-III program, a World Bank assisted programme for improvement in quality of technical education and research.

1.0 Introduction

1.1 VISION DOCUMENT

VISION

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

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.

OBJECTIVES

1. To choose a fully inclusive growth path, carrying all the students, the faculty members and the staff with it.
2. To focus on excellence and innovation.
3. To attribute greater emphasis on post graduate education and research.
4. To focus on inter-disciplinary research.
5. To encourage the faculty to take up more sponsored projects and consultancy, and increase internal resource generation.
6. To become a major player in the endeavour to make India a most favoured destination for international students and global research.
7. To collaborate with premier universities and organizations across the globe on research.
8. To initiate undergraduate students to research very early in pursuance of the "catch them young" policy.
9. To restructure the academic departments, and to set up schools and centres to offer interdisciplinary post graduate and doctoral programmes.
10. To reorient/ restructure the academic programmes in keeping with the developments and market forces.
11. To revise the curricula and syllabi regularly.
12. To initiate greater interaction with industries in the areas of collaborative projects and programmes, exchange of resource persons and training of students.
13. To remain committed to responsibilities towards providing services to community, to make people aware of crucial socio-technical and socio-economic problems, and offer technical solutions in rural, urban and agricultural sectors.

ACTION PLAN

A. RESEARCH

1. In addition to the existing research areas, new research activities will be taken up in different thrust areas. The required infrastructure will be set up to support such

activities. Intake of Institute full-time research scholars will be increased as they play a vital role in sustaining research activities in an institution. Moreover, they will cater to the urgent requirement of faculty in the technical education sector. As has been the practice, freshly recruited young faculty members will be provided with start-up grants for quality research project proposals by the Institute. Funding from TEQIP-III, plan grant and different sponsoring agencies will be utilized for the enhancement of research activities.

The Institute will focus on a few research areas where it would like to excel and lead the country, such as Environment, Energy, Biotechnology, Corrosion, Structure, Water Resource, Power Systems, High Voltage Engineering, Microelectronics, Microwave, Machine Design, Thermal Engineering, Materials, Nanotechnology, and Software Engineering.

2. To initiate students to research early, all students including undergraduate students will be encouraged to get engaged in research early. As has been the practice, the students will be financially supported for international research internship and for presenting papers in national and international conferences. They will also be associated with collaborative research projects.

B. COLLABORATION

1. Collaborations with various premier academic and research institutions in India and abroad have been established. It encompasses exchange programmes of faculty and students, joint academic programmes and research activities. More number of joint research proposals with premier academic and research institutions will be submitted to various funding agencies.
2. A special focus has been placed on forming inter-NIT research groups in multi-disciplinary thematic areas. Joint projects, doctoral and post graduate research will be carried out to gather synergistic benefits.
3. In order to strengthen the industry-academia platform, collaborative research programmes, participation of experts from industries in academic decision-making, invited lectures, training programmes for industry personnel will be further enhanced. Internship in industries shall be encouraged.

C. TEACHING & TRAINING

1. To strengthen existing B. Tech. programmes – The UG laboratories will be further expanded and augmented. Teaching-learning process has been modernized with teaching aids and learning resources. It will be further upgraded as required. Online students' feedback system on the performance of the faculty is being introduced.
2. To strengthen existing PG Programmes – 16 existing M. Tech. Programmes will be strengthened by modernizing the PG laboratories. In TEQIP (Phase II) various PG laboratories have been modernized.

3. New academic programmes in emerging areas will be introduced. Skilled postgraduates will be produced in areas having market demand.
4. The curricula and syllabi are revised regularly in keeping with technological advances. External experts from industries and academia will be consulted in the endeavour.
5. More multi-disciplinary academic programmes will be encouraged in order to bring more flexibility in academic programmes.
6. In order to provide with academic support to weaker students, remedial teaching and special training on soft skill will be conducted.
7. The faculty members will be encouraged to participate for refresher courses, training programmes and collaborative research programmes to premier institutions in India and abroad. They will also undertake pedagogical training. The staff members will also be trained in different areas. The entire training programme will be based on an exhaustive training need analysis carried out by the departments.
8. More Continuing Education programmes for the faculty members and staff of academic institutions and industry personnel will be organized regularly. A Continuing Education cell will be set up.
9. In order to enhance the Institutional Management capacity, the responsible officials like Deans and Heads will be exposed to modern management techniques so that these tools may be used in education management.

D. INFRASTRUCTURE DEVELOPMENT

1. To strengthen central academic facilities – Various central academic facilities like computer centre, library, workshop, central instrumentation facility, etc. will be modernized. More text books shall be issued to the students.
2. Institute Automation – A comprehensive Institute Automation system will be set up to integrate all the activities of the Institute, to speed up the decision-making process and to move towards a paperless and transparent administration.
3. Campus Expansion – The present campus is now grossly inadequate in view of the recent and future expansion of the institute. It has become absolutely necessary to acquire additional land around the present campus for expansion. In case it is not available, land may be explored in and around Durgapur to set up a second campus.
4. Expansion and improvement of Infrastructure – Infrastructure needs urgent expansion to cope with rapidly increasing strength of students and faculty. Though additional facilities are being set up, it needs much more. Construction of more students' hostels, faculty quarters, and academic blocks housing classrooms, laboratories, faculty rooms and other supporting infrastructure are needed urgently. The entire Institute campus should be made wi-fi enabled. The infrastructure for health service should be expanded and improved. Departmental libraries

should be strengthened. Audio system should be installed in large classrooms. Adequate facilities shall be provided to the staff members. The acute shortage of basic amenities like power and water must be overcome from additional sources.

5. Students' Amenities – Auditorium, Open Air Theater, Swimming Pool and additional playgrounds will be set up. The existing facilities of indoor games and other sports and gymnasium will be expanded.

1.2 EDUCATION SYSTEM

National Institute of Technology (NIT) Durgapur is a leading Institute in technical education. It offers UG and PG programmes in various disciplines of engineering, technology, science and management. Doctoral programme is also offered in engineering, science, and humanities.

NIT Durgapur is a part of the erstwhile REC system where education and national integration were considered inseparable, with half the seats allocated to the students from the state while the rest were reserved for the students from other states. Seats are also reserved for students from backward communities as per the guidelines of the Government of India. The education system is holistic with equal importance being attached to academic as well as overall development of the students.

The Institute awards its own degree since it was granted academic autonomy in July 2003, and it awards its own degree. The Senate is the highest policy-making academic body of the Institute.

1.3 NEW INITIATIVES

NIT Durgapur successfully completed the World Bank-funded Technical Education Quality Improvement Programme (TEQIP) phase II as a lead institute and improved its academic infrastructure and quality of human resources. The Institute is now selected as mentor of NIT Nagaland and Dumka Engg College Jharkhand Under TEQIP Phase III. A new Centre of Excellence on "Advanced Materials" has been set up under TEQIP-II. Over the last several years, NIT Durgapur gradually evolved from a teaching-centric institution to an institution focusing on both teaching and research. The faculty members were encouraged to intensify their research activities. This resulted in a rapid increase in research output, like publication in peer-reviewed journals and being selected for sponsored projects. The Institute also initiated collaborative research programmes with esteemed research and academic institutions like CERN, Geneva, Caledonian College of Engineering, Muscat Oman, National University of Singapore, and many other academic institutions. Internship was arranged for the undergraduate students in CERN, Geneva, Germany and NUS Singapore. A number of seminars, conferences, workshops and short-term courses were organized and the faculty members were encouraged to visit premier institutions in India and abroad for participation in conferences, short-term courses and training programmes. New academic blocks, student hostels and faculty residential blocks have been constructed and the existing academic building is being renovated.

2.0 AN OVERVIEW

2.1 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 nine B. Tech. programmes and sixteen M. Tech. programmes. Besides, a three-year MCA programme and two-year MBA programme are also offered. The Institute has also introduced M. Sc. programmes in Physics, Chemistry and Mathematics with Computer Applications.

2.2 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.

2.3 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

2.4 ADMINISTRATION

NIT Durgapur is an autonomous institution under the Government of India since July 2003. As per MOA, the Institute is headed by a Director and administered by a Board of Governors. It also has Finance Committee and Building and Works Committee. In the Board, there are representatives from the Government of India, the Government of West Bengal, industries, other institutions, and the faculty.

2.5. ACADEMIC PROGRAMMES

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, 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 and two-year full time M. Sc. programmes have been on the offer since 2004 and 2009, respectively.

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.

2.6 PROGRAMMES OFFERED

2.6.A. B.TECH / DUAL DEGREE / INTEGRATED M.SC PROGRAMME:

The Institute provides instruction in the courses leading to Eight Semester (Four Year) B. Tech. Degree / Ten Semester (Five Year) B. Tech and M. Tech Dual Degree / / Ten Semester (Five Year) Integrated M.Sc Degree.

SANCTIONED INTAKE OF PROGRAMME

Name of the programme	Department	Sanctioned Intake in 2019-2020
Bachelor of Technology in Biotechnology	Biotechnology	68
Bachelor of Technology in Chemical Engineering	Chemical Engineering	68
Bachelor of Technology in Computer Science & Engineering	Computer Science & Engineering	169
Bachelor of Technology in Civil Engineering	Civil Engineering	71
Bachelor of Technology in Electronics & Communication Engineering	Electronics & Communication Engineering	88
Bachelor of Technology in Electrical Engineering	Electrical Engineering	90
Bachelor of Technology in Metallurgical & Materials Engineering	Metallurgical & Materials Engineering	68
Bachelor of Technology in Mechanical Engineering	Mechanical Engineering	168
B.Tech & M.Tech Dual Degree in Biotechnology	Biotechnology	5
B.Tech & M.Tech Dual Degree in Chemical Engineering	Chemical Engineering	5
5 year integrated M.Sc in Chemistry	Chemistry	17
Total		817

The students from Andaman & Nicobar Islands were admitted in Supernumerary Quota as was decided by CSAB 2019.

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.

2.6 B. POST-GRADUATE PROGRAMMES**(A) FULL-TIME PROGRAMMES**

The Institute offers 16 four-semester M. Tech. programmes, 1 four semester MBA and 3 four- semester M. Sc. Programmes.

SANCTIONED INTAKE OF M. TECH PROGRAMME

Department	Programme	CCMT	Sponsored	Total
Biotechnology	Biotechnology	18	2	20
Chemical Engineering	Chemical Engineering	18	2	20
Civil Engineering	Geotechnical Engineering	18	2	20
Civil Engineering	Structural Engineering	18	2	20
Computer Science and Engineering	Computer Science and Engineering	72	8	80
Earth and Environmental Studies	Environmental Science and Technology	18	2	20
Electrical Engineering	Power Electronics and Machine Drives	18	2	20
Electrical Engineering	Power Systems	18	2	20
Electronics and Communication Engineering	Microelectronics and VLSI	18	2	20
Electronics and Communication Engineering	Telecommunication Engineering	18	2	20
Mathematics	Operations Research	18	2	20
Mechanical Engineering	Fluid Mechanics and Heat Transfer	18	2	20
Mechanical Engineering	Machine Design	18	2	20
Mechanical Engineering	Thermal Engineering	18	2	20
Metallurgical and Materials Engineering	Metallurgy and Materials Technology	18	2	20
Physics	Advanced Material Science and Technology	18	2	20
		342	38	380

OTHER POST-GRADUATE PROGRAMMES (SANCTIONED INTAKE)

SL. NO.	Specialization (Department)	Open	SC	EWS	ST	OBC	Total
1	Master of Business Administration (MS)	20	6	3	3	13	45
2	M. Sc. (Physics)	10	3	2	2	6	23
3	M. Sc. (Chemistry)	10	4	1	1	7	23
4	M. Sc. (Mathematics)	10	3	2	2	6	23
	Total	50	16	8	8	32	114

ELIGIBILITY**M.TECH**

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.

2.7 ADMISSION PROCEDURE**2.7.A. UNDER-GRADUATE PROGRAMMES:**

As decided by the Government of India, Ministry of Human Resource Development, 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) published by Central Board of Secondary Education, New Delhi, and the same is executed through counseling by Joint Seat Allocation Authority (JoSAA) / Central Seat Allocation Board (CSAB) under guidance from GOI, MHRD.

2.7.B. 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

2.8. 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 undergraduate 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 Human Resource Development. 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.

**STUDENTS' RESEARCH ACTIVITIES
EXTRACURRICULAR ACTIVITIES:****I. CENTRE FOR COGNITIVE ACTIVITIES**

Centre for Cognitive Activities (CCA), is the technical gymkhana of NIT Durgapur. Comprising of five capable cells, CCA, in its true sense, caters to every aspect of what an engineer needs and aspires for. It promotes scientific and technical acumen over different fields such as robotics, entrepreneurship, research, innovation, web design and management. Throughout the year, CCA organizes a variety of events and workshops for the all round development of aspiring engineers. The academic year 2019-20 was one of the most successful sessions, with over 50 events being conducted excellently.

CCA understands the importance of social, economic and political awareness, and the need to improve upon them for a brighter future. Consequently, Youth Parliament was conducted, where different socio-economic and political agendas currently prevailing in India are discussed and sorted in a scaled down version. The Know Your Rights Workshop was also organized as

a stepping stone towards social awareness and change. A start-up fair was organized wherein 11 companies approached for internship profiles and saw participation of over 125 students. To promote the research and innovative temperament, CCA gives opportunities to students to present their research papers via its annual magazine COGNITIO. Additionally, workshops on Web Development, AutoCAD, and Ballywho 4.0 were conducted to impart relevant skills to young enthusiasts.

Robotics and Internet of Things are exciting technological disciplines being heavily researched and innovated upon. To contribute to the development of skilled engineers and fulfill the desires of students to attain expertise over such technologies, CCA organized Manual Robotics, Autonomous Robotics and Home Security Workshops. These workshops witnessed over 500 participants from both in and outside NIT Durgapur.

In pursuit of the club's goal of instilling the spirit of science and technological innovation on a national level, CCA participated in the 9th edition of NIT Conclave held in NIT Rourkela. The team presented path breaking discoveries in research, the entrepreneurial atmosphere, start ups of the college and presented a web app in a hackathon. CCA also worked hand in hand with Team Pegasus and achieved incredible success in Robocon '20, by obtaining a full score and advancing to the 2nd round. CCA members also won Createch (L&T), for their innovative project idea "Alternative Power Harvesting".

One of the major events among the year-long activities of the club is the convention of the Annual Techno-Management fest of the institute, Aarohan, which happens to be the second largest of its kind in Eastern India. Since the start of the fest in 2003, it has led the revolution of instilling a culture of science, technology and innovation among the youth of the nation. Aarohan '20 was a big milestone for CCA. With more than 40 events covering the entire spectrum of technology and management, Aarohan'20 saw an incredible outreach of over 10,000 people. Techmela, the annual science exhibition, witnessed 43 projects from within and outside the host college. Inspiratie 8.0, saw motivational leaders, speakers and entrepreneurs share their valuable experiences with the young minds of tomorrow. Technical workshops on ML and AI, Internet of Things, 3D Printing and Ethical Hacking had massive participation and elevated the spirit of technical extravaganza. Furthermore, the club has always strived to innovate and implement new ideas for the development of an individual's technical abilities and the betterment of the collective conscience.

With more such visionary ideas, determination and unified efforts, CCA will undoubtedly shine brighter in 2020-21 and the sessions to come. DANCE CLUB, The official club for dance, nit Durgapur, providing a platform to showcase the talent, hard work and creativity through dance. A group thriving hard continuously to improve the depiction of many things regarding society, culture and daily life perfectly through the forms of dancing. We take care in development not only as a group but also concentrates on individual improvement. Amidst of classes each and every member of the club spending their valuable time in improving them for entertaining our fellow mates, peeps and members of our surroundings.

The club began its journey with Induction program to First years about the club and we explained about our club and followed with a couple performances based on Bollywood, Semi-Classical and hip-hop style to show the view of how we perform, commence and improve ourselves through the journey with the club.

Next on Independence Day, The club performance based on LGBT awareness among youth. Through the "Dance", the club tried to exhibit the grievances and hardships of the people belonging to the third gender, and how if their potential is utilised, they can be an asset to the society.

We also perform on some special occasions like women empowerment which was conducted by humanity and social science department and we performed and executed the theme perfectly in depicting the importance and the awareness of the women towards development of society.

The club represented the college in Centrifuge which was the group dance event of Spring Fest '20, the cultural fest of IIT Kharagpur which is the largest of its kind in eastern India. Our sequence was based on the Grammy Awards and we performed on one of the best songs of the year 2019 and won many hearts. Our diligence and hard work paid off as we put up a stunning performance that was met with applause and acclamation as the judges also congratulated us on our incredible performance.

On the occasion of Republic Day, we expressed the love and respect towards our national flag by performing on "The Importance of Colours in our National Flag". All years from the club participated and expressed themselves through the graceful act after a very long run practice.

We performed in the FESTS like "Aarohan and Avishkar" in Bollywood and freestyle to entertain all where we have a footfall of around 4000 students including teaching and non teaching staff of the college. We always try to entertain them to the full level.

The club put up a performance in the college on the occasion of Matribhasha Divas. We portrayed the folk dance forms from the various states on our country and put up a very colourful and cheerful show. Our performance upheld the native cultural aspects of certain states through dance and it was greeted with appreciation.

Next, at the end of the year we present ourselves in a show case at Junction Mall where we perform to express ourselves which involves a small theme to entertain the entire crowd.

The club is also active on Youtube. The club is not only active but also work hard to improve the status of the club for an overall stance through our Dance shoots and workshop kind videos.

Centre for Cognitive Activities, NIT Durgapur, in its true sense caters to every aspect of what the club stands for.

Throughout the session, CCA remains active by efficiently organizing various technical workshops and events for college students. It also organizes Aarohan, the second largest techno-management fest of Eastern India.



GENERAL BODY MEETING:

The General Body Meeting 2019 of Centre for Cognitive Activities was presided by Prof N.K.Roy (Chief Faculty Advisor CCA), Dr. P. Kumbhakar (Faculty Advisor CCA) and Prof J. Banerjee (Faculty Advisor CCA). The meeting was attended by each and every member of Centre for Cognitive Activities.

The meeting began with a slide show which presented the year long activities of yearlong the club in the previous session. Prof N. K. Roy then announced the names of the new office bearers for the session of 2019-2020, which was followed by a short speech by the Convener and Head of CCA, Sudipta Chakraborty.

Our faculty advisors encouraged the new team; praising the year-long work done by CCA members and advising us upon certain areas where we need to improve.

The event concluded with the release of Avant 2.0 - The annual newsletter of CCA.

JOSH TALKS:

The Know your Rights workshop was organized by the Core Cell of Centre for Cognitive Activities (CCA) in collaboration with Josh Talks. This was conducted by Avni Bhatia who is a social enthusiast and a trainer at Josh Talks.

The "Know Your Rights" workshop was inaugurated by a video on #Absamjhauntanahin which briefed us about the theme of the workshop. Following which the 6 fundamental rights provided by the Constitution, were introduced and explained in detail. Sensitive topics such as sexual harassment at workplace, custodial rape and domestic violence were also discussed. Next, she talked about some newly formed rights and the instances that led to their formation.

PARICHAY:



Team Centre for Cognitive Activities (CCA) conducted their very first event for the freshers of this academic year, Parichay 3.0, on the 21st of August, 2019. This event was conducted mainly to introduce CCA to all the first years and to let them know the things it does throughout the year.

After the huge turnout took their seats, a short speech on CCA, what it stands for and the functions of the various cells, was delivered to the audience by the Convener and Head, CCA. After this, the General Secretary, CCA, talked about the Core cell and the role it plays in maintaining the functionality of the club. Then Aarohan, one of the biggest techno-management fests of India, which is conducted by CCA, was introduced to the freshmen.



This was followed by the introduction of each cell to the audience, by their respective cell heads. Various robots, models and projects including the quadcopter, were displayed and explained to the audience in detail. In between the presentations, interactive sessions were organized for the audience, where they talked their hearts out about their new college and their technical aspirations. After this, Ballywho 4.0, an online E-cell event, was declared open.

The event was concluded with a fun and brain teasing quiz, Quest-o-mania, to which the audience showed utmost enthusiasm and the winners were provided with chocolates and CCA goodies.

AUTOCAD WORKSHOP:



The Core Cell of Centre for Cognitive Activities (CCA), in association with AICT private limited Durgapur, conducted an AutoCAD workshop on 31st August and 1st September

2019. It was open to students of all years and colleges. A huge number of enthusiastic students turned up for the workshop including a number of outstation participants from BCIT and BC Roy Engineering College as well. The first half of Day 1 of the workshop was spent on the installation of the AutoCAD software and teaching basic elements such as Lines, Arcs and Workspace. Some of the topics covered in 2nd half were basic 2D figures and changing colors. On Day 2, limits, units and various modify commands were taught and implemented in the 1st half. Participants were asked to design a room plan using the various tools and commands they had learnt so far and the results were really amazing. 3D modelling and commands related to it were taught in the 2nd half of Day 2. asked to design a 'hopper' as a challenge to test their skills and the winner was awarded a prize. Certificates were then awarded to all the participants and a group photo of the participants and organizers was taken to conclude the workshop. Overall, the workshop was a great success and each of the participants learnt a lot of new things that'll definitely help them in future.

HOME SECURITY WORKSHOP:



This was a hands-on workshop conducted by the Research and Development Cell of Centre for Cognitive Activities (CCA), solely for the first years. It was conducted with a view to introduce them to the uses of various microcontrollers like Arduino Uno and NodeMCU, and different sensors like MQ2 Gas sensor, and other electronic components. The theme was "A smart home security system".



The first day of the workshop started with an introduction to the concept of smart home security. Following this the participants were taught to build an Antiburglary alarm system using piezoelectric sensor. Next, a brief introduction to the Arduino

microcontroller, the Arduino IDE was given and some hello world projects like blinking of LED etc. were shown to help the first years to understand the coding process in Arduino. Next the methods to make the circuit for laser tripwire alarm system using Arduino microcontroller, LDR, etc. was taught. Next it went on with the explaining of the NodeMCU and introduction to the Internet of Things. This was followed by a hands-on experience to make an IoT project, The Gas Leakage Notifier. With this the first day of the workshop came to an end.

The second day started with the introduction to Python followed by a Motion Detector project using PIR sensor. Next it proceeded with the home automation system, the Project of Universal remote, using IR Receiver and Arduino microcontroller, followed by the project of Voice Controlled Lights.

AUTONOMOUS ROBOTICS WORKSHOP:



The Robocell of Centre for Cognitive Activities (CCA) conducted an Autonomous Robotics workshop for the 1st year students. It went on for two days and was divided into four slots.

The participation was overwhelming which included 70 teams of 4 members each. Basics of coding in C language, how to use a microcontroller and coding in Arduino IDE were the main topics that were taught to the participants. They were informed about different types of sensors. Then finally, it was explained how the codes and algorithms for the different bots work namely, line follower, obstacle avoider and Wi-Fi controlled bots.



The workshop concluded with the launch of the after movie of Aarohan'19.

This was followed by a short certificate distribution ceremony and some goodies for all the participants.

YOUTH PARLIAMENT:

The Sixth edition of Youth Parliament was conducted successfully by the Entrepreneurship Cell (CCA) under the guidance of Prof. S. K. Rai and Krishna Sarkar, an esteemed advocate in Durgapur Court. Students from various schools and colleges from inside and outside of NIT Durgapur participated.

The parliament was divided into two sides, Government and Opposition. Participants were provided with various topics to debate on. The session was carried out with a very formal approach. At the end of the session a bill was drafted. Top performers from both sides, Government and Opposition, were awarded with special mention. The session was covered by students acting as Media Units. The best performer from Media Unit was awarded with special mention as well. Certificates for participating were provide to the participants at the end of the session.

The event turned out to be a great success with overwhelming number of participants. The entire event was covered by Hindi newspaper 'Prabhat Khabar' and an article was published in the same.

MANUAL ROBOTICS WORKSHOP:



The Robocell of Centre for Cognitive Activities (CCA) conducted a workshop on Manual Robotics for the first year students, on the above-mentioned date and time. The entire workshop continued for two days and was divided into 3 slots.

A better participation was observed this time as compared to previous year's, which included 27 teams of 4 members each. The participants were provided with kits and other tools that would be required to make the bot. The motive of the workshop was to make a robot which would pick up small things using gripping mechanism. In the workshop, the students were given an idea about the working principle of switches and how mechanical power gets transmitted.



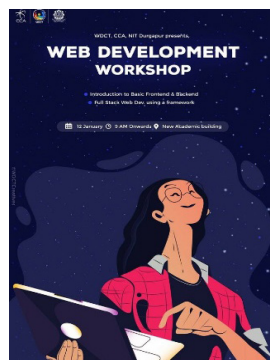
They were also told about gears and geared DC motors, as they would need this much knowledge to construct the manual robot. Some points on machines and mechanism (including 4-bar linkages and rocker bogie mechanisms) were also discussed with the freshers. After this, a lecture on degree of freedom was delivered to the students, which was in turn, followed by constructing the robot.

The workshop concluded with a short certificate distribution ceremony.

BALLYWHO 4.0:

BALLYWHO 4.0, an online event, was organized by Entrepreneurship Cell, CCA. The event was designed to test marketing skills of the participants. It required the participants to promote brands through memes and the entries were posted on the official Facebook page of CCA and we're judged on the basis of likes, comments and shares. The event was a big hit with over 90 entries.

WEB DEVELOPMENT WORKSHOP:



Web Development and Creative Team of Centre for Cognitive Activities conducted a one-day workshop on Web Development.

The main topics that were covered included full-stack development, basic HTML, CSS and full stack frontend Java Script. In the backend, an introduction was given to Django and Python. Other topics included basic knowledge regarding templates and URLs. Finally, the

participants had to apply all the aforesaid knowledge in making a simple blog website and were thoroughly supported by the members of the club

The workshop saw a participation of around 60 students and was a great success. It concluded with the distribution of the certificates to all the participants

START-UP FAIR 3.0:

STIPEND OFFERED 20k-25K	STIPEND OFFERED 10K	STIPEND OFFERED 5K+
STIPEND OFFERED 10K+	STIPEND OFFERED 10K	STIPEND OFFERED 7K+
STIPEND OFFERED 10K+	STIPEND OFFERED 8K+	

ARE RECRUITING AT
STARTUP FAIR 3.0
Portal Link: <http://startupfair.ccanitd.in/>

Entrepreneurship Cell, CCA, organized a STARTUP FAIR as an initiative to help students secure an internship for the summer of 2020. 11 start-ups, which included 1mg, PedalsGo, tan90 etc., coordinated with the club and a very enthusiastic response was recorded on the student's part. More than 125 students applied for the internships. The companies provided internships across profiles like creative writing, web development, business development and marketing

NIT CONCLAVE:



CCA members Swaraj Agrawal, Sneha Singh, Jeswanth Sai Gopi, Adil Hossain, Aashrey Jain represented NIT Durgapur in the 9th edition of NIT Conclave held during 23-25th August 2019 organized by NIT Rourkela attended by 14 other NITs.

Team NIT Durgapur presented the pathbreaking discoveries in the field of research, the healthy entrepreneurial atmosphere and various ingrown start-ups of our college under "Technological Development in NITs: Enhancement of Entrepreneurial and Research Activities".

Then followed a Hackathon with the theme "Technical Developments in NITS". Where in Team NIT Durgapur presented a web application- InoPortal, a cost-effective way to store all the information of a student in a single database using the latest RFID tags.

Later the team actively participated in a Start-Up Hunt event. Finally, the conclave ended with a panel discussion in which our team presented some applaudable points. The panel discussion concluded with several NITs vouching for an Inter-NIT Techfest witnessing collaboration between E-cells of all NITs.

ROBOCON'20:



Team Pegasus, a part of Centre for Cognitive Activities (CCA) participated in Robocon 2020. Robocon is a part of the Asia-pacific robot contest (ABU Robocon) and is organized by Asia-

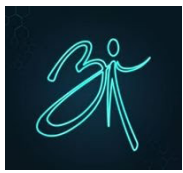
pacific broadcasting union (ABU) since 2002. Over 92 prestigious colleges took part in this event's first round from across the country comprising most of the IITs and NITs.

The problem statement for the first round was that the teams have to design robots which will be playing Rugby against the opponent team. Team Pegasus secured a full score of 100/100 in this event. ABU Robocon 2020 is scheduled to be organized on August 23, 2020 in Suva, Fiji.

CREATECH (L & T):



Ashis Srivastava from Centre for Cognitive Activities participated in CreaTech 2020 organized by Larsen and Toubro(L&T) along with his Team FIJI. There was a total of 6 problem statements out of which they selected "Power Harvesting at Construction Sites" for their project. More than 500 teams from across the country took part in the first round which required them to submit a synopsis regarding their plan on their problem statement. The top 10 teams were called to Mumbai to demonstrate their model. Their innovative project idea, 'Alternative Power Harvesting', using piezoelectric sensors positioned at places of general public use such as speed breakers and footpaths to generate clean alternative electricity was highly appreciated by the judges and was awarded the 1st prize. Team FIJI also received a prize money of Rs. 1,00,000.



AAROHAN'20

DAY 0:



The zeroth day of Aarohan'20 started off with a happy note on the evening of February 7, as the heads of all the organizing clubs got up on stage to address the massive audience in front of them. After this the coordinators of the fest declared the fest open and announced this year's theme (Defense technologies) and then the chief guest, Captain Vivek Madan, from the Panagarh Airbase, took the stage to deliver his speech and imbibed a sense of discipline and passion among the students. After this, a special LED dance performance (Tron dance) was presented by the famous Shivay Inc. group, followed by other musical and dance performances by the various cultural clubs of our college (dance club and spic macay). Next, the stage was taken over by the members of BMEP (an NGO working on the education of underprivileged kids) who entertained the audience by putting up another dance performance. As all these performances ended, team NDORS got busy with their presentation on the automobile they built for an all-India competition which was held just a few days before Aarohan.

The annual science exhibition of Nit Durgapur, TechMela was conducted by Team Aavishkar, where the students presented their technical ingenuity in the form of working models. This time the theme for TechMela was "Assistive Technology" and various

science projects and models (like a quadcopter and rotating LED table) were displayed. Among the projects, few were made by the children of BMEP (like volcano eruption with the help of baking soda) and the majority by the members of R&D cell CCA



Then came the time for the preliminary rounds of all the events. For the first time, the prelims were conducted online to stand strong with the eco-friendly movements running all around the world. A QR code was provided in the Aarohan app which directed the participants to the questions of various events.

After the prelims, music club came up with an outstanding band performance, which marked the end of the zeroth day.

TECHMELA:

The Research and Development Cell of CCA conducted the annual science exhibition of NIT Durgapur, TechMela, during Aarohan. The theme set for this year's TechMela was "Assistive Technology" and the students had exhibited a total of 43 projects including those from within and outside of the host college. Here, the students presented their technical ingenuity in the form of working models, in front of the whole college. The students and the professors came together for exchanging ideas on various science phenomenon and showcased their innovation through the models.

DAY 1:

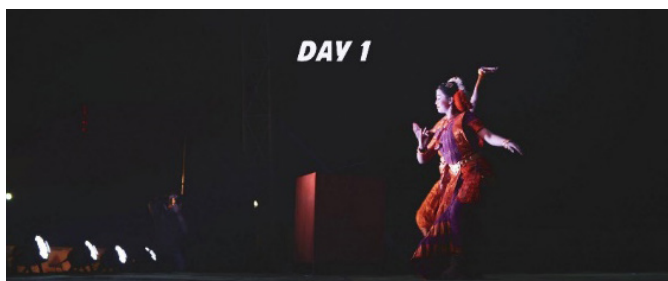


Day 1 of Aarohan commenced with a vibrant morning on 8th February, 2020. The day had a kick start with the most awaited Hackathon and the robotic events like Explorateur. Explorateur

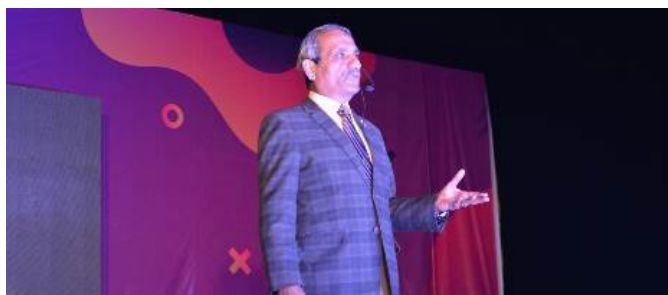
was an autonomous robotics event where the team had to make a robot that would be a line follower as well as an obstacle avoider that could finally move on the given track accordingly. Simultaneously other robotics events like Street Fury and Nuke-clear had their prelims in the robo arena. In these events the teams had to make a manually controlled robot with a hook and a strong gripping mechanism after which they had to compete in a battle field in case of Street Fury and pass through a course of hurdles and diffuse bombs in Nuke-clear. IN the next slot, the flagship event of Aarohan, Invictus started, followed by Bidweiser and the final round of Be A Billionaire. In Invictus, the contestants had to design and make models based on the problem statements given in the genres of chemical, civil, electrical and mechanical engineering. Bidweiser was a fun bidding game where the participants had to take monetary risks and at the same time involve their strategic planning and be a billionaire was a competitive game where people had to bid their way to become a billionaire. The evening began with the rejuvenating speeches of various remarkable personalities in a nutshell, the Inspiratie. After that we proceeded with the Phase-3 and Phase- 4 prelims which comprised the events like Seldom, Rocket It and Maidan-e-creative. The day witnessed the musical melody by Rage n Love band of Music club, NIT Durgapur. In Aarohan's Day 1 midnight, the college found itself engrossed in the exhilarating overnight gaming with games like CS GO and FIFA.

INSPIRATIE:

Entrepreneurship Cell, Centre For Cognitive Activities, conducted their flagship event, Inspiratie in Aarohan 2020. This Inspiratie saw three incredible personalities grace the stage.



In keeping with our theme 'Defense Technology', the first speaker was Lieutenant General Satish Dua, PVSM, UYSM, SM, VSM, often credited as the mastermind who planned and executed the famous surgical strikes post Uri attack. Now retired, he has many laurels to his name and is regarded as a counter terrorism specialist quite aptly. He talked about the preparations that went into executing the surgical strikes. The necessity of discipline and hard work was highly emphasized. He also talked about how the youth can contribute to the nation, not only in defense but in their respective fields.



The second speaker of Inspiratie was Dr. Mou Sen, an immensely reputed alumnus of our college. Starting her career as R&D head of Oxide India Pvt. Ltd., she then served as the HOD of Chemical Engineering in DIATM. She then started working for MSME (Government of West Bengal) and is currently the Joint Director of MSME. She talked about her inspiring journey from being a college student to the Joint Director of MSME.

The third speaker was Mr. Gaurav Tekriwal, author of 'Maths Sutra' and 'Speed Maths'. He has been named as one of India's Top Young Visionaries by Indiafrica and Ministry of External Affairs of India. He introduced the audience to the wonders of Vedic Maths and Speed Calculation. He also talked about his books and the journey of authoring the books.

The event was a great success. The success stories of the speakers were truly inspiring and the inquisitive audience charged up the atmosphere to greater heights.

DAY 2:

Day 2 of AAROHAN'20 began with B Plan. The event was basically a business plan competition where participants were supposed to pitch their business plans or ideas in front of angel investors to get an investment for a start-up. This event was followed by Game of Recruitment. It was a competitive and interview-based event which tested a diverse set of aspects such as originality, coherence and confidence. The event was basically about the participants being witty and improvisational at the same time. It was followed by Contraptions which involved designing a complex mechanism of simultaneous energy conversions to find a complicated solution to perform a simple task. After this we had event Maidan e creative in which participants in groups were given kits and were asked to make something creative out of it. After these events, fest moved to onsite events such as Journo detective. The event was about solving a mystery by following the clues provided to the participants at each checkpoint. The day witnessed the musical melody by Rage n Love band of Music club, NIT Durgapur. After this, we had scintillating performances by the dance club of NIT Durgapur followed by the band performance. In the midnight the college got busy with the overnight gaming event the, Fantasy football.

WORKSHOPS IN AAROHAN:



Aarohan '20 witnessed four enthralling workshops on the most trending technical genres of this era namely Internet of Things, 3D printing, Ethical Hacking, Machine Learning and Artificial Intelligence. The workshops were conducted by distinguished trainers using various modern techniques such as online live lectures, videos and presentations.



The 3D printing workshop enlightened the participants on the technologies in 3D printing, fundamentals of CAD software, operating a 3D printer, latest trends in it and its practical applications. They were also given hands on printing experience with an actual 3D print to take away.

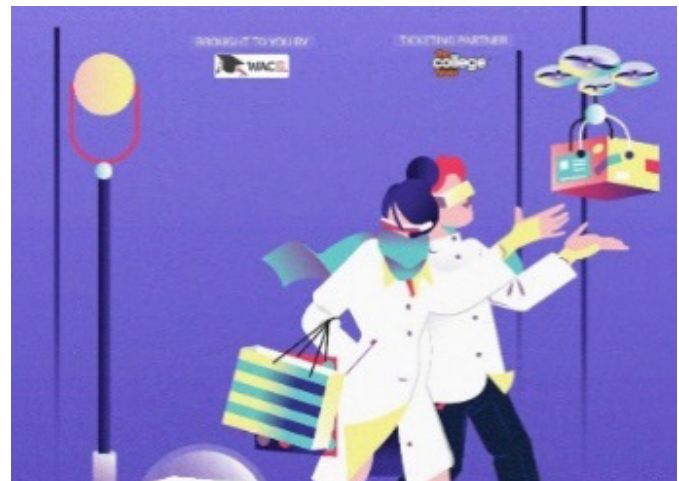


Ethical hacking is a topic which is highly in demand in the current world and a rather intriguing one. This workshop covered infiltrating websites and targeting web vulnerabilities, Cryptography and secure programming for hacking mails and social networks. Topics such as system recovery against malware, software cracking and mobile hacking techniques and security concepts related to fake caller ID were also covered in detail.



Machine Learning and Artificial Intelligence workshop covered the topics such as introduction to Python and data science, basics of calculus and statistics for ML, designing ML models such as SVM and logistics regressions, introduction to deep learning and neural networks, CNN for image classification and hands on with image classification real life problems. It was concluded with a real-life project discussion on time series and AI as used by Uber.

Internet of Things workshop threw light upon the fundamentals of embedded systems and robotics, functioning of Arduino, serial communication concept and, controlling high voltage appliances through logic generated. Some advanced topics such as establishing connection with websites and fetching data to perform automation through Arduino, using Wi-Fi and Bluetooth module to control bots were also discussed in this 2-day workshop.



The workshops witnessed a participation of over 300 students from colleges in and around Durgapur. The participants were overwhelmed by the experience they had and each one of them received certificates of completion powered by Microsoft, Autodesk, HP and Adobe.

DAY 3:



The third and final day of Aarohan'20 started off with the final rounds of various events. It was an exciting morning that saw massive participation in Sweepstakes which was a fun quiz strategy event that tested one's general knowledge and strategic planning. It was followed by SellDom which was a fun event to explore one's strategic and marketing skills in a real-world scenario. The events continued until evening, after which the Valedictory ceremony was scheduled. The chief guest of the ceremony was NIT Alumnus Mr. Subir Chowdhury, the CEO of JCB India Ltd. An interactive session with him and students was also organized. The ceremony started off to a huge crowd, with several renowned guests on stage. Then the respective winners of all the events were awarded by the guests.

After the Valedictory ceremony, cultural clubs, Spic Macay and DC got up on stage to showcase rousing dance performances.

Lastly, the most awaited event, Aarohan Night started off.

The arena was jam packed and the atmosphere was electric. Everyone had a great experience; the event marked an incredible end to a three days Aarohan 2020.



हिंदी छात्र संघ 'दर्पण'

1 अप्रैल 2019 से 31 मार्च 2020 तक हुए कार्यक्रमों की सूची

क्रं सं०	कार्यक्रम का नाम	दिनांक
1.	कोरोना को हंसी में लेना	18-26 मार्च 2020
2.	शिक्षक दिवस समारोह	5 सितम्बर 2019
3.	ख्याल ए अर्ज	9-14 अगस्त 2019
4.	कंटेंट राइटिंग प्रतियोगिता	7 अप्रैल 2019
5.	चाय पे चर्चा	6 अप्रैल 2019
6.	अभिव्यक्ति	5 अप्रैल 2019
7.	ख्याल ए अर्ज	3 अप्रैल 2019

1. कोरोना को हंसी में लेना -

होली की छुट्टियां खत्म हुई थी कि कोरोना की वजह से फिर से छुट्टियां चालू। क्यों ना इन छुट्टियों में कुछ मजेदार किया जाए।

हिंदी छात्र संघ दर्पण प्रस्तुत करता है " कोरोना को हंसी में लेना"।

इसमें आप कोरोना से जुड़े अपने विचार स्वरचित कविता,

लेख या फिर मेमे(original meme) बनाकर व्यक्त कर सकते हैं।

1.कोरोना से बचने के उपाय

2.कोरोना का कारण

3.कोरोना के नुकसान

4.कोरोना के फायदे।

ये सब हमारे द्वारा दिए गए ख्याल हैं आप लोग इनमें से किसी एक पर या सब पर अपने विचार एक चटपटे और मजाकिया अंदाज में व्यक्त करें।

जिसके द्वारा व्यक्त किए गए विचार (किसी भी प्रारूप में) ज्यादा पसंद और शेयर किए जाएंगे वह विजेता घोषित किया जाएगा।

Hurry up! Exciting prizes to win

Rules-

1.1 like-3points

2.1 comment-5points

3.1 share-10 points

नोट-किसी भी पोस्ट पर एक व्यक्ति द्वारा एक ही comment मान्य होगा।

Submit your entry-

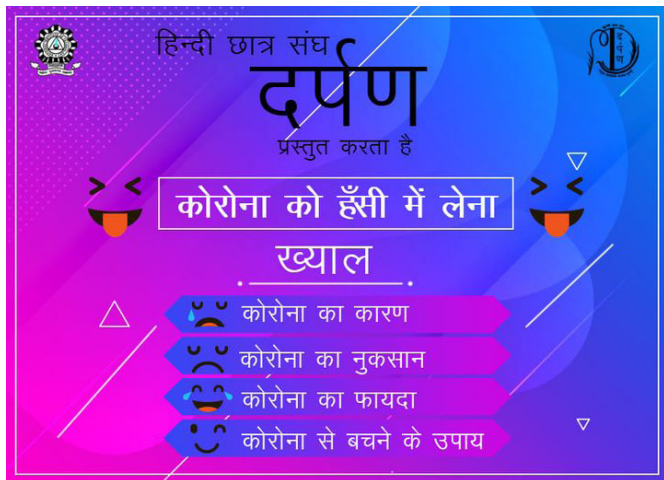
<https://docs.google.com/.../1FAIpQLScIZWFba.../viewform>

For meme you can download this app

<https://play.google.com/store/apps/details...>

You can also send your entries to our page.

DARPAN:Nit Durgapur दर्पण: एनआईटी दुर्गापुर
DURGAN:Nit Durgapur दर्पण: एनआईटी दुर्गापुर



2. शक्तिषक दविस समारोह -

अंतस के तम को दूर भगा
जो ज्ञान का दीप जलाते हैं
उलझी-उलझी सी राहों में
एक राह सही दखिलाते हैं
उन गुरुजन के चरणों में हम
सादर शीश नवाते हैं।

राष्ट्रीय प्रौद्योगिकी संस्थान दुर्गापुर हिंदी छात्र संघ 'दर्पण' की तरफ से शक्तिषक दविस की हार्दिक शुभकामनाएं।



शक्तिषक दविस समारोह में नरिदेशक प्रोफ. अनुपम बासु अपने वचिर प्रस्तुत करते हुए

3. ख्याल ए अर्ज -

73वें स्वतंत्रता दविस के अवसर पर वगित वर्ष की भांत इस वर्ष भी हिंदी छात्र संघ [दर्पण] आप सभी के लए फरि से प्रस्तुत करता है एक आनलाइन कार्यक्रम -[ख्याल-ए-अर्ज]।

आप सभी को हर दनि पंक्तियाँ या ख्याल दर्पण के फेसबुक पेज(https://m.facebook.com/darpan.nitdgp/?_rdr) पर दयि जायेंगे और आपको उससे संबंधति शेर, शायरी या कवति पोस्ट के नीचे कमेंट बॉक्स में लखिना होगा। हर पोस्ट के कमेंट बॉक्स में आपके द्वारा कएि गए कमेंट पर प्राप्त लाइक और रएिक्शंस एवं नरिणायक मंडली के नरिणय के आधार पर वजिताओं का चयन कयि जाएगा तथा वजिताओं को आकर्षक पुरस्कार से सम्मानति कयि जायेगा।

यह एक ऐसा कार्यक्रम है जो उन लोगों को अपनी कलात्मकता को प्रदर्शति करने का अवसर प्रदान करता है जो अपने वचिरों को लपिबिदुध तो करते हैं पर दूसरों के समक्ष प्रस्तुत करने में संकोच करते हैं।

तो आप ही सोचएि कि आपको अपने वचिरों की अभवियक्ति के लए पुरस्कार मलि तो

वचिरों को व्यक्त करने में क्या हरज है?

सोचएिगा जरूर!

हिंदी छात्र संघ

[दर्पण]



4. कंटेंट राइटिंग प्रतियोगिता -

"खुद को खुद से मिलाता है कागजों पर लफजों को बयाँ करना ही शायद हमें खुद से वाकफि कराता है!!"

लोगों की ऐसी ही कला एवं क्षमता को परखने के लिए Recstasy 2k19 के अंतर्गत हिन्दी छात्र संघ दर्पण प्रस्तुत करता है एक कार्यक्रम- "Content Writing Competition"

आप सभी को लिखने के लिए एक Topic दिया जाएगा या किसी Situation से आपको अवगत कराया जाएगा और आपको उससे संबंधित अपने विचारों को लिखकर व्यक्त करना होगा।

तो आमंत्रित करिए अपने दोस्तों को क'आएं और आपसे प्रतस्पर्धा करें।

जी हां ध्यान रखिए आपकी लेखन कला को आंकने के बाद विजेताओं को पुरस्कृत भी किया जाएगा।



5. चाय पे चर्चा -

अक्सर हम चाय की चुस्कीयों के साथ अपने विचारों को रखना पसंद करते हैं, फरि चाहे वो घर हो या चाय की दुकान!!

आपको कुछ ऐसे ही एहसास से रूबरू कराने के लिए Recstasy 2019 के अवसर पर हिन्दी छात्र संघ "दर्पण" प्रस्तुत करता है एक कार्यक्रम - "चाय पे चर्चा "

जसिका विषय होगा-

1. वर्तमान इंजीनियरिंग शिक्षा प्रणाली- कमियां एवं सुधार
2. "ऑनलाइन ट्रैनिंगेशन"- फायदा, नुकसान एवं लागू करना

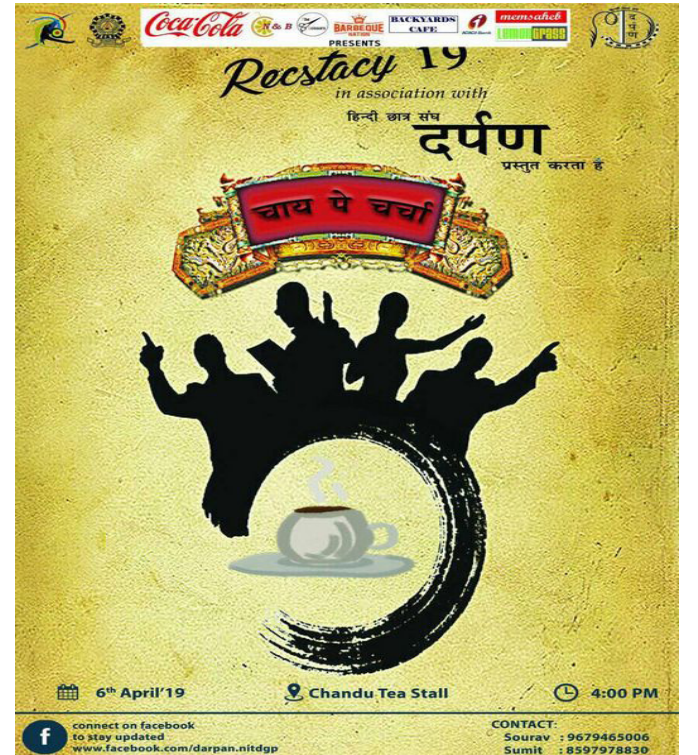
आप सभी सादर आमंत्रित हैं,.....

इंतजार रहेगा, आइयेगा जरूर.

Date- 06/04/2019

Time- 4pm

Venue- Chandu tea stall



6. अभिव्यक्ति -

जज्बातो को बयान कर के चलो आज एक शाम खुद के नाम करे चलो आज अपनी आवाज को एक नई पहचान प्रदान करे!!

आपके ऐसे ही जज्बातों को प्रकट करने के लिए Recstasy 2019 के अवसर पर हिन्दी छात्र संघ "दर्पण" प्रस्तुत कर रहा है कार्यक्रम अभिव्यक्ति, जसिका मुख्य उद्देश्य छात्रों को अपनी

स्वरचिन्ता कविता एवं शायरी सबके समक्ष एक सुनिश्चित समय सीमा के अंदर प्रस्तुत करने हेतु मंच प्रदान करना है।

इस कार्यक्रम के विजेताओं को आकर्षक उपहार एवं प्रमाण पत्र प्रदान किया जायेगा।

यही सही समय है जब आप अपने आप से साक्षात्कार कर सकते हैं और आप क्या हैं लोगों को बता सकते हैं। तो आप ही सोचिए कि आपको आपकी रचना की अभिव्यक्ति के लिए एक मंच मिले और साथ ही साथ पुरस्कार तो भावों को व्यक्त करने में क्या हर्ज है?

इच्छुक प्रतिभागी कार्यक्रम में प्रतिभाग करने के लिए नीचे दिये गये गूगल फार्म को भरकर जल्द से जल्द रजिस्टर करें-

<https://forms.gle/DyemNk22r9tEs2WA6>

Note- Entries are limited so register asap

The poster for Recstacy '19 Slam Poetry is yellow with black and red text. At the top, it says 'Recstacy' 19 in a cursive font, followed by 'in association with हिन्दी छात्र संघ' and 'दर्पण प्रस्तुत करता है'. The main title is '“अभिव्यक्ति”' in large, bold, black letters. Below it is a graphic of a red pen nib pointing upwards. Underneath the pen nib is the text 'SLAM POETRY' in bold, black letters. At the bottom left, it says '5th April '19' and 'SAC'. At the bottom right, it says '2:00 PM'. There are also logos for Coca-Cola, BSNL, and other sponsors at the top. Contact information for Sourav and Sumit is provided at the bottom.

7. खयाल ए अर्ज -

Recstacy 2019 के अवसर पर वगित वर्ष की भांति इस वर्ष भी हृदी छात्र संघ [दर्पण] आप सभी के लिए फरि से प्रस्तुत करता है एक आनलाइन कार्यक्रम -[खयाल-ए-अर्ज]।

आप सभी को हर दनि दो पंक्तियाँ या खयाल दिये जायेंगे और आपको उससे संबंधित शेर, शायरी या कविता पोस्ट के नीचे कमेंट बॉक्स में लिखना होगा। हर पोस्ट के कमेंट बॉक्स में आपके द्वारा किए गए कमेंट पर प्राप्त लाइक और रएकशंस एवं नरिणायक मंडली के नरिणय के आधार पर विजेताओं का चयन किया जाएगा तथा विजेताओं को आकर्षक पुरस्कार से सम्मानित किया जायेगा।

यह एक ऐसा कार्यक्रम है जो उन लोगों को अपनी कलात्मकता को प्रदर्शित करने का अवसर प्रदान करता है जो अपने विचारों को लिपिबद्ध तो करते हैं पर दूसरों के समक्ष प्रस्तुत करने में संकोच करते हैं।

तो आप ही सोचिए कि आपको अपने विचारों की अभिव्यक्ति के लिए पुरस्कार मिले तो

विचारों को व्यक्त करने में क्या हर्ज है?

सोचिएगा जरूर!

हृदी छात्र संघ

[दर्पण]

EDC, earlier known as, NEN NIT Durgapur students' chapter is the only independent cell of this institute. It has always been a goal to us to inculcate into the fresh minds, a clear concept of entrepreneurship, so that ventures are more often undertaken by them.

Our Activities in the Academic year 2019-20

1. LUMINOUS 3.0:

Luminous 3.0, a pre-Diwali event was conducted by EDC on the auspicious occasion of Diwali. It was generally a diya designing event where the participants were asked to design a new logo for their favourite start-ups.

The event took place at the Durga Mandap of NIT Durgapur. Around 20 enthusiastic teams consisting of 4 members participated and designed their favourite logos. Top three winning teams were given prizes and it was captured down the lane.

2. BIZCUP 2.0:

Entrepreneurship Development Cell, NIT Durgapur had organized Bizcup 2.0 on 3rd, 4th and 5th September, 2019.

Bizcup 2.0 was a platform to unleash the entrepreneur in a person and help him to stand out among the crowds. It consisted of three rounds. Students participated in teams of three or four.

The first round was called "Bizquiz".

This round consisted of a quiz related to entrepreneurship. There were 16 questions, and a bonus round. In this round, 28 teams participated, consisting of a total of 85 participants. Out of 28 teams, 16 teams qualified to the next round of Bizcup 2.0.

The second Round was the "Firing Game"

In this round, a problem statement was given to all 16 teams (40 participants). Along with the problem statement, portfolios of 14 employees were provided. In this round, 2 groups were merged and were asked to work as a single team. The task was to fire 4 employees out of 14. Each team was asked to present their decision with brief justification of it. Out of 8 merged teams, 5 merged teams qualified to the final round. Thus, total 10 teams qualified to last round.

The third and final round was the "Case Study Analysis". In this round, a case study was provided to each of the 10 teams (27 participants). Each team was asked to present a solution to the given problem.

3. VIRTUAL E-SUMMIT 2020:

Despite the pandemic and locked-down circumstances this year, we have successfully conducted the largest virtual entrepreneurial summit of India, E-Summit 2020.

Filled with E-Talks from various well-established entrepreneurs, Start-up advisors and investors, E-Summit 2020 did not lack in providing interested and young entrepreneurs a chance to interact with the stalwarts of the industry.

We were honoured and delighted to host these speakers for a 2-day long E-Talks session: Avelo Roy, Jefferson Costa, Nikhil Prasad Maroli, Ankit Aggarwal, Aditi Chopra, Mir Afsar Ali, Indrajit Lahiri, Ravi Ranjan, Ashutosh Kashyap, Rahul Basak, Nikhil Joshi,

Deepali Saini, Baidurya Mukherjee, Pauline Laravoire, Meghdut Roychowdhury and Adhitya Iyer.

Furthermore, we have conducted a Case-Study challenge: RanNIT-E, and a quiz- Quiz-a-preneur, to allow participants to channel their competitive side and showcase their skill, knowledge and understanding of business.

We conducted a workshop on "The Corporate World - Explained" to introduce them to the workings of the corporate world and how to thrive and excel in it.

This year's entrepreneurial summit was nothing short of a plethora of activities aimed to be fun and educative at the same time. It received an attendance of more than 350 students from 20 colleges and schools all over India and was indeed one of the biggest ever summits conducted by EDC.

OUR PARTNERS:

Various companies have agreed to partnerships and sponsorships with us in the past, for example, Nestle, Subway, Safexpress, IDP, and Gateforum, Nectar & Brew, Technopreneur's Surrogate ventures, My ways, and Startup with Ravi Ranjan.

OUR ASSOCIATIONS:

1. Startup with Ravi Ranjan: Ravi Ranjan is a Entrepreneurship Evangelist, Start-up Expert who has 10 years of experience helping start-ups, entrepreneurs and Govt. across India to solve problems using Entrepreneurship, Technology and innovation.

2. Technopreneurs: Nestled in Techno India University, Technopreneurs' Surrogate Ventures is a breeding ground for entrepreneurs and their start-up. Mr. Meghdut Rowchowdhary, Director of Global operations Techno India group, founded Technopreneurs' Surrogate Ventures, with the vision to nurture the innovation and ideas in emerging technology.

It is India's top incubator for start-ups. Its integrated approach offers funding, mentorship and network of CXOs, successful founders, unicorns, deep tech product experts. It builds inclusive ecosystems through strategic support for large scale entrepreneurship events and growth programs.

Enteract, the official Dramatics club of NIT Durgapur, has been providing a platform to one and all in the college to showcase their talents in dramatics which gets somewhere lost amidst the monotonous class routines and has been succouring people develop their dramatic prowess. The club not only takes charge of the entertainment field but also spreads awareness among people through modes of street plays, stage plays, monoacts, mimes and short films.

The club began its journey on Independence Day, wherein the newly inducted members of the club performed a street play, "The Faceless Men". Through this "nukkadnatak" or "street play", the club brought to light the violence caused by mob mentality which is fueled by the spread of fake news through social media

The club received immense love and appreciation from the college students and others present there.

We, then represented NIT Durgapur in "Rendezvous'19", the cultural fest of IIT Delhi, one of the largest of its kind, wherein students not only from IITs and NITs but also from various other colleges from all over India participated. The club performed a street play and a stage play titled "The Faceless Men" and "A Free Prisoner" respectively. "A Free Prisoner" is the story of an innocent prisoner who becomes a writer with the help of his unusual friend. But soon unexpected freedom takes away his innocence and friendship.

Next, the club represented the college in "Spring Fest'20", the cultural fest of IIT Kharagpur, largest in Eastern India. The club performed the stage play "A Free Prisoner" and a street play titled "The Faceless Men". We secured second position for street play and we were in top five for stage play and won the best actor award. The club also performed four monoacts. One of

our monoact depicting comical ride of an autobiography of a cigarette and spreading awareness about harmful effects of smoking secured second position.

We then participated in "Srijan'20", the cultural fest of IIT(ISM) Dhanbad, wherein we performed the stage play "A Free Prisoner" and the street play "The Faceless Men". We secured first positions in both the stage play and street play events.

The club, then gave an opportunity to the first year students to showcase their talent in front of the college. On the occasion of Republic Day, a few first years students performed a street play to raise awareness about human trafficking. The performance was well acknowledged and respected by the crowd.

Enteract is about cheerful faces singing and tapping their feet joyfully to the drum beat, their voices loud echoing through the walls of SAC making the surrounding reverberate with the same energy, thus cultivating dramatic skills in young technical minds.



GNU/LINUX Users' Group (GLUG) Academic Year 2019-20

EVENTS DEDICATED TO FIRST YEARS :

23rd to 25th August 2019

SCREENCAST QUIZ:

ScreenCast Quiz is a quiz based on the screencast videos that we have previously uploaded in the form of a playlist on our YouTube channel. This playlist provides the first technical head-start, and makes them acquainted with different technologies and languages.

PARTICIPATION: 253

3rd-5th September 2019

INTRODUCTION TO LINUX AND INSTALLATION FEST :

The first workshop that GLUG conducted was based on Open Source and Linux, where we targeted teaching the first years about the most popular and free OS, Linux. Considering the need of Linux in different departments during senior years and later in life. We conduct this workshop to guide them in the initial phase of their journey with Open Source. Helping them install, we ensure that an immediate interest for learning something new is created in their young minds.

Participation: 156 the workshop and Linux Distributions installed in 105 systems.

17th-19th October 2019

DIGITAL FORTRESS:

Digital Fortress was conducted as a first-year exclusive online quiz based on locations on a map to solve clues. Incredibly enthusiastic participation was received from the first-years.

PARTICIPATION: 412

21st October 2019

HACKTOBERFEST HACK DAY:

A new event introduced this year, HacktoberFest Hack Day was an initiative to help students understand Pull Requests in Github and then contribute to clear the HacktoberFest challenge, an open-source global event organised by DigitalOcean Inc.

STATISTICS :-

- Participation: 309
- Total Pull Requests Made: 386th October 2019

JUNIOR CODE CRACKER

An event exclusive for the first years, JCC is the door opened for all the newbies, to a world where logic is the operating system and programming is the only comprehensive language. Keeping the prelims mainly logic based, we ensure equal opportunities for those unfamiliar to the same. Being one of the first events, JCC lays an empty plate for all the future code-chefs.

PARTICIPATION: 206

8th November 2019

MINI - CAPTURE THE FLAG :

Capture the Flag is a unique event that demonstrates the power of Linux, hacking and development. By organising the first ever CTF for first years in our college, we give them an opportunity to pique their brains and solve real world problems using Linux terminal and commands. This event not only gives them a taste of the competition outside but also brings to lime-light the prospective hackers of our college.

PARTICIPATION: 139

15th - 30th December 2019

WINTER MENTORSHIP PROGRAM:

First years were mentored in various disciplines including Python, Javascript and Flutter based projects covering the domains of both web and app development. Mentoring was done through Slack.

PARTICIPATION: 113**SEMESTER EVENTS:**

11th - 12th October 2019

WORKSHOP ON GIT AND GITHUB:

The demand for this VCS is ever-increasing. From the tiniest of personal projects to corporate level softwares, everything is dependent on the knowledge of Git today. Understanding its importance, GLUG organised a hands-on workshop on Git and GitHub.

PARTICIPATION: 261

5th November, 2019

SYSTEM DESIGN WORKSHOP :

We conducted a workshop on System Design to inspire students to pursue further in this ever growing field. A must for Software Developers, this workshop is a stepping stone to their future success.

PARTICIPATION: 132

20th January - 1st February 2020

GSOC HEAT V4.0:

In order to promote Google Summer of Code, the most reputed internship across the globe, in our campus, GNU/Linux Users' Group annually organises the only in-college GSoC guidance and simulation program, GSoC BarCamp. Members from our club who have previously cracked GSoC mentor students and guide them through the entire process. We also conduct GSoC Heat - a miniature version of GSoC in a reduced time frame.

PARTICIPATION: 267

4th March 2020

HACK.ME SESSION

A hands on session which covered automated message scheduling using the Twilio API.

PARTICIPATION: 226**MAJOR ACTIVITIES:**

7th - 10th February 2020

AAROHAN, THE TECHNO-MANAGEMENT FEST

The GNU/Linux Users' Group is a part of Team Aavishkar and thereby one of the organizing clubs of Aarohan, the annual techno management fest of NIT Durgapur. Besides organising online and offline events during the fest and helping with managerial work, we designed the website for the fest and also built the iOS and Android application for it. We also built our own form of digital currency for the fest named Eurekoins.

Individually we organised the following events :

Online: Capture The Flag, CodeCracker, Freemex, Online Treasure Hunt, Digital Fortress, Journo Detective, Software Hackathon

Offline: Hardware Hackathon, Explicate, Behind the Scenes, Perplexity, Fantasy football, Incanity, Twin Attack.

MAJOR ACTIVITIES:

1. Capture the Flag: This was the expansion of mini Capture The Flag(CTF) which witnessed immense participation from the students. CTF is a kind of computer security competition which very often ignites one's cybersecurity career due to their competitive nature and team building aspect. The problems ranged from all sorts of topics such as cryptography, steganography, web and reverse engineering. Highly motivated students to explore and learn different techniques of cracking the codes and systems. We got a tremendous response domestically as well as internationally.

503 people participated with the leaderboard as:

1. Yakuhito (Romania)
2. unblvr (Norway)
3. dcua-school (Ukraine)

Domestic Participation: 416

International Participation: 87

2. CodeCracker: A 2 hour long online coding contest hosted on our very own **Online Judge**

with original unique questions.

PARTICIPATION:

- Domestic: 176

- International: 43

3. Journo Detective - A location based online treasure hunt wherein participants had to go to various parts of the campus in order to activate hints and levels, baked right into the official Aarohan app.

PARTICIPATION: 248

4. Software Hackathon(Hackoverflow) - We organise the only Hackathon of NIT Durgapur-"HackOverFlow". It includes both Software and IOT - Hackathon. Last year 50 teams from different colleges took part in the Hackathon. We look forward to expanding the scope of this competition.

PARTICIPATION: 223

5. Freemex : A real time stock market simulation game where participants can trade real stocks with a dummy currency. The stock prices are fetched in real time from NASDAQ for 20 companies.

PARTICIPATION: 723

6. Hardware Hackathon - It is an on spot Hackathon which covers various topics including Robotics, Internet of Things and using Embedded Systems to create innovative machines. The Hackathon is held over a continuous stretch of 36 hours with participants battling it out overnight to make the best working prototype. It was judged by prominent members of the Google Developers Group (GDG).

STATISTICS OF THE AAROHAN MOBILE APPLICATION:

1) **Downloads** - 2096

2) **Reviews** - 4.6/5 (255 Reviews)

3) **#1 Trending** in Events category on Google Play Store

16th February

LINIT MAGAZINE

LINIT is the Official FOSS Magazine of the college. One of the few magazines that are published in the college, LINIT is the perfect platform to show off one's technical knowledge and channelise one's love for everything geeky. Comprising articles about any technology under the sun, LINIT is one of the most prestigious magazines of our college and is GLUG's pride.

OUR ACTIVITIES DURING THE COVID-19 LOCK-DOWN:

24th March 2020 - Present

TECHBYTES

A weekly blog on the latest trends in technology will be featured on all our social accounts under the series called "TechBytes". We hope to make our pages increasingly professional and engage the audience with fruitful content.

30th March 2020 - Present

TECHNICAL BLOGGING ON DEV.TO

We were the first institute club to make our presence on DEV.to, one of the most popular blogging websites for Open Source and technical content. We have since posted a number of original articles, tutorials and tweaks providing latest insights into upcoming and evolving technologies, along with better planning and unique execution methods on existing ones.

Statistics: 11,289 views on our blog with one article featuring in the "Top 7 Articles of the week" on DEV.to.

18th to 21st March 2020

MINDERSNATCH

A new online event based on the concept of "Black Mirror: Bandersnatch". Participants need to reach the end of a mission by choosing an option at every step. For every step they take, the story takes a different turn.

PARTICIPATION: 537

27th March 2020.

AMAZON TALKS

An online talk session addressed by a panel of 5 prominent speakers from the world of technology (software industry). The event saw enthusiastic participation from students of all spheres. All the way from New York, Menlo Park, Seattle, Bangalore and Hyderabad, these people talked about open source and technology and cleared students' doubts about jobs and higher studies in this field.

Participation: 3000 views on Facebook and Youtube Live sessions.

COLLEGE WEBSITE :

One of our most proud accomplishments, we designed and maintained the NIT Durgapur website. We are committed to our

task of maintaining the college website and making it better with each session.

About Maths N Tech Club

Maths N Tech Club is the official knowledge club of NIT Durgapur. MNTC organises several events and workshops based on Mathematics and the latest Technologies. It publishes the Annual Technical Magazine, Anveshan. It conducts Aarohan - The Tech Festival along with SAE, GLUG and CCA.

Our Faculty Advisers:

Dr. Anita Pal, Associate Professor

Dr. Seema Sarkar Mondal, Professor

Mr. Sarit Maitra, Associate Professor

Links to our Social Media accounts:

Facebook: <https://www.facebook.com/mathsntechclub>

LinkedIn: <https://www.linkedin.com/company/14528759/admin/>

Instagram: https://www.instagram.com/mathsn_tech_club/?hl=en

1. Seminar by MADE EASY:

A seminar on 'Career options through GATE and ESE' was organised by Maths N Tech Club in association with MADE EASY, one of the best coaching institutes for GATE.

Date: January 20, 2020

Venue: New Academic Building

2. NASA Space Apps Challenge:

Space Apps is NASA's annual global Hackathon serves as an innovation incubation and civic engagement program.

Date: September 8, 2019



Venue: New Academic Building

3. Scholarship Test by T.I.M.E.:

A scholarship test was organised by MNTC in association with T.I.M.E., for second and third year students of NIT Durgapur.

Date: July 22, 2019

Venue: DM Sen Auditorium 1

4. Ankshala:

'Ankshala', a test aimed at increasing the logic and acumen is conducted by MNTC every year in schools in and around Durgapur. The top performers from each category, i.e., 9-10 and 11-12 were invited for a Grand Finale in NIT Durgapur on 9th February, 2020.



5. Brain Darts:



Bits of logic, mathematics and rationale merged together in a dart throw game characterises Brain Darts. It is conducted annually by MNTC.

Date: October 23, 2020 Academic Building

6. Treasure Hunt:

A Treasure Hunt was organised with science fiction characters from DC and Marvel as the central theme. The event was held within the confines of our campus and a well thought of map was formulated. Around 50 teams actively participated in the event.

Date: January 12, 2020

Venue: Ovals NIT Durgapur (Starting Point)

7. EVENTually 2.0:

EVENTually is an online picture-connect event where you are required to unscramble the word signified by a set of images with the help of hints to steer your thinking

Date: December 21, 2019- December 28, 2019

Platform: Maths N Tech Club Facebook Page

NESCAFE JAM:



The annual Acoustic Jam organized by MuC tries to bring together the whole college within all the mundanity of everyday life over a cup of coffee and some soothing Acoustic music. Usually organized at the beginning of every odd semester, it provides an opportunity for the first years to witness the music culture of NIT Durgapur. Spectators of this event join us while we sing and play their favourite songs which in turn motivates us to perform even better. This event excites many of the spectators to audition for the club and perform in the events organized by MuC.

AAROHAAN PERFORMANCE:



The annual techno-management fest of NIT Durgapur organised by Team Aavishkar usually occurs in the even semesters. Amidst all the technical events conducted by the clubs, MuC tries to engage the crowd with some captivating music. MuC performs in every season of Aarohan and we have been entertaining the crowd since the first time we were provided with the opportunity to perform. The members of MuC show their versatility by performing music of different genre for the crowd, which not only consists of students but also professors.

SPRING FEST 2020 PARTICIPATION:



Spring fest, is the annual social and cultural festival of the Indian Institute of Technology, Kharagpur held during January in the spring semester. A team representing music club NIT Durgapur got the opportunity to showcase their fervor in acoustic jamming in an event named LSD (lake side dreams). The competition consisted of the best musicians across India, the team was able to deliver a soothing performance and made it to top ten among all the teams that participated.



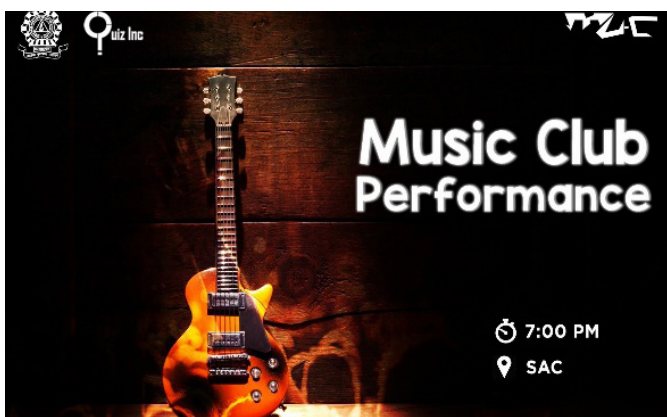
MATHRIBHASHA DIVAS PERFORMANCE:

As the name suggests, the day is celebrated to promote cultural and linguistic diversity across the globe on 21 Feb, every year. The NSS committee NIT Durgapur organised several fun activities during the day, in which acoustic performance by MuC was included. The performance, which comprised songs of different genres and languages made the evening pleasant for the audience. Freshers of MuC were given the chance to perform, so as to give them an early exposure to live stage performance.

COVER-UP:

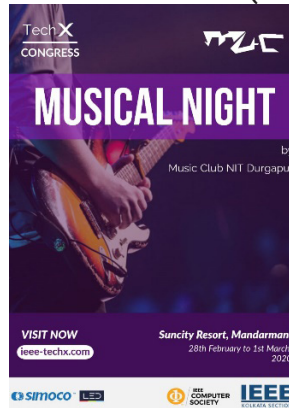
The online event, Cover-up, was made to ease the freshers into the college and to the field of music, where you can choose a relatively popular song, and record either an instrumental or vocal cover. It gained popularity among the first years who had a lot of hidden talent, and realised their undiscovered potential. The event was also used as a benchmark for the auditions of the club, providing those who won the event a direct pass to the final round of auditions.

QUIZZITCH CUP PERFORMANCE:



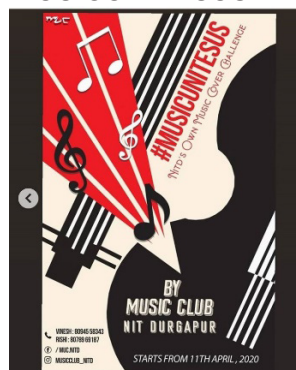
The music club collaborated with Quizinc to bring energy and life to Quizzitch-Cup, The annual Quiz fest, with an array of performances ranging from genres such as Light Music, Yesteryear's Bollywood hits to Pop Music enjoyed by everyone. This contributed to making an otherwise ordinary Quiz event into something spectacular and wonderful, that people thoroughly enjoyed, and entertained the mind of the hardcore quizzers.

MUSICAL NIGHT (TECHX CONGRESS)



TechX CONGRESS is an annual event organised by the IEEE club. With all the intellect brimming around, music provides us with the perfect ice-breaker to explore and interact. No event is complete without the essence of music, leaving everyone tickled. Mu-C, the Music Club of NIT Durgapur was invited for the Musical Night at IEEE TechX Congress at Suncity Resort Mandarmani which cheered up and engaged the audience in some music. Spectators were singing along with the musicians and they had a great moment amidst their workshops and seminars.

MUSICUNITESUS



The online event which was organised by Mu-C amidst the situation of pandemic and crisis to unite people's hearts through music. #Musicunitesus, it was basically an online event where people challenged each other for a particular song and posted their videos as stories on social media (Instagram) mentioning #musicunitesus. The event was pretty successful with a huge participation and the best entries were given a shoutout from MuC Instagram page.

Baja Competition

Date: 23rd January to 26th January, 2020

Team NDORS (NIT Durgapur Off-Road Sports) is the official SAE BAJA team of NIT Durgapur representing the institute in mBAJA SAE INDIA. The team involves a group of 25 auto-enthusiasts

across different streams who share a common passion towards automobile engineering and racing. The team designs, fabricates and competes against other All-Terrain Vehicles at an event popularly called as BAJA SAE which is held annually every year. This year's BAJA SAE India 2020 held at Pithampur, Indore. As every year also this year, Team NDORS designed an All-Terrain Vehicle and participated in mBAJA SAE India 2020 and secured overall 8th rank among all IIT's and NIT's participated this year.

KALAKRITI

Kalakriti, Team Stroke's annual Art and Photography Exhibition held its 6th rendition at Aarohan 2020. Spanning over two days (7th February 2020 - 8th February 2020), the exhibition was one of the star attractions of the fest. The exhibition featured remarkable artworks and photographs from the Strokes members and housed the sculpture which was made tirelessly by our very own members. The exhibition was inaugurated by our Faculty Advisor Prof. Suvamoy Changder Sir on the Day 0 of Aarohan. Since then, Kalakriti attracted many visitors over two days who praised and appreciated the exemplary works done by our members. The event was graced by the presence of honourable guests like Lieutenant General Satish Dua and Founder President of Vedic Maths Forum India Mr Gaurav Tekriwal. On 8th February, Kalakriti concluded with the spirits high inspiring our members to achieve more for the upcoming years.

Glimpses of Kalakriti -2020 organized by STROKES.

SPIC MACAY 2019-20

SPIC MACAY NIT Durgapur Chapter remains committed to its mission of making students more aware about Indian and world heritage by organising programmes of classical music and dance, folk arts, crafts, yoga, classic cinema screenings, heritage walks, etc. inside NIT Durgapur. We intend to make the education system more holistic and meaningful and conduct a variety of events throughout the year to achieve that purpose. Following are some of the events conducted during the academic session of 2019-20 by SPIC MACAY NIT Durgapur Chapter:

ANUBHAV:

SPIC MACAY NIT Durgapur Chapter in association with Bihari More Education Project organised ANUBHAV, an annual art workshop cum competition for the so called underprivileged children on 5th November 2019. We had conducted an art and craft workshop where SPIC MACAY volunteers taught origami skills to children ranging from 7-15 years in age. Following the workshop a competition was organised where the children put all the skills they had learnt to use and produced some beautiful creations. Prizes were also distributed to the best ones. At the end, there were only happy faces all around and it was a privilege to bring a ray of hope and happiness in the lives of these innocent beings.

UTTARAYAN:

UTTARAYAN, the annual kite flying festival was organised by SPIC MACAY NIT Durgapur Chapter on the occasion of Makar Sankranti on 19th January 2020. There was an overwhelming participation of over 110 students in the festival. A fierce battle of kites went on at the Lords Ground for hours before we finally

announced the winners. The SPIC MACAY Dance Wing also put up a beautiful dance performance to end the lovely day.

VIRASAT:

VIRASAT, the official cultural extravaganza was organised by SPIC MACAY NIT Durgapur Chapter on 28th February-1st March 2020. Comprising of musical evenings, workshops and film screenings, VIRASAT brought together an eclectic assortment of artists of magnanimous stature to NIT Durgapur. Following were the events and concerts conducted during VIRASAT:

EVENTS:

FILM SCREENING: The film screening was organised at the Student Activity Centre on 25th February 2020. We showed one of the most iconic films of Indian cinema, 'Sankarabharanam'. A large number of students and professors attended the screening and everyone revelled in the grandeur of this cinematic classic.

ODISSI DANCE WORKSHOP: The Odissi Dance Workshop by Janhabi Behra, a renowned Odissi dancer was organised on 26th-28th February 2020. The three day workshop was quite successful with a large number of students from schools and colleges in Durgapur and around attending it. Smt. Janhabi Behra herself supervised the workshop and perfectly guided the students. It was a great learning experience for everyone to have been taught by one of the most well known names in the world of Odissi.

SOLAPITH ART WORKSHOP: The Solapith Art workshop by Sri. Ananta Malakar was workshop was organised on 27th-29th February 2020 in Hall 14. In the workshop, the students were taught to make splendid artistic pieces from bits of thermocol. It was a fun and creatively satisfying workshop and thoroughly enjoyed by everyone.

CONCERTS

SMT. JANHABI BEHRA: Smt. Janhabi Behra, one of the leading exponents of Odissi performed at VIRASAT 2020 on 28th February 2020. Her skillful expression and gracious moves transfixed one and all in the audience.

MANDIRA LAHIRI: Smt. Mandira Lahiri along with her troupe performed at VIRASAT 2020 on 29th February 2020. A star vocalist, Smt. Mandira Lahiri and her troupe captivated heads and hearts with their powerful performances. It was magical to witness her musical extravaganza at its finest.

THE MYSORE BROTHERS: Mandira Lahiri's performance was followed by another powerful and mesmerising performance by the Mysore Brothers. Hailed by Pandit Ravi Shankar as the 'princes' of Mysore, the Mysore Brothers, with their eminence and extraordinary touch on the violin, glittered the evening with mellifluous tunes that brought everything to a standstill.

TEJENDRA NARAYAN MAJUMDER: The final day of VIRASAT 2020 witnessed the performance of Pt. Tejendra Narayan Majumder, a magical player of the sarod. Pt. Majumder is a world renowned figure having performed at prestigious locations in India and abroad in countries like Russia, Netherlands, USA, UK etc. He enchanted one and all present at SAC with the serene and blissful tunes on the sarod.

GEETA CHANDRAN: The final performance at VIRASAT 2019 was by none other than Smt. Geeta Chandran. A celebrated artist and star performer, classical Indian dancer and choreographer Geeta Chandran is renowned as a thinking artist who has synthesised her inordinate skills in Bharatanatyam with her personal vision of the dance and unleashing its potential as an instrument for changemaking. It was truly a huge honour and privilege to witness her perform here in Durgapur.

IEEE SB NIT DURGAPUR

IEEE Student Branch, NIT Durgapur is a society of enthusiasts aimed at promoting research-related activities in the campus. Comprising bright researchers, developers, speakers, and other contributors we are a society that welcomes in the era of better research prospects, on the campus.

IEEE SB NIT Durgapur has 50+ members, organized 30+ events and workshops so far with a total of 500+ participants.

HIGHLIGHTS OF THE YEAR 19-20

Nominated within the top 10 IEEE Student Branches of IEEE Kolkata Section.

- Two of our flagship events "Internship Bootcamp 2.0" and "Research Scholars' Day 2019" featured in the July-September issue of IEEE INDIA COUNCIL NEWSLETTER in IEEE KOLKATA SECTION ACTIVITIES.
- Collaborated with IEEE Computer Society, IEEE Student Branch Jadavpur University, other IEEE Societies and industries to conduct the IEEE TechX Congress 2020: Eastern India Techno-Management Leadership Summit the first of its kind in IEEE Kolkata Section
(<https://iee-techx.com/>)
- Conducted the first edition of the Satellite Communication Symposium:
Sat-Siege with experts and scientists from ASI and ISRO
- The official website of IEEE Student Branch NIT Durgapur is live now:
<http://www.ieeesbnitdgp.com/>
- IEEE Insight: The official blog of IEEE Student Branch NIT Durgapur was launched to keep people up to date with the recent trends in the field of science and technology. <https://insight.ieeesbnitdgp.com/>

MAJOR EVENTS: 19-20

INTERNSHIP BOOTCAMP (20-21st August)

The Bootcamp was conducted for second- and third-year students to get insight on how to get prestigious internship opportunities and how to prepare for them side-by-side getting perspective from the experiences of the said speakers, which mainly consisted of final year students who recently completed their internship. The workshop consisted of various internship experiences, e.g., DAAD, MITACS, IAS, CERN, BARC etc. The twoday bootcamp ended with a Resume and SOP building workshop.

SELF DRIVING VEHICLE WORKSHOP 2.0 (31st August- 1st Sept.)

As the world becomes more and more interconnected, technology has begun to be considered as a convenient and useful tool for communication between individuals and has facilitated participation in some of the engagements that were challenging in the past. In this era of advancement SDV 2.0 was conducted to give the students a little glimpse of what the world of automation entails and what all possibilities are there. The students were introduced to various new topics including, Algorithms, loops, Arduino, etc. Later the session turned into a hands-on workshop of building the automatic bot and understanding the principle behind it.

INTELLISYS (19th Oct.)

Machine learning is one of the most earnest, sought after and promising fields of data science, IEEE SB NIT Durgapur brought an amazing opportunity of learning this science from the pioneers of this arena in the event. The two prominent speakers, Mr. Shivam Abhilash and Dr. Fakhru Yusuf, who have excelled in various aspects of Machine Learning, bestowed their knowledge to the participants of the workshop. The two mentors guided the students through the world of the Machine Learning and its application in various fields. Then a regression challenge was held by our team for the students to apply their gain knowledge into practical use.

SAT-SIEGE (18th January 2020)

The idea behind this symposium was to introduce the topic of satellite communication to students of our college. Satellite Communication is one of the complicated topics, we invited experts in this field to educate the participants. We had two speakers for the day: Dr Anindya Bose and Dr Chandrakanta Kumar. Dr Anindya Bose, currently a professor at the University of Burdwan, experienced in the field of global navigation satellite system, and also a member of the astronomical society of India addressed the audience. At the start of the session Prof. Rowdra Ghatak, head of department of Electronics and Communication NIT Durgapur, felicitated the guest speaker and shared a few words.

IEEE TechX Congress 2020 (28th Feb.-1st March 2020)

TechX Congress 2020, the Eastern Indian Techno-Management Leadership Summit hosted by the IEEE Computer Society SYP MGAB technically cosponsored by IEEE Kolkata Section, was officially inaugurated on the 28th of February, 2020 at the splendid Sun City Resort at Mandarmani. The event was co-hosted by student branches of NIT Durgapur and Jadavpur University. The purpose of this event was to promote IEEE activities within the section as well as serve as a platform where participants can augment their technical awareness and network with like-minded people.

NSS

NSS NIT Durgapur is institutionalized under the Ministry of Youth Affairs & Sports Govt. of India. The Motto of NSS, "Not Me But You", reflects the essence of democratic living and upholds

the need for self-less service. NSS helps the students to develop the appreciation to other person's point of view and also show consideration to other living beings. the academic year 2019-20, apart from the regular activities of NSS, the volunteers participated in the Vigilance Awareness Week, National Unity Week, Swachhata Pakhwada, Matribhasha Diwas, Communal Harmony Week, and Unnat Bharat Abhiyaan activities. In this session Plastic Free Campaigns were organized in the villages named Bansgora and Pratappur of Durgapur Faridpur Block. The volunteers spread the awareness of the disadvantages of plastic as well as distributed jute bags to the villagers to reduce the use of plastics in daily life. Along with awareness camps at villages, several drives for the same cause were organised on campus. In this endeavor, NSS received the full support from TEQIP cell of the institute. Like every year the Parades on Independence Day and Republic Day by NSS volunteers were appreciated by everyone.

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 like Independence Day celebration, Republic Day celebration, NCC Day celebration, Sports Day celebration etc. This unit also observed and participated various important days like environment Day, Voters Day, organized rallies, Swachhta programme, tree plantation etc.

Achievements in 2019-2020.

- 01 Cadet selected and successfully completed SSB Screening Course during September 16- 25, 2019 at NCC-OTA, Kamptee, Maharashtra.
- 01 Cadet selected and successfully completed the Ek Bharat Srestha Bharat (NIC) Camp during December 13-24, 2019 at NCC Darjeeling, West Bengal.
- 04 Cadets of this unit awarded 'C' Certificate.
- 13 Cadets of this unit Awarded 'B' Certificate.

2.9 EXAMINATION & EVALUATION

The Institute follows semester system of examination. The under-graduate courses are of eight semester (four year) duration. The Institute has been upgraded to National Institute of Technology, Durgapur with Institute of National Importance status and grade system of evaluation has been adopted for the under-graduate students who have been admitted in the year 2003 and onwards. The students are graded with Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). The SGPA of a semester indicates the academic performance of the student in that semester and CGPA indicates the academic performance of the student from the beginning till the current semester. They are conferred with the degree of Bachelor of Technology (B. Tech.) at the completion of the course.

The PG course in engineering and technology are of four semester duration for the full time students and six semester duration for the part time students and lead to degree of Master

of Technology (M. Tech). The Master of Computer Applications (MCA) course is of six semester duration and the Master of Business Administration (MBA) course is of four semester duration and the students are evaluated by Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). The Master of Science (M. Sc.) course is of four semester duration and All the students of these post-graduate programmes are evaluated by Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA).

2.10 PLACEMENT

Training & Placement Department of the institute provides employment opportunities to the final year students and training to the 3rd year students after 6th semester. 453 UG students have been placed in the session 2019-2020. Apart from that few students have opted for higher studies in various IITs and IISc. 117 companies visited the campus including MICROSOFT, AMAZON, ORACLE, GOLDMAN SACHS, J.P. MORGAN, AMDOCS, IBM, L&T, TCS, WIPRO, CESC, HSBC, PWC, RELIANCE JIO, HERO MOTOCORP, VEDANTA, RELIANCE INDUSTRIES, HPCL.

Annexure-I & Annexure-II provides the UG & PG statistics for placement respectively.

39 companies visited the campus for M.Tech courses and 40 no of students have been placed in the academic session 2019-2020. Rest of the students have gone for higher studies. 17 companies visited for MCA and 14 students have been placed out of total eligible strength of 23 6 companies visited for MBA and 7 students have been placed out of total eligible strength of 18.

Training and Allied Activities

Industrial Training/ Vocational Training is provided to the students of 3rd year after passing 6th semester. Annexure-III provides the list of companies for each individual branch.

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.

2.11 GAMES AND SPORTS:

Games and Sports Participation & Achievements:

The Institute organized various intra NIT tournaments throughout the year in the fields of Football, Volleyball, Basketball, Cricket, Chess, Badminton, Table Tennis, yoga, kabaddi, hand ball and Athletics. In the year 2019-2020 Institute participated in the following All India Inter NIT & other Games & Sports tournaments

- All India Inter NIT Table Tennis & yoga (Men & Women) Tournaments organized by NIT Silchar during October 11 to 13, 2019.
- All India Inter NIT Lawn Tennis & Chess (Men) Tournaments organized by NIT Jaipur during October 17-19, 2019.

3. All India Inter NIT Faculty & Staff tournament in Badminton organized by NIT Jaipur during December 18-20, 2019.
4. All India Inter NIT Faculty & Staff tournament in Cricket organized by NIT Nagpur during December 27-30, 2019.
5. All India Inter NIT Basketball (Men & Women) Tournaments organized by NIT Surathkal during January 17-19, 2020.
6. All India Inter NIT Track & Field & Volleyball tournaments (Men & Women) organized by NIT Rourkela during January 24-26, 2020.
7. All India Inter NIT Badminton and Cricket (Men) tournaments organized by NIT Surat during February 20- 23, 2020.

ACHIEVEMENTS IN 2019-2020.

1. Yoga (Men) Secured Third Position in All India Inter NIT Meet held at NIT Silchar.
2. One Silver Medal in All India Inter NIT Track & Field Meet at NIT Rourkela.

2.12 STAFF POSITION

The Staff position (both teaching and non-teaching) on date of the Institute is given in detail in items 11.5 (a), 11.6 (a) & 11.6 (c).

2.13 RAJBHASHA SAMITI

As per the directives of the Department of Official Language, Ministry of Home Affairs, Government of India, Rajbhasha Samiti of the institute is committed for the implementation of Official Language at the institute. Through out the year the committee tries to achieve the targets set by the Department of Official Language, Gol, in its Annual Programme. The Samiti is also active at the town level in coordination with Town Official Language Implementation Committee (TOLIC). The institute was represented in all the regular meetings of TOLIC. Hindi Pakhwada was the mega event of Rajbhasha Samiti in this session. Several activities were organised during this fortnight.

Matribhasha Diwas: 21 February: was also celebrated at the institute. As per the initiative of the Director, Prof Anupam Basu, the day was observed with full fervour and gaiety. In this event the focus was not only on Hindi but also on languages like Bengali and Telgu. Students not only participated in the programmes in full fervour but also attended the classes that day in their traditional attire and put up stalls of their respective State Food, as a part of EK BHARAT SHRESTHA BHARAT initiative.

2.14 NOTABLE ACHIEVEMENTS SHOWN IN GRAPHS AND PICTURES:

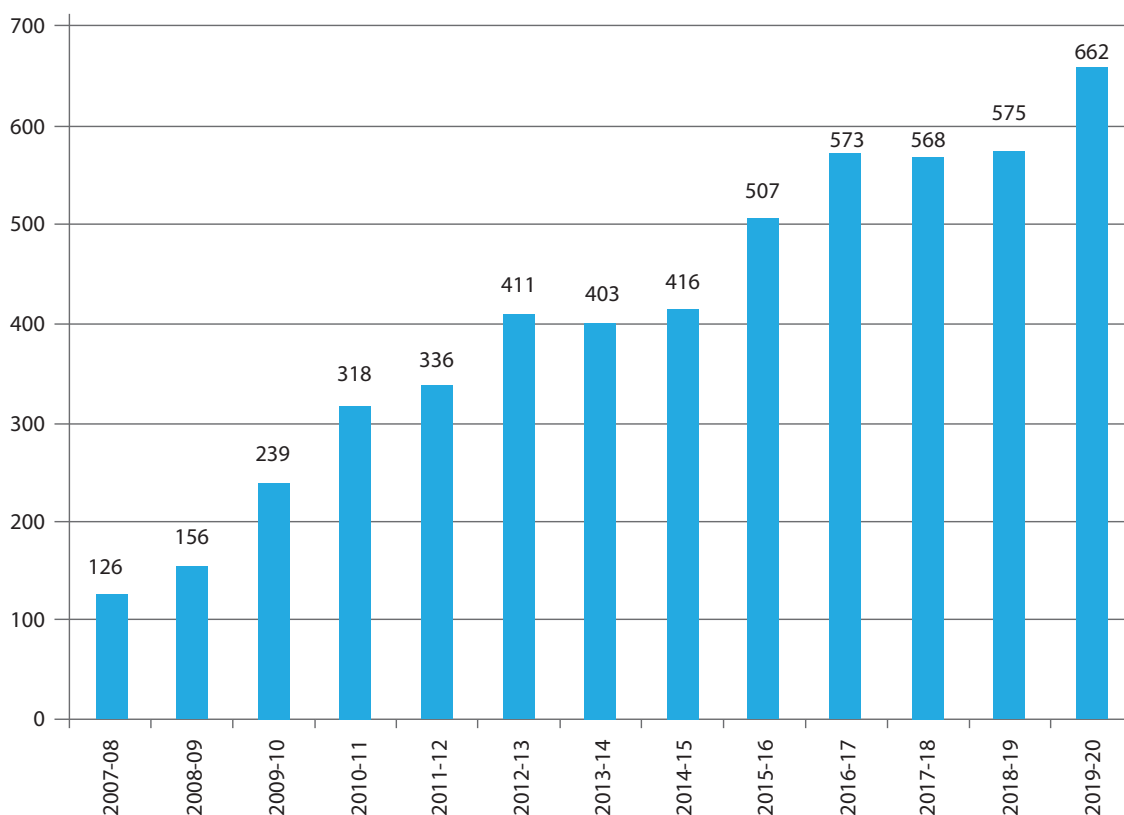


Fig. 1. Publication in journals in the last few years

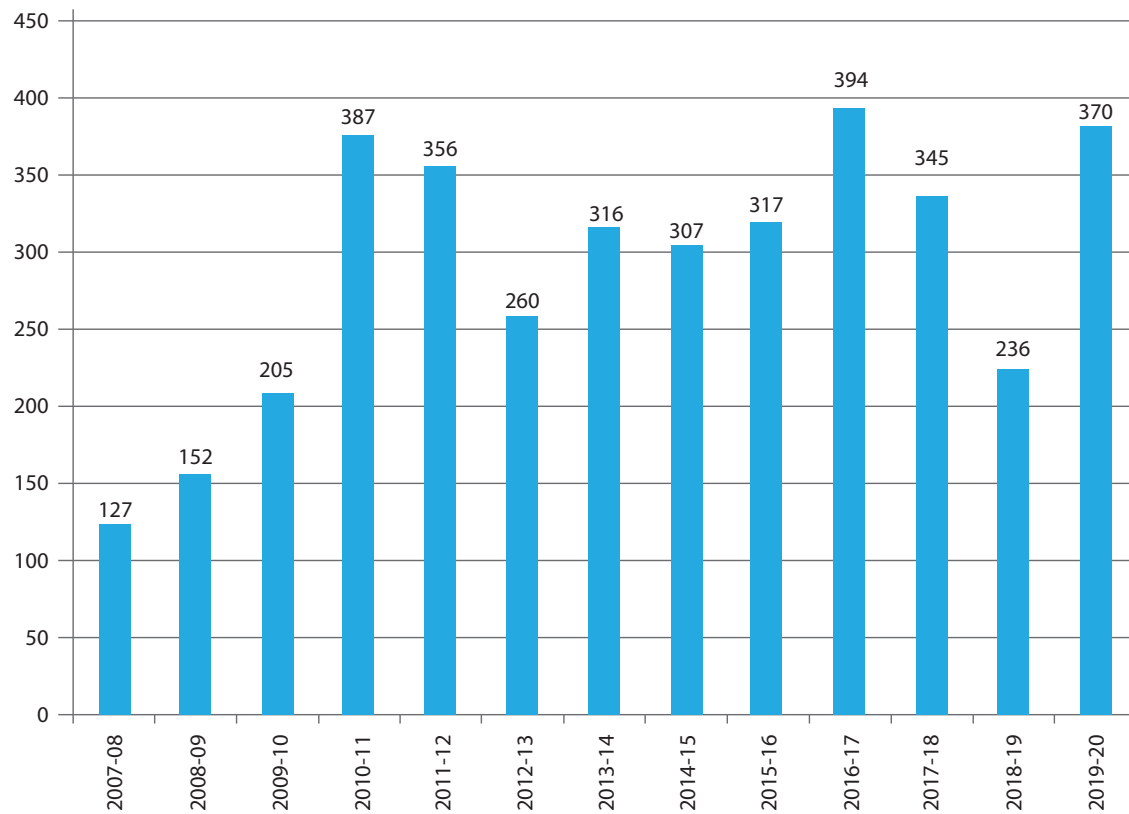


Fig. 2. Presentation in conferences/symposiums in the last few years

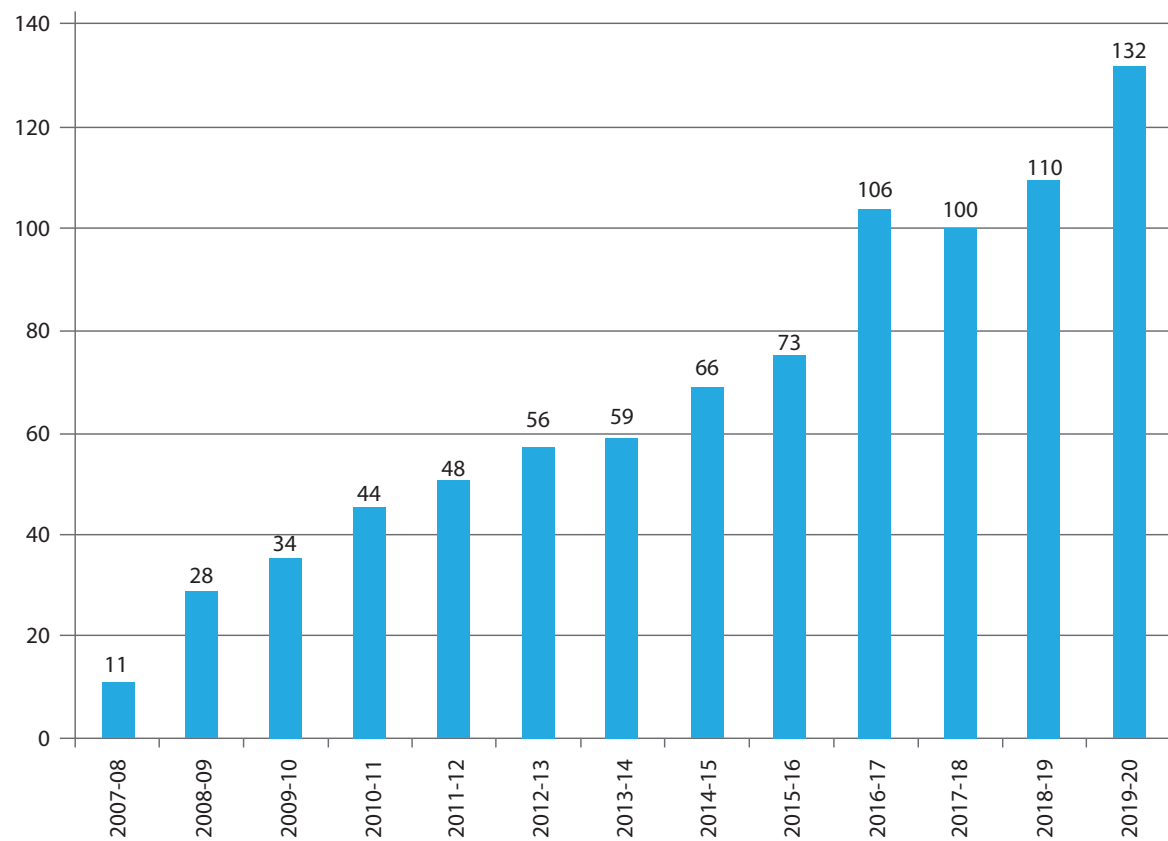


Fig. 3. Number of sponsored projects during the last few years

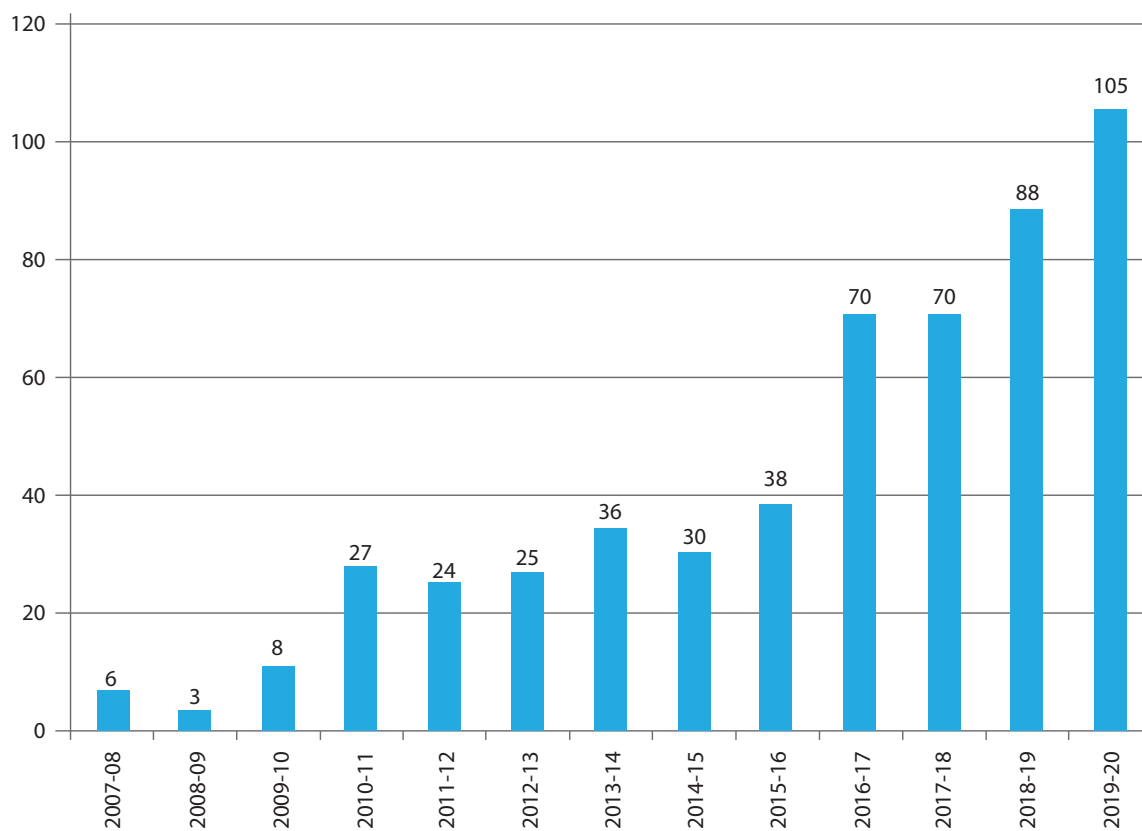


Fig. 4. Number of PhD degrees awarded during the last few years

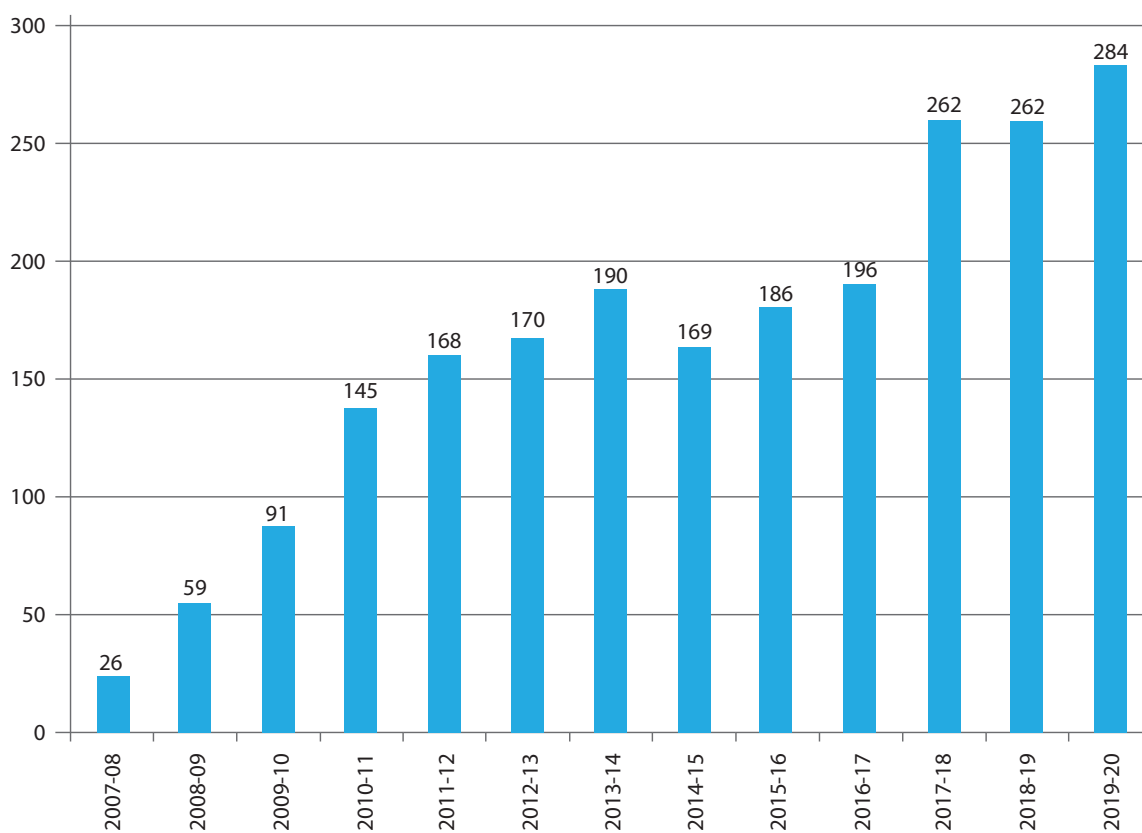


Fig. 5. Reviews of journals/books during the last few years



Fig. 6. Swachhata Pakhwada with I&B Ministry



Fig. 7. The 15th Convocation



Fig. 8. Republic day Celebrations 2020



Fig. 9. Independence day Celebrations 2019



Fig. 10. Matribhsha Diwas 2020



Fig. 11. Utkarsha Bhavan: Foundation Stone Programme



Fig 12. Fit India Movement

3.0 THE STAFF

3.1 ACADEMIC STAFF (TEACHING)

DEPARTMENT OF BIOTECHNOLOGY

Sl. No	Name of the post	Name
01	Professor	Aikat Kaustav, PhD Chattopadhyay Sudip, PhD Chaudhuri Surabhi, PhD Dasgupta(Mandal) Dalia, PhD Dey Apurba, PhD Mukhopadhyay Sudit Sekhar, PhD
02	Associate Professor	Bhattacharjee Ashish Kr, PhD Dutta Debjani, PhD Ghosh Monidipa, PhD Khannam Kazy Sufia, PhD Roy Barman Subhankar , PhD
03	Assistant Professor Gr-I	Mahata Nibedita, PhD Mukherjee Oindrilla, PhD Saha Sougata, PhD
	Assistant Professor Gr-II	De Debojyoti , PhD Mondal Sudipta , PhD Barik Amita, PhD

DEPARTMENT OF CHEMICAL ENGINEERING

Sl. No	Name of the post	Name
01	Professor	Dutta Susmita , PhD Ghanta Kartik Ch., PhD Gupta Parthapratim, PhD Halder Gopinath, PhD Mandal Tamal, PhD Pal Parimal, PhD Sadhukhan Anup Kr., PhD
02	Associate Professor	Mandal Mrinal Kanti, PhD Sikder Jaya, PhD Lahiri Sandip Kr., PhD
03	Assistant Professor Gr.-I	Das Bimal, PhD Hens Abhiram, PhD Paruya Swapan, PhD
04	Assistant Professor Gr-II	Chaudhuri Rajib Ghosh, PhD Mondal Bikash Kr. PhD

DEPARTMENT OF CHEMISTRY

Sl. No	Name of the post	Name
01	Professor	Majhi Milan, PhD Moi Sankar Ch., PhD Patra Apurba Kr, PhD Sukul Dipankar, PhD Saha Rajnarayan, PhD
02	Associate Professor	Chakraborty Jitamanyu, PhD Panja Sujit Sankar, PhD
03	Assistant Professor Gr-I	Adhikari Utpal, PhD Ghosal Subhas, PhD Saha Tanmoy Kr., PhD
04	Assistant Professor Gr-II	Banerjee Deb Ranjan, PhD

DEPARTMENT OF CIVIL ENGINEERING

Sl. No	Name of the post	Name
01	Professor	Bhattacharjee Kamal, PhD Bhattacharyya Soumya, PhD Banik Atul Krishna, PhD Das. Amlan, PhD Dwivedi. Vijay Kr., PhD Roy Purnendu, PhD Saha Showmen , PhD Singha Roy Dilip Kr., PhD Samanta Amiya Kr. PhD
02	Associate Professor	Das Diptesh, PhD Datta Alope Kr, PhD Nanda Radhikesh Prasad, PhD Pal Supriya ,PhD Topdar Pijush, PhD
03	Assistant Professor Gr-I	Roy Pronab , PhD
04	Assistant Professor Gr-II	Karmakar Somnath, PhD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Sl. No	Name of the post	Name
01	Professor	Choudhury Subhrabrata, PhD Nandi Debasish, PhD Nandi Subrata, PhD Pal Tandra, PhD Roy Suchismita, PhD
02	Associate Professor	Chakraborty Baisakhi, PhD Das Suvrojit, PhD De Tanmay, PhD Dutta Animesh, PhD Kisku Dakshina Ranjan, PhD Mitra Debasis, PhD Mukhopadhyay Sajal, PhD Sarkar Anirban, PhD Sarkar Goutam, PhD Sen Bibhas , PhD Saravanan C. , PhD
03	Assistant Professor Gr-I	Bhattacharjee Sanghita, PhD Changder Subhamoy, PhD Choudhury Prasenjit, PhD Chatterjee Rajib Kr. Dalui Mamta, PhD Das Dipanwita PhD Howlader Joydeep, PhD Jana Nandadulal , PhD Saha Mousumi, PhD Saha Sujoy, PhD Sharma Abhijit, PhD
04	Assistant Professor Gr-II	Guha Thakurta Parag Kr. PhD Karmakar Sandip, PhD Majhi Subhankar Sadhu Sanjib

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No	Name of the post	Name
01	Professor	Acherjee Parimal , PhD Banerjee Subrata, PhD Ghosh Saradindu, PhD Koley Chiranjib, PhD Mahato Sankar Narayan , PhD Ray Nirmal Kumar, PhD Saha Tapas Kr., PhD Thakur Sidhartha Sankar, PhD
02	Associate Professor	Bhowmik Partha Sarathee, PhD De Jayati, PhD
03	Assistant Professor Gr-I	Barman Jitesh Ch. Bera Tushar Kanti, PhD Bhattacharya Aniruddha, PhD Halder Suman, PhD Saha Ray Biman Kr., PhD Sarkar Supriya, PhD
04	Assistant Professor Gr-II	Bohre Aashish Kr., PhD Das Avinandan Dey Aritro, PhD Dhara Ashis Kr., PhD Mohd. Falul Ahmed Irfan, PhD
05	Trainee Teacher	Dey Rajiv

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Sl. No	Name of the post	Name
01	Professor	Bhattacharjee Anup Kr., PhD Ghatak Rowdra, PhD Kundu Sumit, PhD Mahanty Goutam Kr., PhD Mahapatra Rajat, PhD Maji Bansibadan, PhD Mal Ashis Kr., PhD
02	Associate Professor	Chandra Aniruddha, PhD Dhar Roy Sanjoy, PhD Kar Rajib, PhD Mandal Durbadal, PhD Sadhukhan Tapas, PhD
03	Assistant Professor Gr-I	Mandal Sujit Kr., PhD
04	Assistant Professor Gr-II	Chattaraj Nilanjan, PhD Majumder Aurpan Mondal Hemanta Kr., PhD Ranwa Sapana, PhD

DEPARTMENT OF EARTH & ENVIRONMENTAL STUDIES

Sl. No	Name of the post	Name
01	Professor	Adhikary Kalyan, PhD
02	Assistant Professor Gr-I	Mondal Sandip , PhD
03	Assistant Professor Gr-II	Ozha Manoj Kr., PhD

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

Sl. No	Name of the post	Name
01	Professor	Sengupta Partha Pratim, PhD
02	Associate Professor	Banerjee Joydeep, PhD Modak Arindam, PhD Rai Srikrishan, PhD
03	Assistant Professor Gr-I	Chakraborty Debasis, PhD
04	Assistant Professor Gr-II	Banerjee Sutanuka, PhD

DEPARTMENT OF MATHEMATICS

Sl. No	Name of the post	Name
01	Professor	Basu Kajla, PhD Sarkar (Mondal) Seema, PhD Kar Samarjit, PhD
02	Associate Professor	Bagchi Satya, PhD Dey Lakshmikanta, PhD Maitra Sarit, PhD Pal Anita, PhD Pal Pinaki, PhD
03	Assistant Professor Gr-I	Panigrahi Goutam, PhD Gopmandal Partha Pratim, PhD
04	Assistant Professor Gr-II	Ali Md. Firoz, PhD

DEPARTMENT OF MECHANICAL ENGINEERING

Sl. No	Name of the post	Name
01	Professor	Basak Indrajit, PhD Banerjee Nilotpal, PhD Halder Biswajit, PhD Mullick Amar Nath, PhD Hui Nirmal Baran, PhD Layek Apurba, PhD Puri Asitbaran, PhD Roy Shibendu Shekhar, PhD
02	Associate Professor	Biswas Arup Kr., PhD Khan Kallol, PhD Mitra Ambuj Kr., PhD Mukhopadhyay Sumit, PhD Pramanik Achinta Kr, PhD Rana Subhash Ch., PhD
03	Assistant Professor Gr-I	Bera Biswajit, PhD Barman Rabindra Nath, PhD Das Asim Kr. De Jagannath, PhD Karmakar Sujit, PhD Mitra Ranjan Kr., PhD Pramanik Shantanu, PhD
04	Assistant Professor Gr-II	Datta Aparesh, PhD Goswami Arjyjayoti, PhD Jana Kuntal, PhD Mondal Sirshendu, PhD Mishra Chintamani, PhD Patari Animesh Sengupta Sayantan, PhD
05	Trainee Teacher	Akram Wasim Kumar Deepak

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Sl. No	Name of the post	Name
01	Professor	Ghosh. Karuna Sindhu, PhD Maity Joydeep, PhD
02	Associate Professor	Bera Supriya, PhD Ghorai Satadal, PhD Ghosh Madan Mohan, PhD Mondal Manas Kr., PhD Pramanik Susanta, PhD Show Bijay Kr, PhD
03	Assistant Professor Gr-I	Mallik Manab, PhD Mandal Arup Kr., PhD Mandal Durbadal, PhD
04	Assistant Professor Gr-II	Maji Barnali, PhD Yagati Krishna Priya, PhD

DEPARTMENT OF PHYSICS

Sl. No	Name of the post	Name
01	Professor	Chakraborty Amit Kr, PhD Kumbhakar Pathik, PhD Meikap Ajeet Kr., PhD
02	Associate Professor	Basu Soumen, PhD Chaudhuri Hirok, PhD Mandal Mrinal Kanti, PhD Mondal Aniruddha, PhD Sahoo Sukdev, PhD
03	Assistant Professor Gr-II	Das Soumik, PhD Ghosh Abhijit, PhD Ghosh Sayantari, PhD Subramanian Hemachander, PhD

Further detail of faculty positions are given in Annexure 11.5(a) to 11.5(d).

3.2 NON-ACADEMIC STAFF (NON-TEACHING)

The non-academic Staff (non-teaching) of the Institute consists of competent officers, technical and administrative persons. The details of the non-academic staff position are given in Annexure 11.6(a) to 11.6(e).

3.3 TRAINING STATUS

The Institute provides ample opportunities to the Faculty to attend Seminars, Conferences, Short-Term Programmes etc. in India and abroad. Details are given in Annexure 11.7(a) & 11.7(b).

3.4 PLACEMENT OF STAFF FOR ACADEMIC EXCELLENCE

To encourage teaching and non-teaching staff, the Institute provides opportunities in the form of leave for higher studies/ research and taking up research projects from outside agencies. Faculty members and staff of the Institute are also encouraged to attend summer and winter schools, seminar, workshops etc. on the emerging areas. Research papers are regularly published in national and international journals. The details of publications, doctoral programmes, research projects, etc. are given in Annexure 11.4(a) to 11.4(i).

4.0 TEACHING PROGRAMMES

4.1 PROGRAMMES OFFERED

The programmes offered by the Institute have already been mentioned in item number 2.6. For further elaborations item numbers 11.8 (a) and 11.8 (b) may kindly be referred to.

4.2 PROGRAMME-WISE ENROLMENT WITH GENDER, CASTE BREAK-UP

4.2 A1. ENROLMENT IN B. TECH. PROGRAMMES DURING 2019-2020. (GENDERWISE):

Vide Annexure 11.8(b) 1..

4.2 A2. ENROLMENT IN B. TECH. PROGRAMMES DURING 2019-2020 (CASTEWISE):

Vide Annexure 11.8(b) 2.

4.2 B1. ENROLMENT IN M. TECH. & M. SC. PROGRAMMES DURING 2019-2020 (GENDER WISE):

Vide Annexure 11.8(b) 3.

4.2 B2. ENROLMENT IN M. TECH. & M. SC. PROGRAMMES DURING 2019-2020 (CASTE WISE):

Vide Annexure 11.8(b) 4.

4.2 C1. ENROLMENT IN MCA PROGRAMME DURING 2019-2020 (GENDER WISE):

Vide Annexure 11.8(b) 5.

4.2 C2. ENROLMENT IN MCA PROGRAMME DURING 2019-2020 (CASTE WISE):

Vide Annexure 11.8(b) 6.

4.2 D1. ENROLMENT IN MBA DURING 2019-2020 (GENDER WISE)::

Vide Annexure 11.8(b) 7.

4.2 D2. ENROLMENT IN MBA PROGRAMME DURING 2019-2020 (CASTE WISE):

Vide Annexure 11.8(b) 8.

4.2 E1. ENROLMENT IN MSW DURING 2019-2020 (GENDER WISE):

Vide Annexure 11.8(b) 9.

4.2 E2. ENROLMENT IN MSW PROGRAMME DURING 2019-2020 (CASTE WISE):

Vide Annexure 11.8(b) 9.

4.2 F. ENROLMENT OF RESEARCH SCHOLARS FOR PHD WORK DURING 2019-2020 (FULL TIME & PART TIME):

4.3 ADMISSION STATISTICS – UG/PG PROGRAMMES

The details of the admission statistics is given in Annexure – 11.8(c)1. to 11.8(c)5.

4.4 STUDENTS' TOTAL STRENGTH

Sl No	Name of the programme	Total Number of Students
1	Bachelor of Technology	2937
2	B. Tech & M. Tech Dual Degree	8
3	5 Years Integrated M. Sc. Programme	13
4	Master of Technology	477
5	Master of Computer Applications	132
6	Master of Business Administration	48
7	Master of Science	69
TOTAL		

4.5 THE HOSTELS

Staying in hostels is mandatory for all undergraduate students of the Institute. Accommodations are provided to GATE-qualified M Tech students, too. The Institute has seven halls of residence for the male students of which five halls are of 250 seats capacity each, one is of 360 seats capacity and the other can accommodate 120 students. Three of these halls have single-seated rooms for senior students. The Institute has also several halls of residence and the details are given below :

Hostels	Boys/Girls	Actual student Capacity	Number of students accommodated
Hall-1	Boys	650	636
Hall-2	Boys	252	316
Hall-3	Boys	336	320
Hall-4	Boys	252	252
Hall-5	Boys	380	380

Hostels	Boys/Girls	Actual student Capacity	Number of students accommodated
Hall-6	Girls	119	172
Hall-7	Girls	194	166
Hall-8	Girls	125	125
Hall-9	Boys	548	462
Hall-10	Girls	332	332
Hall-11	Boys	702	592
Hall-12	Boys	170	97
A & B Type Qr.	Girls	73	62

4.6 SCHOLARSHIPS/ASSISTANCE

The Department of TPSW helps the students to avail several scholarships under various schemes which are listed in the annexure 11.9(a). Moreover, the Institute provides merit-cum-means scholarship to some of the needy students of the Institute..

4.7.GAMES AND SPORTS

The Institute organized various intra NIT tournaments through out the year in the fields of Football, Volleyball, Basketball, Cricket, Chess, Badminton, Table Tennis, Athletics, yoga and Martial Art.

In the year 2019-2020 Institute participated in the following All India Inter NIT & other Games & Sports meet.

1. All India Inter NIT Table Tennis & yoga (Men & Women) Tournaments organized by NIT Silchar during October 11 to 13, 2019.
2. All India Inter NIT Lawn Tennis & Chess (Men) Tournaments organized by NIT Jaipur during October 17-19, 2019.
3. All India Inter NIT Faculty & Staff tournament in Badminton organized by NIT Jaipur during December 18-20, 2019.
4. All India Inter NIT Faculty & Staff tournament in Cricket organized by NIT Nagpur during December 27-30, 2019.
5. All India Inter NIT Basketball (Men & Women) Tournaments organized by NIT Surathkal during January 17-19, 2020.
6. All India Inter NIT Track & Field & Volleyball tournaments (Men & Women) organized by NIT Rourkela during January 24-26, 2020.
7. All India Inter NIT Badminton and Cricket (Men) tournaments organized by NIT Surat during February 20- 23, 2020.

4.8 AWARDS

The details of the awards received by the students and the faculty are given in Annexure 11.9(b)..

4.9 EXAMINATION DETAILS

Written examinations are held at the end of every semester (generally of 3 hours duration) for the theory papers. B. Tech. examinations are arranged centrally by the Academic Section while the postgraduate examinations are being conducted by the respective departments from the academic year 2008-09, with partial support from the Academic Section, whenever necessary. The students are also continuously assessed through class

tests, viva-voce and the class attendance. For the laboratory and sessional classes, the assessments are continuous and supported by viva-voce /examination at the end of the semester. The methods of the evaluation systems on such assessments are given below.

SGPA- CGPA SYSTEM

All the subjects in a semester carry credit units depending on the contact hours per week and nature (lecture/ tutorial/ sessional/ laboratory) of the class. The full marks for all the subjects both theoretical and sessional/laboratory are 100. The percentage mark of a theoretical subject consists of 30% by continuous assessment, and 70% through end semester examination. The total mark obtained in a subject is converted to appropriate letter grade by the subject teacher(s) and dispatched for result compilation. In general, the number to grade conversion and the corresponding grade value is as follows:

90 and above: Ex (10); 80-89: A (9); 70-79: B (8); 60-69: C (7); 50-59: D (6); 40-49: P (5). Below 40 in theory subject or below 50 in sessional/ laboratory: F (0). Failure in Sessional / laboratory is required to repeat the semester through readmission. In case of absent in end-semester examination: X (0).

The product of the grade value and the credit unit of that particular subject is the grade point earned by the student in that subject. The total grade point (TGP) is the summation of all such grade points. Semester grade point average (SGPA) = (TGP) / Total credit unit of the semester, rounded up to second place of decimal. If a candidate cleared all the subjects, he is declared as passed in the grade sheet, otherwise supplementary. Supplementary candidate(s) will be allowed to appear in the supplementary examinations for the subject(s) in which he/she was failed. Fresh grade sheet is issued for such candidates with improved SGPA. The grade obtained by the candidates in the subject(s) for which he/she had appeared for the supplementary examinations are decreased by one step at the time of compilation of the supplementary examination results. Unsuccessful candidates in the supplementary examination are required to repeat the semester through readmission. Two such readmissions are permitted in the whole undergraduate studentship. The CGPA is also indicated in the grade sheet, which is the indicator of the student's continuing performance given by the ratio of the total grade point scored by the student up to the current semester and the total credit unit of all the subjects up to the current semester. Based on the CGPA at the end of the final semester the classes are awarded as follows:

CGPA \geq 8.00 First class with Distinction; $8.00 >$ CGPA \geq 6.50 First class; the rest of the passed candidates get Second class.

Similar system is followed for the M. Tech., M. Sc., MBA and MCA programmes. In some project based courses in MBA, the 70/30 ratio as indicated above is changed according to need as a special case.

The results of the end semester examinations (both Undergraduate and Postgraduate) are compiled centrally by the Examination Cell.

4.10 TRAINING AND PLACEMENT

The Institute provides industrial training and placement to the students through the Department of Training, Placement, and

Students' Welfare. The students are given an insight of the corporate industry via various vocational training programmes facilitated by the department. The department believes that such an insight is quite crucial and helps the students in understanding the professional aspects along with the technical details of their probable future jobs. Along with training sessions (ranging between 3 to 5 weeks), the department also organises plant visits to various organizations in and around Durgapur. Apart from providing industrial training, the department also helps the students in preparing for campus recruitment drives by developing their communication and interpersonal skills through certain development programmes, which include conducting mock group interviews. It also takes care of inviting reputed firms from all over to hire students through their campus recruitment drives.

5.0 RESEARCH AND DEVELOPMENT ACTIVITIES

5.1 PROPOSED PLAN FOR RESEARCH

Proposed Plan for Research

Vide Annexure – 11.4(g) 1

5.2 DETAILS OF PHDS DONE SO FAR

Vide Annexure - 11.4(h) 1

5.3 INSTITUTE-INDUSTRY COLLABORATION DURING 2019-20

DEPARTMENT OF BIOTECHNOLOGY

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities
Royal Care Hospital (Ghosh, M.)	Provide Patients samples	Sensor mediated disease detection and validation

DEPARTMENT OF CHEMICAL ENGINEERING

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities
Thermax Ltd., Pune	CFD modelling of reactors	Thermax-Sampark-Professor Fellowship Programme
Rice Mill Industries [Sree Ma Rice Mill, Bhabatarini Rice Mill and Laxmishree Rice Mill] Burdwan, WB, India	Waste Management and Valorization	Rice husk ash to Silika recovery and Bio-Organic Fertilizer production in association with other industrial and domestic waste and wastewater treatment
Leder Chemischque PVT LTD, Leather Complex, Bantala, Kolkata	Waste Management	Tannery Wastewater treatment, Chromium recovery for recycle and Bio-Organic Fertilizer development from solid waste [Wet Blue Leather]
Scientific Design company, USA	modelling and optimization of industrial reactors	Real time application building for online modelling and optimization of industrial processes
Bell Energy, UK and Abu Dhabi	Application of artificial intelligence in process industries	Real time artificial intelligence based application building for various industrial processes

DEPARTMENT OF CHEMISTRY

Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Dr. Reddy's lab Hyderabad	Computational analysis	Ghosal S and Dey Archan	Research and development

DEPARTMENT OF CIVIL ENGINEERING

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities
Eastern Coalfields Ltd.	Scientific study on OC mines workings	Scientific studies of OC mines pit slopes, dump slopes and monitoring of slopes, layout of haul road etc.
HIT Haldia	Research	Joint PhD Supervision
West Bengal Mineral Development Corporation Limited	Scientific study on OC mines workings	Scientific studies of OC mines pit slopes, dump slopes and monitoring of slopes.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities
Tata Consultancy Services (TCS)	Research	TCS Research Schola Programme

DEPARTMENT OF MATHEMATICS

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities

DEPARTMENT OF MECHANICAL ENGINEERING

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities
Advanced Systems Laboratory, Hyderabad	Control system	Research and Development

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities
Alloy Steel Plant, Durgapur	Recycling of EAF Dust	Research and Development
CSIR-CMERI, Durgapur	Materials Processing and Wear Behaviour	Research and Development
CSIR-NML, Jamshedpur	Metallurgy	Research and Development
Durgapur Steel Plant, Durgapur	Metallurgy	Research and Development
IIST, Shibpur, WB	Metallurgy	Research and Development
TATA Steel Jamshedpur	Metallurgy	Research and Development

DEPARTMENT OF PHYSICS

Collaborating Institute / Organization	Areas of collaboration	Collaboration Activities
IMEC, Belgium	Resistive Random Access Memory	Visit and seminar by industry faculty, planning of joint research.

5.4. INNOVATIONS AND TECHNOLOGY TRANSFER

Patent filed during 2019-20

DEPARTMENT OF BIOTECHNOLOGY

Title	Inventors	Application No.	Date of filing
Sequential ultraviolet mediated mutagenesis for enhanced production of Rapamycin	Subhasish Dutta, Apurba Dey, Bikram Basak, Ankan Sinha	201631036780	October 26, 2016 PUBLISHED ON 29.03.2019
Recombinant Cellobiohydrolases	Sudit Sekhar Mukhopadhyay, Subba Reddy Doda, Nibedita Sarkar, Kaustav Aikat	201731045312	December 17, 2017 (published on June 21, 2019)
Amorphous silicon monoxide based nanowire electrode biosensor	Aniruddha Mondal; Monidipa Ghosh; Shyam Murli Manohar Dhar Dwivedi, Chiranjib Ghosh; Sagarika Deepthy, Rini Lahiri.	201931007981	February 28, 2019
An Electrode based system for analysis of Biomarkers\Biological specimens.	Monidipa Ghosh, Chiranjib Koley	201931047203	November 19, 2019
A system for measurement of Vitamin D level in serum samples.	Monidipa Ghosh, Chiranjib Koley, Doel Pal, Moumita Maji, Sourav Dhara	201931051578	December 12, 2019

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title	Inventors	Application No.	Date of filing
AN END-TO-END SYSTEM FOR OFFLINE LOCALIZED CRISIS MAPPING AND METHOD OF OPERATION THEREOF	Subrata Nandi, Sujoy Saha, Partha Sarathi Paul, Kingshuk De, Prithviraj Pramanik, Bishakh Chandra Ghosh, Hriday Dutta, Naman Mehta, Indrajit Bhattachaya, Sandip Chakraborty	201931050685	9.12.2019

DEPARTMENT OF ELECTRICAL ENGINEERING**PATENT AWARDED**

Title	Inventors	Application No.	Date of award
System and method of Stable rotation of a magnetically levitated ferromagnetic cylindrical body	Subrata Banerjee	No:320921	20.09.2020

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Title	Inventors	Application No.	Date of filing
A Method for Mode Switching and Power Allocation in Device to Device Communication	Pratik Chakraborty	202011009278	03.04.2020

PATENT AWARDED**DEPARTMENT OF CHEMICAL ENGINEERING**

Title	Inventors	Application No.	Date of award
A green process for continuous and direct production of L-glutamic acid	Pal, P. and Kumar, R. Kumar	962/KOL/2014Granted right Patent No. 321961	29/9/19
A high flux low energy osmotic system for arsenic removal at low cost	Pal, P. and Chakraborty, S.	1003/KOL/2014 No. 333616	29.2.20

5.5 WORKSHOPS/SEMINARS ORGANISED BY THE INSTITUTE (2019-20)**DEPARTMENT OF BIOTECHNOLOGY**

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Dr. Pradip Nair, Chief Scientific Manager, Biocon Research Limited	Industry Institute Interaction (III)-TEQIP III	April 4, 2019
2	Mr. Anjan Sen (Patent Attorney), Prof. Goutam Saha (IIT Kharagpur), Prof. T. K. Bandyopadhyay (IIT Kharagpur)	One day workshop on Intellectual Property Rights (IPR 2019)	May 14, 2019
3	Mohua Roy	Life skill management and women empowerment	July 6-7, 2019
4	Dr. Anjil Kumar Srivastava, Research Associate, Durham University	Invited talk in the Dept. of Biotechnology under the diamond jubilee seminar series	October 15, 2019
5	Dr. Sebak Datta, Senior Research Scientist, TCG Life Science & Dr. Sibabarata Mukherjee, Industry Technology Specialist, Novozymes	Industry Institute Interaction (III)-TEQIP III sponsored Workshop on "Prospect of Transition from the academia to the health-sector industry"	December 6, 2019

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
6	Prof. Bikramjit Basu, IISc Bangalore; Prof. Suresh Devasahayam, CMC Vellore; Prof. Suman Chakraborty, IIT Kharagpur Prof. Santanu Dhara, IIT Kharagpur; Dr. Koushik Chatterjee, IISc Bangalore; Dr. Monidipa Ghosh, NIT Durgapur and others.	Recent Trends in Biomedical Engg. 2020. NIT Durgapur	January 3-7, 2020
7	Dr. Uttam Chand Banerjee, Professor & Head, Pharmaceutical Technology, NIPER Mohali	TEQIP III Sponsored Programme under Improvement in Student Learning on 'Advances in Bioprocess Technology'.	January 14, 2020
8	Prof (Dr.) Tapas Bose, Head and Professor, Forensic and State Medicine, Nilratan Sarkar Medical College Dr. Nazmiara Sabnam, Presidency University Ms. Sanjukta Chakraborty, Jain Irrigation Systems Ltd Mr. Rahul Sen, State Bank of India, Durgapur	Biotechnology: The Road Ahead"	January 19, 2020
9	Mr. Arijit Mukherjee Senior HR Business Partner, BIOCON Ltd., Bangalore	TEQIP-III Industry-Institute-Interaction Programme on "Skills to Improve Employability in Biotechnology Sector	February 7, 2020
10	Dr. Ranjan Sen, F.N.A., Centre for DNA Fingerprinting & Diagnostic	Invited talk in the Dept. of Biotechnology under the diamond jubilee seminar series	February 12, 2020

DEPARTMENT OF CHEMICAL ENGINEERING

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Mandal M K., Pal S, Chaudhuri H.	5 days' workshop under BRICS project	March 25-31, 2019
2	Halder, G. N. and Das, B.	TEQIP-II & DST-Govt. of W.B sponsored, 5th One week Short Challenges in Sustainable Biofuel Synthesis Over Conventional Fuel	June 13-17, 2019
3	Halder G N	National Symposium on Waste Management and Resource Circulation : NSWMRC-2019	August 9-10, 2019
4	SK Lahiri, Rajesh P. Barnwal, Roy, P., Chatterjee, S., Roy, S., Basu, A.,	Workshop on "Process Modelling and Simulation using Aspen Plus and Application of Artificial Intelligence in Process Industries"	Feb 17-21, 2020

DEPARTMENT OF CHEMISTRY

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Dr. S. C. Moi (Member)	One-Day IPR workshop	14.05.2019
2	Dr. S Ghosal (Secretary) Dr. D. R. Banerjee (Secretary)	One-day Industry-Institute-Interaction (I-I) Topic: Invited talk by Dr. Archan Dey (Reddy's lab, Hyderabad) on "Recent trends in industrial Chemistry'	10.01.2020
3	Dr. S. C. Moi Dr. S Ghosal Dr. D. R. Banerjee Dr. U. Adhikari	One-day Industry-Institute-Interaction (I-I) Topic: Student visit and excursion of DVC MPTS	24.01.2020

DEPARTMENT OF CIVIL ENGINEERING

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Prof. Anup K Sengupta, Leigh Univ., USA Prof. A. V. Taskin, FEFU, Russia Prof. A. Mazumder, JU Prof. Y. Li, Hohai Univ., China Prof. P. Sengupta, JU Prof. Otto Correa Rotunno Filho, the Federal University of Rio de Janeiro Dr. Yihui Dong, ECUT, China Prof. Gopa Samanta, Burdwan University Prof. R.N.Saha, NITD Dr. H. Chaudhuri, NITD	International Conference on "Sustainable Water Resources Management under changed climate" at Jadavpur University jointly organised by NIT Durgapur and Jadavpur University along with Womens's College, Calcutta	March 13-15, 2020

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Prof. Umapada Pal, ISI Kolkata Prof. Bhabotosh Chanda, ISI Kolkata Prof. Swagatam Das, ISI Kolkata Prof. Sudipto Mukhopadhyay, IIT Kharagpur Prof P.K.Biswas, IIT Haragpur Prof. Ananda Chowdhury, Jadavpur University Prof. S.P.Maity, IEST, SHipbur, Howrah Dr. Ashis Kumar Dhara, NIT Durgapur Dr. Mrinal Kanti Mondal, NIT Durgapur Dr. Debashis nandi, NIT Durgapur Dr. Baisakhi Chakraborty, NIT Durgapur	TEQIP-III Sponsored Short Term Course on Recent Trends in Machine Learning for Computer Vision and Image Analysis Computing 2019	Aug 19-23, 2019
2.	Dr Prasenjit Choudhury Dr Prasenjit Choudhury	AICTE – Training & Learning (ATAL) Academy Sponsored Program on Data Sciences	14-18 October 2019
3.		AICTE – Training & Learning (ATAL) Academy Sponsored Program on Artificial Intelligence	18-22 November 2019

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	A. K. Dhara and T K Bera	Machine Learning for Biomedical Image Analysis	12-11-2019 to 16-11-2019
2.	T. K. Bera, A. Bhattacharya, M. V. Aware, I. Ahmed	Electric Vehicle (EV) and its Impacts on Power System	17-02-2020 to 21-02-2020

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Mr. Kunal P. Ghosh (Director, VSD Corp. Pvt. Ltd.) Dr. H. S. Jatna (SCL Chandigarh) Dr. Anand Bulusu (IIT Roorkee)	The Faculty Development Programme on "VLSI Chip Design Hands on using open source EDA" at NIT Durgapur jointly organized Coordinator by Electronics and ICT Academies through National Knowledge Network at NIT Durgapur as Remote Centre with NIT Patna under the "Scheme of financial assistance for setting up of Electronics and ICT Academies" by the MeitY, Government of India	08.07.2019 to 12.07.2019
2	Prof. Ratnajit Bhattacharjee (IIT Guwahati) Dr. Mahima Arrawatia (IIT Guwahati) Dr. Soumava Mukherjee (IITJ) Prof. K. P. Ray (Defence Institute of Advanced Technology (DIAT) Dr. Rajarshi Bhattacharya (NIT Patna) Dr. S.B. Chakraborty (SAC ISRO Ahmedabad) Prof. Debasis Mitra (IEST Shibpur) Prof. Gopi Shrikanth Reddy (IIT Mandi) Prof. P.H.Rao (SAMEER Chennai)	Summer FDP on "Antenna Trends". The program is jointly organized by Electronics and ICT Academies, IIT Guwahat, NIT Patna and MNIT Jaipur through National Knowledge Network with NIT Durgapur as Remote Centre. The program is under the "Scheme of financial assistance for setting up of Electronics and ICT Academies" by the MeitY, Government of India.	01.07.2019 to 05.07.2019
3	Prospective external Experts: (i) Prof. S.K. Saha, Professor, IIT Delhi (ii) Prof. Asish Dutta, IIT Kanpur (iii) Dr. Debanik Roy, BARC, Mumbai Experts from host Institutes- (iv) Prof. Vijay Kumar Gupta, IIITDM Jabalpur (v) Prof. R. B. V. Sabramanyam, NITW	The Faculty Development Programme on "Robotics & AI" at NIT Durgapur jointly organized Coordinator by Electronics and ICT Academies through National Knowledge Network at NIT Durgapur as Remote Centre with NIT Patna and IIT Guwahati under the "Scheme of financial assistance for setting up of Electronics and ICT Academies" by the MeitY, Government of India	24.06.2019 to 28.06.2019

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Sl. No.	Invited Speaker	Name of Programme	Date
1	Dr. Dipankar Saha	TEQIP-III Sponsored under the aegis of Institute-Industry-Interaction.	11/09/2019
2	Prof. Firoz Alam et al.	TEQIP-III Sponsored International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	13-15 January, 2020
3	Prof. P P Mujumdar	TEQIP-III Sponsored International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	13-15 January, 2020
4	Prof. S. P. Gon Chaudhuri	TEQIP-III Sponsored International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	13-15 January, 2020

Sl. No.	Invited Speaker	Name of Programme	Date
5	David A. Polya ¹ et al.	TEQIP-III Sponsored International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	13-15 January, 2020
6	Firoz Alam et al.	TEQIP-III Sponsored International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	13-15 January, 2020
7	Dr. Dipankar Saha	TEQIP-III Sponsored International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	13-15 January, 2020

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1.	Prof. Pabitra Sarkar Prof. Anjali Gera Roy, IIT Kharagpur Dr. Rajni Singh, IIT ISM Dhanbad Dr. Santwan Chattopadhyay, Jadavpur University Dr. Mausumi Bhattacharyya, Visva-Bharati Prof. Bula Bhadra, Retd. Prof. Calcutta University Prof. Niladri R. Chatterjee, University of Kalyani	Media, Gender and Globalization: Emerging Issues; Trends and Challenges	03.06.2019 -09.06.2019

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1.	Prof. R.C. Gupta, Prof. Dipak Mazumdar, Prof. G.S. Gupta, Dr. J. Pal, Dr. K K Prasad, Dr. Amit Mukherjee	One week Short term course on Indian Iron and Steel Technologies: Challenges and Remedies (IISTCR-2019)	09-13 December, 2019
2	Dr. S. Bhowmick, Prof. A. S. Panwar, Dr. S. Chatterjee, Dr. P. S. Ghosh	Short term course: Computational Materials Modelling & Simulation (CMMS 2020)	February 17 – 21, 2020

DEPARTMENT OF MANAGEMENT STUDIES

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1.	Prof. Mukul Asher (NUS) Dr. Amlan Ghosh	GIAN-MHRD	May 19-25, 2019

DEPARTMENT OF MATHEMATICS

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Swami Atmapriyananda, VC, Vivekananda University Dr Imon Paul, IQ City Hospital Dr Rajib Chakroborty, NIT Durgapur	Induction for B. Tech First year students of NIT Durgapur	July 29 – August 04, 2019
2	Prof. Sudeshna Basu, Department of Mathematics, George Washington University, USA and Mr. Debayan Goswami, Assistant Manager (E &T), Durgapur Projects Limited	Industry Institute Interaction (I-I) Program on Functional Analysis and Optimization	September 12, 2019

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
3	Prof. Y. Adachi, University of Tsukuba, Japan	Invited Lecture on "Sedimentation and electrophoresis of porous floc and polymer coated colloid"	September 24, 2019
4	Mr. Amitava Chakraborty, Senior Infrastructure Architect – IBM Managed Service/Cloud Architecture, IBM India Pvt. Ltd.	Industry Institute Interaction programme on "Cloud computing and Optimization"	November 21, 2019
5	Prof. Sudeshna Basu, Department of Mathematics, George Washington University, USA	Special Lecture on Geometry of Banach Spaces	December 9, 2019
6	Prof Jyotirmoy Sarkar, USA Prof S P Mukherjee, CU Prof Debabrata Datta, DAE, Govt. of India	International Conference FORBS 2019	December 27-28, 2019
7	Prof Ishita Banerjee Dube, Mexico, Mr Pushpen Chatterjee, BDO, Chakdah Block, Dr Agnimita Giri Sarkar, Consultant Pediatrician, Ms Sweta Agarwal, IAS	One week workshop on Women Empowerment in India: Challenging Obstacles and Creating Opportunities (WEICOCO 2020)	January 06-10, 2020
8	Prof. Graham Priest, Distinguished Professor of Philosophy, City University of New York Prof. Mihir Chakraborty, Retd. Professor of Mathematics, Calcutta University	One day workshop on "Beyond Classical: Philosophy and Science"	January 13, 2020
9	Prof. U. Feudel, Oldenburg University, Germany, Prof. K. Lehnertz, University of Bonn, Dr. Syamal K. Dana, Jadavpur University and Dr. Tanmoy Banerjee, Burdwan University	Student Improvement Programme on "Complex Dynamical Systems in Science and Engineering"	March 3, 2020

DEPARTMENT OF MECHANICAL ENGINEERING

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Experts from industry and academia	International conference on 'Clean and Renewable Energy'	July 10-12, 2019
2	Experts from industry and academia	Short term course on Structural Dynamics, Vibrations and control	July 22-26, 2019
3	S. K. Saha, IIT Delhi, S. Sen, D. N. Roy and S. Nandy, CMERI; S. S. Roy, N. Chattaraj and N. B. Hui of NIT Durgapur	ATAL Program on Robotics, Sponsored by AICTE, New Delhi	December 09-13, 2019
4	Prof. A. Mukhopadhyay, Prof. Swarnendu Sen, Prof. Ranjan Ganguly, Jadavpur University; Dr. Subhankar Sen, IIT-ISM (Dhanbad); Dr. Debashis Pal, IEST, Shibpur; Dr. Sujit Karmakar, Dr. Shantanu Pramanick, Dr. Rabindra Nath Barman, Dr. Ranjan Kumar Mitra, NIT Durgapur	Recent Advances in Fluid and Thermal Engineering (RAFTE 2019)	December 17-21, 2019

DEPARTMENT OF PHYSICS

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
1	Prof. Hans Georg Braun, Leibniz Institute of Polymer Research, TU Dresden, Germany	One Day Seminar	February 22, 2019
2	Prof. P. Kumbhakar, Dr Subrata Biswas	OSI Sponsored Seminar on "Light and its Applications in Daily life" at Durgapur Vidyasagar Model High School, Durgapur to Celebrate the International Day of Light, as declared by UNESCO	May 16, 2019

Sl. No	Name of Key Speaker(s)	Name of the Programme	Date of the programme
3	Dr. Premomay Ghosh, Dr. J. K. Nayak Dr. S. Sahoo, Dr. M. K. Mandal Prof. A. K. Meikap, Prof. P. Kumbhakar Dr. T. Baneerjee, Dr. K. Mukherjee	Short-Term Course on "Recent Advances in Theoretical and Computational Physics with Hands on Training in Computer Programming"	June 10-14, 2019
4	Prof. Prabir Kumar Bose Prof. Sunanda Dhar Prof. Ranjan Kumar Mitra Etc.	1st International Conference on Clean and Renewable Energy (ICCARE-2019)	July 10-12, 2019
5	Prof. Kalyan K. Chattopadhyay Dr. Mrinal Pal Mr. Amit Ranjan Dasgupta	Industry, Academia and Student Interaction	August 13, 2019
6	Amitranjan Dasgupta, Dr. Mrinal Pal	One day workshop on Industry Institute Interaction under TEQIP-III	September 2, 2019
7	Prof. P. K. Joshi	One day seminar	October 1, 2019
8	Prof. A. N. S. Iyengar and Dr. J. R. Kayal	One day out-reach programme	October 17, 2019
9	Dr. Harsh Vardhan	Engineering Model Competition Meet & Expo in India International Science Festival (IISF 2019)	November 5-8, 2019
10	Prof. Sushanta Dutta Gupta	One day out-reach programme	December 5, 2019
11	Dr. G. S. Kar, Senior Director, IMEC, Lauvене, Belgium	Industry-Interaction Seminar	December 16, 2019
12	Dr. Nandita Dhawan,	Workshop: Women Empowerment in India: Challenging Obstacles and Creating Opportunities	January 6-10, 2020
13	Wees2020.com	International Conference on Water Energy and Environmental Sustainability (WEES 2020)	January, 14-16, 2020
14	Prof. B. C. Paul, Department of Physics, North Bengal University, Siliguri, Darjeeling, India	Seminar on "Gravitational Wave: A new window in Modern Astronomy"	February 3, 2020
15	Dr. Debiprasad Duari	"Prof. M. S. Sinha Colloquium"	February 10, 2020
16	Prof. Amitabha Ghosh	Science Exhibition in connection to celebrating 'National Science Day 2020' at NIT Durgapur	February 28, 2020
17	Prof. Yiping Li, Prof. Otto R, Prof. A. Taskin, Dr. Evgeniya Soldatova	International conference on "Sustainable Water Resources Management under Changed Climate" held at Jadavpur University, Kolkata (Worked as Coordinator)	March 13-15, 2020

5.6 COLLABORATION WITH ACADEMIC AND RESEARCH INSTITUTIONS

DEPARTMENT OF BIOTECHNOLOGY

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Bath University, Department of Electronics and Electrical	Research on sensor mediated disease detection	Ghosh, M., NIT DGP, Estrela, P., Bath University	Joint project
Bihar Agricultural College, BAU, Sabour	Research on rice – blast pathosystem	Roy-Barman, S., NITD; Prasad, B.D., BAU, Sabour	Joint Research
Bose Institute, Kolkata	Research on Cellular Signaling, Inflammation mediated Cancer	Bhattacharjee, A., NIT Durgapur Biswas, K., Molecular Medicine, Bose Inst. Pal, M, Molecular Medicine, Bose Inst.	Joint Research
Broad Institute at Massachusetts Institute of Technology, USA	Research collaboration on Computational Biology	De. D., NIT Durgapur and Natoli, T., MIT	Joint research

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Central Ground Water Board, Kolkata	Research on arsenic contaminated groundwater microbiology	Kazy, S.K, NIT Durgapur; Sar P., IIT Kharagpur; Kar A, CGWB, Kolkata	Sample Collection and Research for sponsored project
Central Manufacturing Technology Institute (CMTI)	Biosensor Development	Ghosh, M., NIT DGP, Agarwal, M., CMTI	Joint project
Central Mechanical Engineering Research Institute (C.M.E.R.I), Durgapur	Research on Ethanol Production from Water Hyacinth	Dey, A., NIT Durgapur and Chatterjee, P.K., C.M.E.R.I Durgapur	Joint Research
Central Mechanical Engineering Research Institute (C.M.E.R.I), Durgapur	Research on Environmental Biotechnology/Tissue Engineering applications	Dey, A., NIT Durgapur and Mondal, B.N., C.M.E.R.I, Durgapur	Joint Research
Central Mechanical Engineering Research Institute, Durgapur	Biomimetics	Mukhopadhyay, S., NIT, Durgapur and Chatterjee D., CEMRI, Durgapur	Research
Central Mechanical Engineering Research Institute, Durgapur	Biosensor Development	Ghosh, M., NIT DGP, Mistry, K., CSIR-CMERI DGP.	Research
Central Mechanical Engineering Research Institute, Durgapur	on Biopolymer Development and its Applications	Mahata, N., NIT DGP, Chanda, N., CSIR-CMERI DGP.	Research
Dr. Rajendra Prasad Central Agricultural University, Pusa	Research on rice – blast pathosystem	Roy-Barman, S., NITD; Sahni, S., RPCAU, Pusa	Joint Research
Geological Survey of India, Kolkata	Research projects on subsurface sediment/groundwater microbiology	Kazy, S.K, NIT Durgapur; Sar P., IIT Kharagpur; Pal T., GSI, Kolkata	Research Project
Indian Agricultural Research Institute, New Delhi	Research on Production of Novel Enzymes	Dutta, D., NIT Durgapur, Lata, IARI, New Delhi	Joint research
International Centre for Genetic Engineering and Biotechnology, New Delhi	Signal transduction	Chattopadhyay S. and Sopory, S.K.	Joint research project
Indian Institute of Technology Kharagpur, Department of Chemical Engineering	Research on sensor mediated disease detection	Ghosh, M., NIT DGP, Mukherjee, R., IIT KGP	Joint project
Indian Institute of Technology Kanpur	Nanotechnology for drug delivery	Chaudhuri, S., Dutta D, NIT Durgapur; Sivakumar, S., IIT Kanpur	Research
Indian Institute of Technology Kharagpur	Research on subsurface environment/ groundwater microbiology	Kazy, S.K, NIT Durgapur; Sar, P., IIT Kharagpur, Pal T, GSI; Mukherjee, A., IIT Kharagpur	Research Project
Institute of Post-Graduate Medical Education and Research, Department of Pharmacology	Research on the role of AMPK activators in Reducing cancer cell aggressiveness	Bhattacharjee, A., NIT Durgapur Chatterjee, S., Professor, IPGMER Kolkata	Research Project/ Joint Research
MoES-Borehole Geophysical Research Laboratory, Karad, Maharashtra	Research on microbiology of deep subsurface continental crust at Koyna region, Western India	Kazy, S.K, NIT Durgapur; Sar, P., IIT Kharagpur, Roy S, MoES-BGRL, Karad, Maharashtra	Research Project
NIPGR, New Delhi	Signal Transduction	Chattopadhyay S. and Sinha, A.K.	Joint research project
Rajiv Gandhi centre for Biotechnology	Research on Nutraceuticals	Dutta, D., Kumar, H.	Research
Samsung Biomedical Research Institute, SKKU, South Korea	Research Collaboration on Stem Cell Biology	De, D., NIT Durgapur and Prof. Kyeong Kyu, K., SKKU	Joint Research
The University of Transdisciplinary Health Sciences and Technology	Research on rice – blast pathosystem	Roy-Barman, S., NITD; Gowda, M., TDU, Bangalore	Joint Research

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Tripura University, Tripura	Biosensor Development	Ghosh, M., NIT DGP, Bhattacharjee, S., Tripura University	Research
Tezpur University	Proteomics	Sougata Saha, NIT Durgapur, Prof. Robin Doley, Tezpur University	Joint research
University of Hyderabad	Signal Transduction	Chattopadhyay S. and Sharma, R.P.	Joint research project
Visva-Bharati University	Research on seed-borne mycoflora	Aikat, K., NIT Durgapur & Biswas, M.K., Visva-Bharati University	Joint guidance of the Ph.D work of part-time Ph.D scholar

DEPARTMENT OF CHEMICAL ENGINEERING

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Burdwan University	Membrane-based biofuel production	Pal, P.	Research & publication
Central Mechanical Engineering Research Institute-CSIR, Durgapur	Catalyst development	Pal, P.	Research & Publication
CMERI, Durgapur	Removal of pollutants	Dutta S. and B. Ruj	Joint Publication
CSIR-Central Mechanical Engineering Research Institute, Durgapur	Microfluidic Research	Hens, A., Dutta, S. and Chanda, N.	Research and Publication
Department of Chemical Engineering, IIT Gauhati	Treatment of Industrial Wastewater and domestic water purification for potable water supply.	Mandal T. and Purkait. M.	Joint Research Project
Department of Chemical Engineering, IIT Kharagpur	Treatment of Industrial Wastewater and domestic water purification for potable water supply.	Mandal, T. and De S.[IIT KGP]	Collaborative research and pilot scale treatment facility deployment in the concerned Industry.
Department of Chemical Engineering, Jadavpur University, Kolkata-32	Treatment of Industrial Wastewater and domestic water purification for potable water supply.	Mandal, T., Bhattacharya, C. and Das, P.	Collaborative research, Joint research Project and Publication
Department of Environmental Protection and Water Engineering Institute of Environmental Protection Vilnius Gediminas Technical University, Lithuania	Removal of pollutants	Dutta S. and Edita Baltrėnaitė	Joint Research and publication
Department of petroleum Engineering, ISM Dhanbad	Treatment of Industrial Wastewater.	Mandal, T. and Kumar, T.	Collaborative research and Joint Publication
Faculteit Industriële Ingenieurswetenschappen, KU Leuven, Campus Groep T Leuven, Leuven, Belgium	Removal of pollutants	Dutta S. and Dutta A. (Faculteit Industriële Ingenieurswetenschappen,	Joint Research and publication
Federal University of Rio de Jenerio, Brazil	Pollution Treatment	Mandal M K., Pal S, Chaudhuri H.	Joint research work
Department of Chemical Engineering, GMR Institute of Technology, Rajam, AP	Biodegradable organic filler production from bio waste and Nano gold, nano fibre production , natural laminates	Das, B, and Datta, D.	Research and Publication
Hohai University, China	Catalytic Membrane Reactor	Mandal M K., Pal S, Chaudhuri H.	Joint research work
IIT Madras, Chennai	Nonlinear dynamics and Multiphase flow	Paruya S. Pushpavanam S. (IITM)	Joint R&D proposal for funding, publications

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Indian Agricultural Research Institute (IARI), New Delhi	Microalgal bioenergy generation	Halder. G. N.	Research and Publication
Indian Institute of Chemical Technology, Hyderabad, Telengana-500007	Treatment of Industrial Wastewater and domestic water purification for potable water supply.	Mandal T. and Sridhar S.	Joint Research project
Indian Institute of Technology Kharagpur	CO2 Capture From Flue Gas	Mondal, B.K. and Samanta, A.N.	Joint Publication
Lappeenranta University of Technology, Finland	Sustainable Technology development	Pal, P. and Roy .M. (MS)	Research
National Institute of Technology Agartala (NITA), Tripura	Bio-sequestration of CO2	Halder. G. N.	Research and Publication
National University of Science and Technology, Oman	Nanomaterials	M. Geetha Devi	Joint Research and Publication
South Dakota School of Mines and Technology, South Dakota, USA	Biotechnological approach to waste management and valorization	Mandal, T., Saini, R., Rithmann N. K. and Ramana, V.	Collaborative research and Joint Publication
State Key Laboratory of Pollution Control and Resources Reuse, College of Environmental Science and Engineering, Tongji University, Shanghai, P.R.China 200092	Removal of pollutants	Dutta S. and Tang Y.	Joint Publication
Tomsk Polytechnic University, Russia	Catalytic Membrane Reactor	Mandal M K., Pal S, Chaudhuri H.	Joint research work

DEPARTMENT OF CHEMISTRY

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
BITS Pilani Hyderabad	Computational support	Dr. Chakraborty Manab, Dr. Chatterjee Tanmay, Prof. Dinda Srikanta and Dr. Ghosal S	DFT calculation of experimental work
Central Institute of Mining & Fuel Research, Dhanbad	Molecular Complex Formation Between Coal Asphaltene and different acceptor molecules	Panja S.S and Ghosh A. K.	Spectroscopic study of Molecular Complex Formation Between Coal Asphaltene and different acceptor molecules.
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"
Colloids and Materials Chemistry Department, CSIR-IMMT, Bhubaneswar, Odisha	Environmental Application of Nano Materials	Chatterjee Sriparna, Saha R. N.	Joint Supervisor for Ph.D Work, Paper publication
CSIR-CMERI	Designing of Sensors	Banerjee, P., and Chakrabarty J.	Joint Supervisor for Ph.D Work, Paper publication
CSIR-CMERI	Designing and investigating the effect of benzothiazole corrosion inhibitors	Sukul, D. and Banerjee, P.	Joint Project under WB-DSTBT and Publication of papers
CSIR-CMERI	Designing and investigating the effect of organic corrosion inhibitors	Banerjee, P., and Sukul, D	Publication of papers

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
CSIR-CMERI	Arsenic removal	Ruj Biswajit Debbarma Swarup Ranjan & Saha R. N.	Joint Supervisor for Ph.D Work, Paper publication
CSIR-CMERI	Designing of Sensors	Banerjee, P, and Chakrabarty J.	Joint Supervisor for Ph.D Work, Paper publication
Department of Chemical Engineering, BITS Hyderabad	Instrumental analysis	Dinda, S. and Chakrabarty, J. Ghosal, S.	Joint paper publication
Department of Chemistry University of California, Davis, CA 95616, USA	Single Crystal X-ray Crystallography	Prof. Marilyn M. Olmstead Patra A.K.	Single crystal X-ray Diffraction studies on the metal complexes with supporting Schiff base, Amide ligand
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
Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Kolkata, India	Crystal structure determination	Partha Mitra Patra A.K.	Single crystal X-ray Diffraction studies on the metal complexes with supporting tridentate Schiff base ligand
Dept. of Chemistry, Cotton College, Assam	Development of natural fibre reinforced polyester composite material	Choudhury S. Panja S. S.	Jointly supervising Ph.D student
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
Dept of Zoology, Cancer research Laboratory Calcutta University, WB		Prof. Urmi Chatterji and Prof. S. C. Moi	Research Collaboration
Dept of Zoology, Visva-Vharati University, Santinekatan, WB		Prof. Sudipta Moietra and Prof S. C. Moi	Research Collaboration
Gaya College of Engineering	Quantum Computing	Dr. Goswami Biplab and Dr. S. Ghosal	Collaborative project work
IISc Bangalore	Development of Microwave absorber	Dr. Suryasarathi Bose and Dr. S. S. Panja	Collaborative research
IIT Gandhinagar	Computational support of experimental work	Dr. S. Ghosal and Sriram Kanvah	DFT calculation and Paper publication
IIT Delhi	Molecular dynamics simulation	Dr. Singh Gaurav and Dr. Ghosal S	Collaborative project work
Institut des Matériaux Jean Rouxel, Université de Nantes, UMR CNRS 6502, 2 rue de la Houssinière, BP 32229, 44322 Nantes, France	Use of DFT Calculation in our research area	Dr. S. C. Moi & Prof. Xavier Rocquefelte Institut des Matériaux Jean Rouxel, France	collaboration for DFT calculation using different Software
Institute of Chemical Technologies and Analytics, Vienna University of Technology, Getreidemarkt, 9/4. 1060 Vienna, Austria, Europe	X-ray structures were determined	Dr. S. C. Moi & Prof. Frank Kubel, Institute of Chemical Technologies and Analytics, Vienna University of Technology	X-ray structures were determined from his Lab. One research has been published in SCI Journal
IIT (ISM) Dhanbad	Instrumental analysis and application of metal complexes	Dr. T. K. Saha Dr. Chanchal Halder	Dr. T. K. Saha Dr. Chanchal Halder

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Microbiology Research Unit, Parasitology Research Laboratory, Department of Zoology, The University of Burdwan, Burdwan-713104, West Bengal, India	Biological activities of the synthesized metal complexes	Chandra Goutam	Dr. T. K. Saha Dr. Chanchal Halder
NISER, Bhubaneswar, Orissa	Single X-ray crystallography	Dr. T.K Saha Dr. Jogendra Nath Behera	Dr. T. K. Saha Dr. Chanchal Halder
North Bengal University	synthesis and characterisation of complex compound	Dr. B. Biswas and Dr. M. Maji	Research Collaboration
Raghnathpur College	Synthesis and characterisation of Coordination compounds	Bhaskar Biswas	Paper publication and guiding Ph.D. students
Texas A&M University	Chemical Biology	Dr. Jonathan Sczepanski Dr. Deb Ranjan Banerjee	Research collaboration and paper publication (Two papers published in 2019)
Vienna University of Technology, Applied Synthetic Chemistry Dept. Vienna, Getreidmarkt 9/163, Vienna Austria, Europe	Kinetics and mechanism of substitution reaction on d8 metal ion systems	Prof. Wolfgang Linert, Dept of Applied synthetic Chemistry	8 research papers has been published in SCI Journals

DEPARTMENT OF CIVIL ENGINEERING

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
CSIR-CMERI, Durgapur	Structural Health Monitoring	Datta, A.K., Topdar, P.	Research
CSIR-CMERI, Durgapur	Vibration of asymmetric structures	Das, D., Topdar, P.	Research
DUT, South Africa	Water Resources and Pollution Treatment	Pal, S.	Research
ECUT, China	Water Resources and Pollution Treatment	Pal, S.	Research
Federal University of Rio de Janeiro, Brazil	Water Resources and Pollution Treatment	Pal, S.	Research
Hohai Univ., China	Water Resources and Pollution Treatment	Pal, S.	Research
IIST Shibpur	Vibration Control of Structures under Multi-hazard Scenario	Das, D.	Research
IIT Bhubaneswar	Traffic control	Karmakar S	Research
IIT Kharagpur	FEM-SPH Coupling	Karmakar S	Research
Jadavpur Univ.	Groundwater pollution	Pal, S., Chaudhuri, H, Mandal, MK.	Research
TPU, Russia	Water Resources and Pollution Treatment	Pal, S., Chaudhuri, H, Mandal, MK	Research

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Indian Statistical Institute Bangalore	Semantic Web, Big Data and Social Network Analysis	Biswanath Dutta, Animesh Dutta	Academic Research & Development
Claude Bernard University of Lyon 1, France	Multi Agent System	Samir Aknine, Animesh Dutta	Academic Research & Development, Joint PhD supervision
SCAP Polytechnic of Porto, Portugal	Semantic Web, Social Network Analysis	Mariana Curado Malta, Animesh Dutta	Academic Research & Development, Joint PhD supervision
University of Minho, Portugal	Semantic Web, Social Network Analysis	Ana Alice Baptista, Animesh Dutta	Academic Research & Development
Departament de Ciències de la Computació, Universitat Politècnica de Catalunya Barcelona, Spain	Game Theory and its Applications Cloud, Fog, Healthcare, Crowdsourcing etc.	Fatos Xhafa, Sajal Mukhopadhyay	Research
Department of Computer Science and Engineering, University of Surrey	Game Theory and its Applications to Crowdsourcing	Paul John Krause, Sajal Mukhopadhyay	Research
Virginia Tech, USA \	Wireless Networks	Vijay K. Shah	Research
IIT kharagpur	Network, Transportation System	Sandip Chakraborty	Research

DEPARTMENT OF ELECTRICAL ENGINEERING

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Central Mechanical Engineering Research Institute, Durgapur	Control Systems, Power Electronics	Banerjee S (NIT), Giri S (CME RI)	Joint Research
Central Power Research Institute, Bangalore	High Voltage Engineering & Liquid Insulation	N K Roy (NIT) Dr Thomas (CPRI)	Joint Research
IIT Delhi	Control Systems, Electromagnetic Levitation	Banerjee S (NIT) Nabi M (IIT)	Joint Project & Research
IIT Kharagpur	Power Electronics, Multilevel Converters	Banerjee S (NIT) Chakraborty C (IIT)	Joint Research
Uppsala University (UU), Sweden	Biomedical image analysis	A K Dhara (NIT) R. Strand (UU)	Joint Research

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Brno University of Technology, Brno, Czech Republic	Millimetre wave channel modelling	Chandra, A.	External member of a Czech national project
Slovak University of Technology, Bratislava, Slovakia	Modelling of optical communication channels	Chandra, A.	Visiting fellowship
National Institute of Standards and Technology (NIST), USA	Millimetre wave channel sounding	Chandra, A.	Developing a joint IEEE standard
Lab-STICC, University of Southern Brittany (UBS), Lorient, France.	Wireless Network-on-Chip	Mondal, H. K.	Visiting Professor
University of Parma, Italy	IoT Networks	S.Kundu	Writing Joint research paper
University of Liverpool, UK	GaN Devices	Mahapatra R	UGC-UKIERI Joint Project

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Bidhan Chandra Krishi Viswavidyalaya	Environment and agricultural pollution	Brahmachari Koushik (BCKV) Adhikari Kalyan (NIT)	Jointly supervising Ph.D student and publication
ICAR-Central Inland Fisheries Reserch Institute	Surface water Quality	Nag Subir Kumar (CIFRI) Mondal Sandip (NIT)	Joint Research and publication
IIT Kharagpur	Geochemistry of uranium bearing ores: proxy to understand U-mineralization	Mishra Biswajit (IIT), Ozha M K (NIT)	Joint Research and publication
IIT Bombay	Metamorphic and Geochronological studies	Pandalai H. P (IIT Bombay), Ozha M K (NIT)	Joint Research and publication
Gauhati University	Fluid induced alteration of allanite	Bhagabati B (GU) Ozha M K (NIT)	Joint publication

DEPARTMENT OF MATHEMATICS

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Aliah University, Kolkata	New Topological Indices of Graphs	Pal, A., NIT Durgapur And Nayeem, S.M.A.	Joint Research
Artificial Intelligence and Big Data College, Chongqing College of Electronic Engineering, Chongqing	Fuzzy Graph	Pal A. and Cen Zuo	Joint Research
Artificial Intelligence and Big Data College, Chongqing College of Electronic Engineering, Chongqing 401331, China	Fuzzy Graph	Pal, A. and Zuo, C.	Joint Research
Babes-Bolyai University Cluj-Napoca, Romania	Topology	Dey L.K. and Petrusel, Adrian	Joint Research
Calcutta Institute of Engineering and Management (CIEM), India	Chemical Graph Theory	Pal. A. and De, N.	Joint Research
CIEM, Kolkata	Computational Graph Theory	Pal A. and Nilanjan De	Joint Research
Department of Computer Science, University College of Rouzbahan, Sari, Iran	Graph Labeling	Pal, A. and Rashmanlou, H.	Joint Research
Department of Mathematics Sidhu KanuBirsra University, WB	Soft Computing	Panigrahi G, NIT DGP and DrBarun Das	Joint Research
Department of Mathematics Mugberia College, East Midnapore, WB	Bio Mathematics	Panigrahi G NIT DGP and Dr. KalipadaMaity	Joint Research
Department of Physics, Sari Branch, Islamic Azad University, Sari, Iran	Graph Labeling	Pal, A. and Mofidnakhai, F	Joint Research
Dept of Mathematics Haldia Institute of Technology, East Midnapore, WB	Soft Computing	Panigrahi G NIT Durgapur And Jana Dipak HIT, Haldia	Joint Research
Dept of Mathematics Haldia Institute of Technology, East Midnapore, WB	Supply Chain Management	Basu K, NIT Durgapur And Jana Dipak HIT, Haldia	Joint Research

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Dept of Mathematics Asansol Engineering College, West Burdwan, WB	Statistics	Basu K NIT Durgapur And Bandyopadhyay A, Asansol	Joint Research
Dept of Operations Management TA PAI Management Institute, Manipal	Management	Panigrahi G, NIT DGP and Chattrejee Debmalya	Joint Research
Dept. of Industrial Engineering and management, Hanyang University, South Korea	Operations Research	Prof K. Basu and Dr. Biswajit Sarkar	Joint Research
Division of Computational Mathematics and Engineering, Institute for Computational Science, Ton DucThang University, Ho Chi Minh City, Vietnam	Fuzzy Graph	Pal A. and Hoang Viet Long	Joint Research
DR. SPM IIIT, Naya Raipur, India	Codes over rings	Bagchi, S, NIT Durgapur and Ramakrishna Bandi, IIIT, Naya Raipur	Joint Research
DR. SPM IIIT, Naya Raipur, India	Codes over rings	Bagchi, S, NIT Durgapur and Ramakrishna Bandi, IIIT, Naya Raipur	Joint Research
Eastern International University, Vietnam	Graph Labeling	Pal. A. and Debnath, N.C.	Joint Research
Faculty of Mathematics and Statistics, Ton Duc Thang University, Ho Chi Minh City, Vietnam	Fuzzy Graph	Pal. A. and Viet, L.H.	Joint Research
Gobinda Prasad Mahavidyalya, Bankura	Operations Research	Basu, K., NIT Durgapur and Sathi Mukherjee,	Joint Research
Government General Degree College, Kashmuli, Porolda, Paschim Medinipur	Transportation Problem	Basu K NIT Durgapur And Pravash Kumar Giri, Paschim Medinipur	Joint Research
Graduate Technological Educational Institute of Western Greece, Greece.	Fuzzy Logic and modelling	Pal A. and M. Voskoglou	Joint Research
Hiralal Bhakat College, Naihati, Birbhum, WB	Mathematical modelling for the control of infectious diseases	Sarkar (Mondal), S., NIT Durgapur, Sahoo, B., Hiralal Bhakat College, Naihati, Birbhum, W.B.	Joint Research
ICBM, Carl von Ossietzky University, Germany	Nonlinear Dynamics	Pal, P, NIT Durgapur and Feudel, U. of ICBM, Germany	Joint Research
ICFAI University, Tripura-799210	Bio-Mathematics	S. Maitra and S. Kundu	Joint Research
IIFT Kolkata	Green Supply Chain Management	Pal, A., NIT Durgapur and Das, P.K. Joint Research	Joint Research
IIT Bhubaneswar	Geometric Function Theory	Ali, M. F., Vasudevarao, A.	Joint Research
IIT Kharagpur, India	Electrokinetic Transport Phenomena	Gopmandal P. P and Bhattacharyya S.	Joint Research
ISI Bangalore	Geometric Function Theory	Ali, M. F., Ghosh, N.	Joint Research
ISI Kolkata	Nonlinear Dynamics	Pal P. and Hens C.	Joint Research
ISI Kolkata	Nonlinear Dynamics	Pal P. and Ghosh D.	Joint Research
Jadavpur University, Kolkata	Nonlinear Dynamics	Pal P. and Dana, S.K.	Joint Research
Jadavpur University, Kolkata	Functional Analysis	Dey L.K. and Das, Pratulananda	Joint Research

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Jawaharlal Nehru University, India	Artificial Intelligence	Pal. A. and Singh, G.K.	Joint Research
Laboratoire Interdisciplinaire des Environnements Continentaux (LIEC), Université de Lorraine, CNRS, Nancy, France	Electrokinetic Transport Phenomena	Gopmandal P. P and Duval J. F. L	Joint Research
Mahadevananda Mahavidyalaya, Monirampore, Barrackpore, WB	Eco-epidemiological models with chaotic dynamics	Sarkar (Mondal), S., NIT Durgapur, Das, K.P., Mahadevananda Mahavidyalaya, Monirampore, Barrackpore, WB & Karmakar, P., W.B.E.S.	Joint Research
Mugberia Mahavidyalaya	Bio Mathematics	Panigrahi G, Maity K	Joint Research
Nankai University, Tianjin, China	Financial Modelling	Kar S. and Xiaowei Chen	Joint Research
Narajole Raj College. Medinipore	Graph Theory	Pal, A., NIT Durgapur and Rana, A.	Joint Research
Om Dayal Group of Institutions, Howrah.	Fuzzy Graph	Pal A. and Dhrubajyoti Ghosh	Joint Research
Robert Bosch Engineering & Business Solutions Pvt Ltd (RBEI/ESY) (R & D)	Cryptography	Basu K, NIT Durgapur and Vishal Saraswat, Bangalore.	Joint Research
Robert Bosch Engineering and business solutions pvt. Ltd., Bangalore.	Cryptography	Prof K. Basu and Dr. Vishal Saraswat	Joint Research
Saroj Mohan Institute of Technology, Hooghly, India	Fuzzy Graph	Pal. A. and Dey, A.	Joint Research
Sidhu Kanhu Birsha University, Purulia	Network Optimization	Panigrahi G, Das B	Joint Research
The George Washington University, USA	Functional Analysis	Dey L.K. and Basu, Sudeshna	Joint Research
Tokyo University of Science, Japan	Electrokinetic Transport Phenomena	Gopmandal P. P and Ohshima H.	Joint Research
Tsinghua University, Beijing, China	Uncertainty Theory	Kar S. and Baoding Liu	Joint Research
Uludag University, Turkey	Graph Theory	Pal A. and I. N Congul	Joint Research
University of Belgrade, Serbia	Functional Analysis	Dey L.K., Damjanovic B., and Radenovic S.	Joint Research
University of Bonn, Germany	Nonlinear Dynamics	Pal P. and Klaus L.	Joint Research
University of Nis, Serbia	Nonlinear Analysis	Dey L.K. and Rakocevic V	Joint Research
Vidyasagar university	Network Optimization	Panigrahi G, Maity M	Joint Research
Vidyasagar university, Paschim Medinipur	Operations Research	Basu K NIT Durgapur And Manoranjan Maity, Raghu Nandan Giri, Paschim Medinipur	Joint Research
Visva-Bharati University, Santiniketan-731235	Plasma Physics	S. Maitra and G. Banerjee	Joint Research
VNU Information Technology Institute, Vietnam National University, Hanoi, Vietnam	Fuzzy Graph	Pal A. and Le Hoang Son	Joint Research
VNU Information Technology Institute, Vietnam National University, Hanoi, Vietnam	Fuzzy Graph	Pal. A. and Hoang, S.L.	Joint Research
Yamaguchi University	Geometric Function Theory	Ali, M. F., Yanagihara, H.	Joint Research

DEPARTMENT OF MECHANICAL ENGINEERING

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Advanced Systems Laboratory	Control System Design	Hui N. B., NIT Durgapur, Taraknath De, ASL Hyderabad	Joint Research & Student training
CMERI, Durgapur, India	Heat Transfer	Pramanick, A. K., NIT Durgapur, Chatterjee, P. K., CMERI Durgapur	Student Exchange
CMERI Durgapur	Robotics	Roy, S.S, NIT Durgapur Sen, S., Mahapatra, A., Arora, A., CMERI Durgapur	Joint Project
CMERI, Durgapur	Micro-Additive Manufacturing	Roy, S.S, NIT Durgapur Murmu, N.C, CMERI Durgapur	Joint Project
Duke University, USA	Thermodynamics	Pramanick, A. K., NIT Durgapur, Bejan, A., Duke University	Pedagogy
IISc. Bangalore	Evaporation of sessile droplet	Dr. Shantanu Pramanik, NIT Durgapur and Dr. Saptarshi Basu, IISc Bangalore	Joint research
IIT Bombay	Droplet dynamics	Dr. Shantanu Pramanik, NIT Durgapur, Prof. Atul Sharma, IIT Bombay	Joint research
IIT Kharagpur, India	Droplet Dynamics	Pramanick, A. K., NIT Durgapur, Bandyopadhyay, P. P., IIT Kharagpur	Joint research
IIT Kharagpur, India	Robotics & Manufacturing Automation	Roy, S.S., NIT Durgapur, Pratihari, D.K., IIT Kharagpur	Joint PhD
IIT Kharagpur	Fluid dynamics	Prof. A. Guha, IIT Kharagpur, S. Sengupta, NIT Durgapur	Joint Research
IIT Madras	Thermoacoustic instability	Prof. R I Sujith, IIT Madras. S. Mondal, NIT Durgapur	Joint research
Jadavpur University	Energy	Jana, K., NIT Durgapur, De, S., Jadavpur University	Joint research
Jadavpur University	Combustion and flame dynamics	Mukhopadhyay A. and Sen S., Jadavpur University. Mondal S., NIT Durgapur	Joint research
Jadavpur University	Natural Circulation loop	Ghosh K., Mukhopadhyay A. and Sen S., Jadavpur University. Mondal S., NIT Durgapur	Joint research
Jadavpur University	Heat Transfer, fluid flow	Apresh Datta, NIT Durgapur Nirmalendu Biswas, Nirmal Kumar Manna, Jadavpur University	Joint research
NIT Agartala	Heat Transfer, fluid flow	Apresh Datta, NIT Durgapur Pritam Das, Ajoy Kr. Das, Agartala	Joint research
NIT Silchar, India	Heat Transfer	Dr. D. Bhanja, NIT Silchar Dr. S. Sengupta, NIT Durgapur	Joint Research
Shiv Nadar University	Control of Aeroelastic instability	Prof. J. Venkatramani, SNU. S. Mondal, NIT Durgapur	Joint research
University of Stuttgart, Germany	Aerospace Thermodynamics	Pramanick, A. K., NIT Durgapur, Weigand, B., University of Stuttgart	Student & Faculty Exchange
Universidade Do Vale Do Rio Dos Sinos	Thermodynamics	Pramanick, A. K., NIT Durgapur, Rocha, L. A. O., Universidade Do Vale Do Rio Dos Sinos	Pedagogy
University of Lorraine, France	Thermodynamics	Pramanick, A. K., NIT Durgapur, Feidt, M., University of Lorraine	Pedagogy

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
CSIR-CGCRI Kolkata	Material Engineering and Mechanical Behaviour	Prof. Ghosh K.S & Acharya, Saikat Dev CGCRI, Kolkata	Joint Research, Work
CSIR- CGCRI, Kolkata	Biomaterials	Dr. S. Bera, Dr. D. Mandal & Dr. M. Das	Joint Ph.D. student
CSIR-CMERI	Wear-resistant applications	Dr. B.K.Show	Joint Project by DST
CSIR-CMERI	Development of self lubricating nano-composite for wear-resistant applications	Dr. B.K.Show Dr. Nilrudra mandal (CSIR-CMERI) Dr. Himadri roy (CSIR-CMERI) Dr. Kalisadhan Mukherjee (CSIR-CMERI)	Joint Project by DST
CSIR-CMERI Durgapur	Metal casting & Characterisation	Dr. Maji B. & Dr. Roy Himadri (CSIR-CMERI)	Research, Joint M.Tech student
CSIR-CMERI	Al alloy	Dr. M.K.Mondal & Himadri Roy (CSIR-CMERI)	Joint Research, Work, Publication
CSIR-National Metallurgical Laboratory, Jamshedpur	Metal casting and Forming, Semi solid processing	Dr. Mandal D. & Dr. Sahoo K.L (CSIR-NML, Jamshedpur)	Research, Joint M.Tech. Student
CSIR-National Metallurgical Laboratory, Jamshedpur	Mechanical Metallurgy, Low cycle Fatigue	Dr. Mandal .D & Dr. Bar H.N (CSIR-NML, Jamshedpur)	Research, Joint M.Tech student
CSIR-National Metallurgical Laboratory, Jamshedpur	Utilization of steel plant waste	Dr. Mandal A. K. & Dr. Nath S. (CSIR-NML, Jamshedpur)	Research, Joint M.Tech. Student
CSIR-National Metallurgical Laboratory, Jamshedpur	Utilization of steel plant waste	Dr. Mandal A. K. & Dr. Nath S. (CIR-NML, Jamshedpur)	Research, Joint M.Tech. Project Work
DMRL, Hyderabad	Materials Characterisation	Dr. B. K. Show and Dr. Rajdeep Sarkar (DMRL, Hyderabad)	Research work
Erich Schimdt Institute, Leoben, Austria	Al alloys, Biomaterials	Dr. S. Bera, Dr. P. Ramaswamy	Joint Research Work, Publications
IEST Shibpur	Material Science	Dr. S. Bera & Dr. A. Sinha (IEST Shibpur)	Research, Joint M.Tech student
Indian Institute of Technology, Gandhinagar	Al alloy	Dr. M.K.Mondal & Manas Paliwal (IIT Gandhinagar)	Joint Research, Work, Publication
Indian Institute of Technology Kharagpur	Al alloy	Dr. M. K. Mondal & Chandra Sekhar Tiwary (IIT kharagpur)	Joint Research, Work, Publication
IIT(BHU), Varanasi	Iron and Steel making	Dr. A. K. Mandal & Prof. O.P. Sinha (IIT-BHU, Varanasi).	Research, Joint publication
Indus University, Ahmedabad-382115	Alloy Development	Dr. Mandal D & Dr. S.K Chaudhury	Joint Research work

DEPARTMENT OF MANAGEMENT STUDIES

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
LUT, Finland	Collaborative Research on Sustainable development	Prof.M.Roy	Research

DEPARTMENT OF PHYSICS

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Burdwan University	Nonlinear Optics	Kumbhakar P.	Joint Research/ publication of paper
CSIR-CGCRI, Kolkata	Photonics	Kumbhakar P.	Book (Joint Editing)
IIT Kharagpur	Nanotechnology	Kumbhakar P.	Joint Research/ Publication of paper
RK University Rajkot	Nanotechnology	Kumbhakar P.	Joint Research/ Publication of paper
Jadavpur University	Nanotechnology	Kumbhakar P.	Joint Research/ Publication of paper
University of Hyderabad	Photonics	Kumbhakar P.	Joint Research
IIT Kharagpur	Photonics	Kumbhakar P.	Joint Research
CSIR-CGCRI, Kolkata	Photonics	Kumbhakar P.	Book (Joint Editing)
IIT Kharagpur	Nanotechnology	Kumbhakar P.	Joint Research/ Publication of paper
CSIR-CMERI Durgapur	Polymer Nanocomposites	Meikap A. K.	Joint Research/ Joint PhD Guidance
Technology Center of Nagasaki, Japan	Polymer Nanocomposites	Meikap A. K.	Joint Research
University of Ottawa, Canada	Polymer Nanocomposites	Meikap A. K.	Joint Research
Burdwan University	Nanomaterials	Meikap A. K.	Joint Research/ Joint PhD Guidance
Pondichary University	Ferroelectric Composites	Meikap A. K.	Joint Research
IIT(ISM) Dhanbad	Optics	Ghosh A.	Collaborative Research and Joint Publication
University of Calcutta	VOC sensor	Chakraborty A.K.	Joint research and publication
Visva-Bharati University, Shantiniketan	Photophysical properties	Chakraborty A.K.	Joint Research project and publication
Central University of Jharkhand, Ranchi	Biosensors	Chakraborty, A. K.	PG student intern and publication
Anhui University of Technology, Ma'anshan, Anhui, PR China	VOC sensor	Chakraborty, A. K.	Joint research and publication
Bose Institute, Kolkata	Carbon nanomaterial characterization	Chakraborty A.K.	Collaborative research
IIT, Kharagpur	Nanomaterials for gas sensor	Chakraborty A.K.	Sensor characterization
Jagdish Bose National Science Talent Search (JBNSTS), Kolkata	Lead free solder joint interface	Chakraborty A.K.	Joint PhD student and publication
CSIR-Central Electrochemical Research Institute (CECRI), Karaikudi	Electrochemistry	Chakraborty A.K.	collaboration through PhD student exchange
The Open University, Milton Keynes, UK	Graphene based solar cells	Chakraborty A.K.	Several PhD student exchanges and joint research

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
University of Liverpool, United Kingdom	Photoelectrochemical water splitting for hydrogen evolution, photoelectron spectroscopy	Chakraborty A.K.	Joint research project, student and staff exchange, MOU signed
National Institute of Technology, Raipur	Condensed Matter Physics	Sahoo S.	Joint Research
KIIT University, Bhubaneswar	Condensed Matter Physics	Sahoo S.	Joint Research
TDB College, Raniganj	Nuclear Physics	Sahoo S.	Joint Research
Regional Institute of Education, Bhubaneswar (NCERT)	Nuclear Physics, Physics Education & General Physics	Sahoo S.	Joint Research
CSIR-CMERI, Durgapur	Multiferroics materials	Basu S.	Joint Research
IACS, Kolkata	Nanomaterials, Multiferroics	Basu S.	Joint Research
Burdwan University	Electronics and Communication	Mandal M.K.	Joint Research
Women's College, Burdwan	Optics	Mandal M.K.	Joint Research/ publication of paper
Moffitt Cancer Center and Research Institute, Tampa, FL, U.S.A	Evolution-based understanding of properties of DNA	Hemachander Subramanian	Collaborative Research and Joint Publication
Indian Statistical Institute Kolkata	Machine Learning	Ghosh S.	Joint Research
Bose Institute, Kolkata	Early warning signatures, Statistical Physics and Complex Systems	Ghosh S.	Joint Publication
Indian Institute of Technology Kanpur	Network science	Ghosh S.	Collaborative Research and Joint Publication
Indian Institute of Technology Kharagpur	Soft computing and epidemiological flow	Ghosh S.	Collaborative Research and Joint Publication
Federal University of São Carlos, Brazil	Nanoelectronics	Mondal A	Sample Characterisation, joint research
IIT Bombay, INDIA	Characterization of InN NWs	Mondal A	Joint Research
National Institute of Technology, Nagaland	Nanotechnology	Mondal A	Joint Research
Saha Institute of Nuclear Physics	Nanotechnology	Mondal A.	Joint Research
University of Nottingham, UK	Nanoelectronics	Mondal A.	Sample characteri-zation, joint research
The University of Petroleum and Energy Studies, INDIA	Characterization	Mondal A.	Sample Characterisation, Joint Research
Jadavpur University, INDIA	Characterization	Mondal A.	Sample Characterisation, Joint Research
Calcutta University, INDIA	Characterization	Mondal A.	Sample Characterisation, Joint Research
U R Rao Satellite Centre-ISRO, INDIA	Characterization	Mondal A.	Sample Characterisation, Joint Research

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Queen's University, Kingston, Ontario K7L 3N6, Canada	Nanotechnology	Mondal A.	Joint Research
Higher School of Economics (National Research University)	Nanotechnology	Mondal A.	Joint Research
Saha Institute of Nuclear Physics, Kolkata, India.	Nonlinear Analysis (Power Spectrum and Wavelet Analysis) of Geochemical Precursory Signals	Chaudhuri H.	Joint Research and Joint Publication
Atomic Mineral Directorates, Department of Atomic Energy	Helium Exploration	Chaudhuri H.	Joint Research
Far Eastern Federal University, Vladivostok, Russia	Extraction of metals from fly ash	Chaudhuri H.	Joint Research and Joint Publication
Engineering School of Natural Resources, National Research Tomsk Polytechnic University	Environmental geochemistry and treatment of organic pollutants in aquatic systems	Chaudhuri H.	Joint Research and Joint Publication
East China University of Technology (ECUT), School of Water Resources and Environmental Engineering	Environmental geochemistry and treatment of organic pollutants in aquatic systems	Chaudhuri H.	Joint Research and Joint Publication
Federal University of Rio de Janeiro, Brazil	Water management and wastewater treatment	Chaudhuri H.	Joint Research and Joint Publication
Hohai University, China	Water management and wastewater treatment	Chaudhuri H.	Joint Research and Joint Publication

6.0 THE COUNCIL, BOG AND OTHER COMMITTEES

6.1 INSTITUTE'S COUNCIL

Vide Annexure - 11.1

6.2 BOARD OF GOVERNORS

Vide Annexure - 11.2

6.3 FINANCE COMMITTEE

Vide Annexure - 11.3 (a)

6.4 BUILDING AND WORKS

COMMITTEE

Vide Annexure - 11.3(b)

6.5 OTHER COMMITTEES

Senate

Vide Annexure - 11.3(c)

7.0 CONCESSIONS FOR SC, ST AND SPECIALLY ABLED STUDENTS

7.1 CONCESSIONS PROVIDED FOR STUDENTS

The Department of Training, Placement, and Students' Welfare helps the students get Railway Concessions during their vacations.

Tuition fee waiver is given as per Govt. Rule.

8.0 FINANCIAL STATUS

8.1 ANALYSIS OF PLAN AND NON-PLAN GRANTS (2019-2020)

Plan (General Component) Grants – Rs. 3286.52 Lakhs

Non-Plan (Recurring) Grants – Rs. 13943.06 Lakhs

8.2 SOURCES OF FUNDS

Entire Recurring and Non-Recurring Grants are borne by Govt. of India

8.3 EXPENDITURE POSITION FOR LAST FIVE YEARS

(Rupees in Lakhs)

Plan head Expenditure		Non-Plan head Expenditure	
2015-16	4750.82	2015-16	9028.35
2016-17	6404.46	2016-17	11188.98
2017-18	6414.45	2017-18	12423.47
2018-19	1403.85	2018-19	14814.37
2019-20	3286.52	2019-20	13943.05

9.0 CENTRAL FACILITIES AND SERVICES

9.1 COMPUTER CENTRE

Sl. No.	Name of the Lab	Area of the Lab
1.	Lab-1	24' X 40'
2.	Lab-2	34' X 24'
3.	Lab-3	34' X 24'
4.	Lab-4	34' X 24'
5.	Lab-5	23' X 15'
6.	Server Room	11' X 24'
7.	Class Room	28' X 16'

Sl. No.	Name of the Lab	Number of System (PC)	Configuration of the System	Software
1.	Lab-1	48 Nos. (48 nos. running)	Lenovo Thinkcentre Intel core i5 Vpro, 3.3 GHz; 6GB RAM---17 Nos. HP Elite Desk 800G – Intel core i5; 3.5 GHz; 8 GB RAM--- 31 Nos.	Windows 10 pro, Ubuntu -18.04.0, MS Office 2013, Codeblocks, eclipse, NetBeans, StarUML, Dev C++.
2.	Lab-2	32 Nos.(32 nos. running)	HP Elite Desk 800G – Intel core i5; 3.5 GHz; 500GB HDD; 8 GB RAM--- 22 Nos Acer Veriton - Intel core i5-8500; 3.0 GHz; 1TB HDD; 8 GB RAM--- 10 Nos.	Windows 10 pro, Ubuntu -18.04.0, Mysql, Codeblocks, eclipse, NetBeans, StarUML, Dev C++.
3.	Lab-3	32 Nos.(32 nos. running)	Acer Veriton - Intel core i5-8500; 3.0 GHz; 1TB HDD; 16 GB RAM--- 28Nos. Acer Veriton - Intel core i5-8500; 3.0 GHz; 1TB HDD; 8 GB RAM--- 4Nos.	Windows 10 pro, Ubuntu -18.04.0, Mysql, Codeblocks, eclipse, NetBeans, StarUML, Dev C++, Auto CAD (Free).
4.	Lab-4	32 Nos.(32 nos. running)	Acer Veriton - Intel core i5-8500; 3.0 GHz; 1TB HDD, 16 GB RAM---32 Nos.	Windows 10 pro, MS Office 2016, NetBeans, Dev C++, MatLab-2016a, Auto CAD (Free version).
5.	Lab-5	19 Nos. (19 Nos. running)	Acer Veriton - Intel core i5-8500; 3.0 GHz; 1TB HDD; 8 GB RAM--- 19 Nos.	Windows 10 pro, NetBeans.
6.	Server Room	3 Nos. Server (All are running)	GPU Based Server --- 2 Nos. Intel Based Server --- 1 No.	Linux OS, Ubuntu 18.04.3 Canonical OS.

9.2 WORKSHOP

The Department of Workshop of the Institute is a cluster of eight shops, namely (1) Machine Shop, (2) Fitting Shop, (3) Electrical Shop, (4) Carpentry & Pattern Shop, (5) Black Smithy Shop, (6) Welding Shop, (7) Sheet Metal Shop and (8) Foundry Shop, clusreded in five different sheds. Training to all UG students of first year is provided through these shops in accordance to UG Curricula which include Workshop classes for all branches of engineering at different levels. The Workshops are modernised periodically by utilizing the grants provided to it under different scheme to update the training. Some depratments also use

workshop for advance training on machinaries and processes. Students from all the departments utilize the workshop facilities for their Project works in undergraduate and postgraduate level. The students are encouraged to use the facility to make fabrications and prototypes of different levels of technical competitions.

9.3 LIBRARY

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

having three floors on a plinth area of 1000 sq. mtrs. The library has a collection of 189325 volumes, which includes text books, reference books & bound volumes of Journals, Standards etc. The library subscribes to about 125 current Journals (Subscribed & Gifted). Library operations have been automated with the help of an integrated library management software package, LibSys-4. The book database is accessible through OPAC (Online Public Access Catalogue). It has good collection of reference books for all branches of the Institute. It has a good collection of electronic resources in its Digital Library.

Library has introduced Wi-Fi facility in the reading halls to access e-resources.

The library has a well-equipped photocopying facility. The users can avail of this facility on request. It has also some Audio-Visual equipment like Colour TVs, VCPs, Video Cameras, Direct Projectors, Multimedia Projectors, etc. It has also a good IT infrastructure.

The library is an institutional member of DELNET (Developing Library Network), and NPTEL (National Programme on Technology Enhanced Learning).

It is also a beneficiary member of eSS (e-SodhSindhu) previously known as INDEST-AICTE (Indian National Digital Library in Engineering, Science & Technology) which provides Desktop Access to high quality e-resources (online journals and databases).

LIBRARY HOURS:

8:30 A.M to 12:00 Midnight (Weekdays)

9:00 AM to 5:00 P.M. (Weekends)

During vacations 8:30 A.M. to 5:30 P. M. (Institute holidays remain close).

E-JOURNALS/DATABASES THROUGH E-SODH SINDHU (2020) ARE AS FOLLOWS:

Sl. No.	Name of Resource	Sl. No.	Name of Resource
1	ACM Digital Library	9	JSTOR
2	American Institute of Physics	10	MathSciNet
3	American Physical Society	11	Oxford University Press
4	ASCE Journals Online	12	Project Muse
5	ASME Journals Online	13	Springer Link 1700 Collection
6	Economic & Political Weekly	14	Nature Journal
7	Institute for Studies in Industrial Development (ISID) Database	15	Web of Science Lease Access
8	JGate Plus (JCCC)	16	Urkund, PDS Software

LIBRARY INDIVIDUALLY SUBSCRIBES IMPORTANT SCIENCE & TECHNOLOGY JOURNALS AND DATABASES FROM LEADING PUBLISHERS'.

1. E-JOURNALS

Sl. No.	Name of Resource	Sl. No.	Name of Resource
1	American Chemical Society (ACS)	8	PNAS Tier – 3
2	Emerald - 310 Journals Package	9	Royal Society of Chemistry (RSC Gold EA)
3	IEEE (IEL Online) Level-2	10	Sage iMeChe - Material Science & Engineering & Management & Org. Studies
4	ASTM Standards	11	Taylor and Francis (4 Subject Collection)
5	Elsevier -Science Direct (11 Subject Collection)	12	Wiley Online (25 Journals)
6	Indian Standards (BIS Code)	13	American Concrete Institute (ACI) journals
7	SAE Journal	14	Institute of Physics (IOP) journals

2. DATABASES & TOOLS

Sl. No.	Name of Database/Tools
1	SCOPUS Database
2	EPWRF Database
3	Scifinder Database
4	iThenticate (Anti-plagiarism/ Similarity measure tool)
5	Grammarly (Writing support tool)
6	IEEE SWEBOOK Course Content
7	PROWESS Database (CMIE)

3. BACKFILES OF E-JOURNALS (FROM VOL.1 ISSUE 1 TO TILL DATE)

- Elsevier Backfiles Collection:** Engineering & Technology (164 titles) and Chemical Engineering (36 titles)
- Royal Society of Chemistry (RSC Gold):** Archive 1841-2007
- Emerald Backfiles Collection:**
 - Accounting and Economics – 1974-2006 (27 Journals)
 - Marketing -1967-2006 (18 Journals)
 - HR Learning and Organisational Studies -1952-2006 (28 Journals)
 - Operational Logistics and Quality – 1971-2006 (22 Journals)

- Public Policy and Environment -1899-2006 (10 Journals)

4. LIBRARY SUBSCRIBES E-BOOKS FROM DIFFERENT LEADING PUBLISHERS:

Institute library has more than 18000 e-book collection of different publishers. Detail areas below:

- Oxford e-Book collection for Mathematics and Physics
- Springer e-Book Collection, LNCS (Lecture Note in Computer Science) from 1973 to 2020
- Elsevier e-Books
- CRC Press

LIBRARY COLLECTIONS:

Total collection of Books, Print journals, etc. are as below (up to 31.03.2020):

(i) Collection	General Book	123709
	Book Bank	41078
	Bound Vol. of Journals	7744
	SC/ST	934
	BIS Code	5072
	Gift	5059
	Misc.	1485
	TEQIP Books	4244
	Total Collection	189325
(ii) Print Journals	Subscribed Journal	57
	Gifted	68
	Total	125

9.4 LABORATORIES

All departments have well equipped laboratories which cater to the hands on training to the under graduate as well as postgraduate students. The laboratories are also regularly used for carrying out projects and research works. List of the laboratories of various departments are given in Annexure-11.13.

9.5 HOSPITAL, POST OFFICE AND SHOPPING CENTRE

The Institute has a Medical Unit with Outdoor and Indoor (20 beds) facilities including Isolation wards. It is served by three full-time general physicians and supported by part-time specialists physicians: one Cardiologist (thrice a week), one Medicinell Specialist (once a week), one Obstetrician and Gynaecologist (once a week), one ENT specialist (once a week), one Ophthalmologist (once a week), one Psychiatrist (once fortnightly) and one Dentist (thrice a week). The Medical Unit also

has one Counselling Centre for well being with one Psychiatrist and two Psychologists who take care of the mental health of the students. All faculty members, staff members and their families as well as the students are benefited from the medical unit. The medical unit provides 24hrs emergency services with two well equipped ambulances at its disposal.

9.6 PHYSICAL FACILITIES

The Institute has branches of State Bank of India, Canara Bank and SBI ATM in the campus. The Institute also has two canteens and one cafeteria near the students' hostels. Three playgrounds and gymnasium are used regularly by the students and residents of the campus. For the recreational facilities of the faculties and staff there are two clubs namely, Faculty Club and Staff Club. The clubs regularly organise cultural programmes, games and sports for the members. A higher secondary school is also located in the campus.

9.7 GAMES & SPORTS FACILITIES

The Student Activity Centre has excellent Infrastructure facilities for both outdoor and indoor games. The Centre has one central gymnasium equipped with sufficient number of equipment's with different time slots for its users. The Institute play grounds (Oval & Lords) always bubble with outdoor activities like football, handball, cricket, athletics, kabaddi, hockey etc. Turf and concrete courts with flood light facilities are also available in the events of volleyball, basketball, lawn tennis and badminton.

Beside central sports facilities, most of the halls of residence equipped with Volleyball and concrete badminton courts including Table Tennis, Chess and Carom board facilities.

9.8 STUDENT ACTIVITY CENTRE (SAC)

The student activity Centre is one of the Central facilities of the Institute organized students choice based Co- Curricular Credit Course in Physical Education and its allied dimensions as a compulsory subject to all first year B-Tech, B-Tech & M-Tech (Dual Degree) and integrated MSc students with one credit point in each semester.

Beside academic activities the Centre lays emphasis on promotion of games and sports of the Institute. The Centre has been sincerely guiding both UG/ PG students and employees of the Institute in different areas of games and sports activities. The Centre organized various sporting events throughout the year, be Intra NIT or the Inter NIT and Inter University tournaments. Regular practice in every major game is carried out under the guidance and supervision of the Centre. Institute teams are picked, trained and exposed to various levels of tournaments.

9.9 UTKARSHA BHAVAN

National Institute of Technology, Durgapur an "Institute of National Importance" has been a major transformation in the research ambience in NIT Durgapur since its transformation from REC to NIT by the Govt. of India, vide NIT Act 2007 (29 of 2007). Quantum jump is observed in publication in premier peer-reviewed journals over the years with commensurate increase in PhD degree awardees.

To further encourage enhanced research activities among faculty and students and also to enhance collaborative research, four cutting-edge areas have been decided to be set up as centres of excellence first to optimize the usage of high-valued sophisticated instruments and secondly, to provide service to the other academic and research institutions and the industries which shall help in internal resource generation through sponsored research and consultancy and testing.

To realizing this objective by way of setting up such a centralized facility ("Utkarsha Bhavan") the Institute has received a sanction of Rs. 97 crore thorough HEFA loan.

The approved DPR of HEFA to set up "Utkarsha Bhavan" includes the following.

(A) BUILDING:

G+10 Storied Central Research & Academic Laboratory Building (Utkarsha Bhavan)

(B) EQUIPMENTS

- ❖ Central Research Facility (CRF)
- ❖ Centralized Laboratory Facility (CLF)
- ❖ Centre for Research on Environment and Water (CREW)
- ❖ Centre for Biomedical Engineering & Assistive Technology (BEAT)
- ❖ Centre for Advanced Research on Energy (CARE)
- ❖ Centre of Excellence on IoT and Intelligent Systems (IoTIS)
- ❖ Central Research Facility (CRF)

These include

- (i) Physical Characterization Facility,
- (ii) Chemical Characterization Facility,
- (iii) Mechanical Characterization Facility,
- (iv) High Performance Computing and Storage, and
- (v) Electrical and Electronics fabrication and characterization facility.
 - ❖ Centralized Laboratory Facility (CLF)

The following laboratories will be included in Centralized Laboratory Facility:

- (i) Physics Lab,
- (ii) Chemistry Lab,
- (iii) Basic Electrical Engg. Lab,
- (iv) Basic, Analog and Digital Electronics Laboratory,
- (v) Computation Lab,
- (vi) Process Control Lab, and
- (vii) Communication Lab.

9.10 ESTATE SECTION

LIST OF MAJOR WORKS IN FY 2019-20:

1250 seated Boy's Hostel: A Building G+12 consisting of 1250 seated capacity boys hostel has been constructed with 06 nos. modernized Lifts, total 447 rooms, modernized kitchen and dining hall with a total area of 35260 sqmtr.

Construction of Concrete Pavement Main Road and Renovation of Flexible Pavement of Campus Road in the Campus: Two main pavement roads concrete constructed from Main Gate to North Gate and Tank Gate to SS-10. Others connected bituminous roads has been renovated.

Raising of Boundary wall and strengthening of security aspects: Raising of Height of Boundary Wall with concertina coil and Strengthening of Security Aspects with construction of peripheral road and perimeter lighting completed. This has strengthen the security and safety aspects of the Campus.

Relaying & Renovation of Sewer Line in NIT Campus: Construction of separate Sewer Line of the Institute has been completed. Institute overall sewer line has been changed with adequate Inspection Pits and Septic Tanks.

Renovation of Class Rooms in Main Academic Building: Class rooms augmentation of facilities Civil, Electrical and Audio Visual capacity including replacement of furniture of Main Academic Building completed.

Renovation of Main Gate: Institute Main gate has been redesigned and renovated. It has given an attractive look with fenced garden.

Construction of Boundary Wall of 1st year boys' hostel and other facilities: The construction of boundary wall for 1st year boys' hostel along with other facilities basketball court, volleyball court and badminton court completed.

Exterior Painting of Quarters: The exterior painting of residential quarters completed.

Central Research Laboratory (G+10) (UTKARSH BHAVAN): The work for UTKARSH BHAVAN under HEFA Project started.

Lady Enclave: In view of safety & security of girls students, a Lady Enclave made ready in this year surrounded with wall consisting of four girls hostel i.e. Hall-7, 8, 10 & 13. Only one gate is made operational which is equipped with CCTV surveillance system.

Installation of 500 KVA DG Sets: Earlier Institute has 04 Nos. 400 KVA capacity and 01 No. 50 KVA capacity DG Sets installed in different locations. During this year 02 Nos. DG of 500 KVA capacity each installed for all boys hostels and other for 1250 seated boys hostel.

9.11 OTHER FACILITIES LIKE HOSTELS, MESSES AND STAFF QUARTERS

1. The Institute has eight boys' hostels and four hostels for girls' students. Each hostel has a separate mess, managed and run by the members of the mess committee comprising of the students under the supervision of the Mess Managers/Matrons and overall guidance of the Wardens of the respective hostels. The Institute provides different categories of residential quarters to the faculty, staff and administrative personnel on licence fee basis. One multi-storeyed accommodation (G+8) for faculty members is completed consisting of 32 numbers of quarters. The construction of Prof. S. N. Ray memorial building is completed. Academic Block has also been inaugurated and 4 number 150 seated auditorium are in use for 1st year students. All other auditoriums and class rooms will be ready soon. Expansion and renovation work of Institute Medical Unit cum Hospital is completed. Widening of Road and construction of Drainage network is completed. Construction of New Market Complex is also completed. Newly constructed Chemistry Laboratory-cum-Biotechnology Department and New Guest House are operational. Construction of a 1500 capacity Auditorium is in progress.

10. NOTABLE PAST ACHIEVEMENTS

- The Institute, since starting off in 1960 with only four branches of Engineering for UG studies and a handful of buildings and quarters, has made tremendous overall development and achieved the status of Institute of National Importance. Some major achievements are listed below:
- In all, 9 B. Tech. programmes in Engineering, 21 M. Tech. programmes, 3 M. Sc. programmes, MCA and MBA programmes are running successfully.
- Many students have won national and international recognition as teachers, industrialists and entrepreneurs in various leading organisations.
- A large number of new laboratories have come up over the years for UG and PG students, Research Scholars and the faculty members of the Institute.
- The Institute was elevated to the National Institute of Technology with Deemed University status.
- NIT Durgapur was declared "Institute of National Importance" by the Government of India.
- The Institute successfully participated in the World Bank assisted TEQIP phase I and II as lead institution,
- Many faculty members have achieved distinction in the field of research by way of publishing papers in peer-reviewed journals and also received best paper awards. Many of them also have the honour of acting as reviewers of international journals.
- The Institute is a QIP Centre for M Tech programmes for faculty members of the polytechnic institutes and PhD programmes for all faculty.
- Under the Centre of Excellence Scheme of the MHRD, Govt. of India, state-of-the-art research laboratories have been set up with modern equipment.
- Many faculty members have served outside organisations and Institutes in the capacity of advisors, consultants and experts of various technical committees.
- NIT Durgapur implemented reservation for OBC students (27%) completely.
- Collaborative activities are in progress with CERN Geneva, NUS Singapore, Caledonian College of Engineering Muscat and a number of premier universities abroad. Faculty exchange, visits of delegation, students' internship and collaborative research have been taken up.
- The Ministry of Steel, GOI, has instituted a Ministry of Steel Chair Professor and has been sponsoring five scholarships to UG students.
- NIT Durgapur mentored NIT Arunachal Pradesh and GKCIT, Maldah.
- The B Tech and M. Tech programmes of various departments are accredited by NBA committee.
- A patent cell has been formed to look after the potential patentable data generated in various departments of the institute.
- S N Roy Memorial building, New Guest house and New Academic building have been inaugurated. Six students' hostels are renovated.
- As a part of the lecture series "Beyond the Walls" organized by NIT Durgapur Alumni Association, seven distinguished alumni members delivered lectures on various topics in the institute. The alumni members acted as resource persons in various workshops and short term courses organized by the Institute.
- The projects namely, 1250-seated Boys' Hostel and Auditorium are in progress. The New Guest House and 500-seated Girls' Hostel have recently been completed.

ACHIEVEMENTS IN 2019 -2020 PHYSICAL INSTRUCTOR

1. Yoga (Men) Secured Third Position in All India Inter NIT Meet held at NIT Silchar.
2. One Silver Medal in All India Inter NIT Track & Field Meet at NIT Rourkela.

ANNEXURE – 11.1 INSTITUTE'S COUNCIL

NIT COUNCIL (AS PER STATUTE)

- 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
- 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

ANNEXURE-11.2 BOARD OF GOVERNORS (AS PER NIT ACT, 2007 (29 OF 2007))

Sl. No.	Nomination Under	Name and Designation of nominated Member	Serve as
01.	Section 11 Clause (a)	Prof. Anupam Basu Chairperson, Board of Governors, National Institute of Technology Durgapur Durgapur-713209	Chairperson
02.	(b)	Prof. Anupam Basu Director, National Institute of Technology Durgapur Durgapur-713209	Member
03.	(c)	Shri Madan Mohan ADG(HE) Deptt. of Higher Education, Ministry of Human Resource Development, Shastri Bhawan, New Delhi-110 001	Member
04.	(c)	Mrs. Darshana M Dabral JS & FA (IFD) Deptt. of Higher Education, Ministry of Human Resource Development, Shastri Bhawan, New Delhi-110 001	Member
05.	(d)	Mr. Sanjay Jhunjunwala Chief Executive Officer, Mani Group Kolkata	Member
06	(d)	Dr. D.K. Majumdar Former Professor (DIPSAR) University of Delhi, C-8, IDPL Apartments Plot No.-GH10 Sector 10A Gurgaon-122001	Member

Sl. No.	Nomination Under	Name and Designation of nominated Member	Serve as
07.	(e)	Dr. Mitali Mukerji, Senior Principal Scientist CSIR, IGIB, New Delhi.	Member
08.	(e)	Dr. Jyotsna Dhawan, Chief Scientist, CCMB, Hyderabad	Member
09.	(f)	Prof. Parthapratim Gupta Professor, Department of Chemical Engineering, National Institute of Technology Durgapur	Member
10.	(f)	Prof.(Mrs.) Suchismita Roy, Professor, Department of Computer Science and Engineering NIT Durgapur	Member
11	(g)	Prof. Sriman Kumar Bhattacharyya Director(Officiating) Indian Institute of Technology, Kharagpur India, Pin-721302	Member
12	Section 18 Clause (2)	Shri Soumya Sen Sharma Registrar, NIT Durgapur Durgapur-713209	Secretary

ANNEXURE-11.3(A) FINANCE COMMITTEE

Sl. No.	Name of the Member	Server as
1.	Prof. Anupam Basu, Chairperson, Finance Committee, National Institute of Technology, Durgapur Durgapur-713209.	Chairperson
2.	Prof. Anupam Basu, Director, National Institute of Technology, Durgapur Durgapur-713209	Member
3.	Shri Madan Mohan, ADG(HE) Deptt. of Higher Education, Ministry of Human Resource Development, Shastri Bhawan, New Delhi-110 001	Member
4.	Mrs. Darshana M Dabral, JS & FA (IFD), Ministry of Human Resource Development, Deptt. of Higher Education, Shastri Bhawan, New Delhi-110 001	Member
5.	Prof. Parthapratim Gupta, Professor, Department of Chemical Engineering, National Institute of Technology Durgapur Representative of BOG	Member
6.	Shri Soumya Sen Sharma Registrar, National Institute of Technology, Durgapur Durgapur-713209	Member Secretary

ANNEXURE-11.3(B) MEMBER OF BUILDING AND WORKS COMMITTEES

Sl. No.	Name of the Member	Server as
1	Prof. Anupam Basu, Director, National Institute of Technology Durgapur Durgapur – 713 209	Chairman
2	Dr. Sukhbir Singh Sandhu, Addl. Secretary (TE), Department of Higher Education, Ministry of Human Resource Development, Shastri Bhawan, New Delhi-110001.	Member
3	Shri Madan Mohan, ADG (HE), Ministry of Human Resource Development (MHRD) Room No. 431 'C' Shastri Bhawan, New Delhi-110001.	Member
4	Shri Anil Kumar, Director (Finance), Department of Higher Education, Ministry of Human Resource Development, Shastri Bhawan, New Delhi-110001.	Member
5	Shri Satyaki Sen, Nominee of BOG, NIT Durgapur CJ 84, Sector – 2, Salt Lake City, Kolkata – 700 091	Member
6	Shri Durga Prasad (Nominee of CPWD, Electrical Wing) Superintending Engineer (Electrical), Kolkata Central Electrical Circle – 1, Central Public Works Department (CPWD), 234/4, Acharya J. C. Bose Road, Kolkata – 700 020.	Member
7	Shri C. P. Sharma, (Nominee of CPWD, Civil Wing) Superintendent Engineer (Civil), NIT Durgapur,	Member
8	Prof. S. Bhattacharya Department of Civil Engineering Chairman Construction	Member
9	Prof. N. K. Roy Department of Electrical Engineering. Chairman Planning	Member
10	Prof. S. Saha Department of Civil Engineering, Chairman Maintenance & Campus Facility	Member
11	Prof. Atul Krishna Banik Department of Civil Engineering Chairman & Convenor PMQCC	Member
12	Shri Soumya Sen Sharma Registrar, National Institute of Technology Durgapur, Durgapur – 713209.	Member Secretary

Sl. No.	Name of the Member	Server as
Special Invitees		
13	Prof. K. Bhattacharya, Department of Civil Engineering Advisor, Core Committee for Utkarsh Bhavan under HEFA Loan Scheme	
	Dr. Anirban Sarkar Department of CSE HOD Computer Centre	

ANNEXURE-11.3(C) LIST OF SENATE MEMBERS

Sl.no.	Name	E-mail Address	Telephone
1	Prof. Anupam Basu Director and Chairman-Senate	director@admin.nitdgp.ac.in	9434788001

EXTERNAL MEMBER

2	Prof. Siddhartha Sen, Professor, Electrical Engg. Dept., IIT Kharagpur	ssen@ee.iitkgp.ernet.in	+91 - 3222 283084
3	Prof. (Mrs.) Swagata Dasgupta, Professor, Dept. of Chemistry, IIT Kharagpur	swagata@chem.iitkgp.ernet.in	+91-3222-283306
4	Prof. Ajitava Raychaudhuri, Professor, Dept. of Economics, Jadavpur University Kolkata	ajitava_rc@economics.jdvu.ac.in	91-33-2414-6328

INVITEE MEMBER

5	Sri S. Chatterjee Managing Director Innovative Heat Handling Pvt. Ltd. CG-106, Salt Lake City Kolkata 700 091	samiran45@gmail.com	9831016604
6	Mr. B. Bhattacharya, Invitee Member, (Alumni)	gpibhattacharya@yahoo.com	9830042175
7	Mr. Supratik Bhowmik, PG Student Nominee Roll No. (17EE4209),	supratikbrowmick95@gmail.com	
8	Mr. Bushra Arshad UG Student Nominee Roll No. 15/EC/01	Ba20150001@btech.nitdgp.ac.in	
9	Dr. Palash Pal, Principal of Dumka Engineering College Jharkhand	gecd.principal@gmail.com	
10	Dr. B. Shakila, Assistant Professor, Dept. of Electrical and Electronics Engineering, NIT Nagaland,	saki.baskaran@gmail.com	9791624896
11	Dr. Neelima Arambam, Associate Dean (Academic) NIT Nagaland, Dimapur	neelima@nitnagaland.ac.in	9862568950

Sl.no.	Name	E-mail Address	Telephone
BIOTECHNOLOGY			
12	Prof. S. Chattopadhyay,	sudipchatto@gmail.com, sudip.chattopadhyay@bt.nitdgp.ac.in	9434788029
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HUMANITIES AND SOCIAL SCIENCES			
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PHYSICS			
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ANNEXURE - 11.4(A) ONGOING SPONSORED PROJECTS

DEPARTMENT OF BIOTECHNOLOGY

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Microbial production of Lactic Acid using wastes (dairy waste & rice straw) as substrates, for the production of bioplastic	Aikat, K.	Department of Science & Technology and Biotechnology, Govt. Of West Bengal	13.7 lakhs	2019
Role of Adenosine Monophosphate Activated Protein Kinase (AMPK) activators in reducing cancer cell aggressiveness	Bhattacharjee, A., Chaudhuri S and Chatterjee S	Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal	20.76 lakhs	2019
Regulation of MCP-1-induced calcium-independent phospholipase A2 (iPLA2)-dependent monocyte migration	Bhattacharjee, A., Ghosh M.	DBT-Govt. of India	57.07 lakhs	2019
Fish fat transformation during processing, preservation, braising and its nutritional consequences in terms of food value	Chakrabarty, J. and Bhattacharjee, A.	Department of Science and Technology, Government of West Bengal	32.18 lakhs	2017
Investigation of functional interrelations of bZIP transcription factors: ZBF2/GBF1, HY5 and HYH of light signalling pathways in Arabidopsis thaliana	Chattopadhyay, S.	JC Bose National Fellowship (DST)	68 lakhs	2016
Program support on genome engineering of tomato (Cloning and functional characterization of GBF1/ZBF2 in tomato)	Chattopadhyay, S. and Sharma, R.P. (University of Hyderabad)	DBT	98 lakhs	2016
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	Chaudhuri S, Sen Maiti S (CIT Kokrajhar)	DBT-Govt. of India	23.71 lakhs	2019
Molecular characterization of a small-molecule based reprogramming of non-adipocyte cells to brown adipocytes for its potential use as anti-obesity drug	De, D.	DST-SERB	31.67 lakhs	2019

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
FIST program, DST	Head, Biotechnology Department	DST-FIST	1crore 50 lakhs	2017
Exploring lithautotrophic microbial communities in terrestrial biosphere underneath the Deccan Traps at Koyna region, India	Kazy, S.K.	14th phase of Census of Deep Life (CoDL) Project, Deep Carbon Observatory (DCO), Carnegie Institution for Science, USA	DNA sequencing project	2018
Microbiology of arsenic contaminated groundwater of Bengal delta plain: deciphering the role of subsurface microorganisms in As release and prospect for in situ remediation –	Kazy, S.K., and Sar, P., IIT Kharagpur	Department of Science and Technology (DST), Govt. of India	~41 Lakhs	2016
Microbiology of deep granitic subsurface of Koyna-Warna region	Kazy, S.K., NIT Durgapur and Sar, P., IIT Kharagpur	Ministry of Earth Sciences (MoES), Govt. of India	151.98 Lakhs	2017
Enteropathogens dampen innate immune response through inhibition of macrophage functions	Mahata, N.	NIT Durgapur (RIG)	10 lakhs	2016
Design of novel short helical peptide based biosurfactant	Mondal, S.	NIT Durgapur (RIG)	5 lakhs	2019
Design of modular peptide nanotubes platforms by the self-assembly of shortest helical building blocks for application as ion channel mimic	Mondal, S.	DST-SERB	27 lakhs	2019
Determining the role of the gastric microbiota in Helicobacter pylori infection to utilize it for the development of a probiotic therapy	Mukherjee, O	DST-SERB	31.05 lakhs	2019
MCM3AP: A novel S Phase replication checkpoint protein and its relation with Fanconi anemia protein.	Mukhopadhyay, S.S.	DST-SERB project	42.16 lakhs	2018
Engineering of cellulase enzymes of Aspergillus fumigates NITDGPKA3 for enhancing their activity	Mukhopadhyay, S.S., Aikat, K.; Bagchi, A. (University of Kalyani)	DBT-Govt. of India	37.63 lakhs	2017
Investigation of functional connection between cAMP-dependent signaling pathway and MoWISH, a gene encoding a novel GPCR in rice blast fungus	Roy-Barman, S.	DST-SERB	50 lakhs	2018

DEPARTMENT OF CHEMICAL ENGINEERING

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Centre for Technological Excellence in Water Purification (CTEWP)	Mandal, T.	Department of Science and Technology, Govt. of India.	57,30,000	June 2019
Dispersion of modified Starch onto Polymer matrix towards Enhancement of its Biodegradability to reduce the Solid Waste Generation	Halder G.N. and Das, B.	Department of Science and Technology, Government of West Bengal	14.88 lakhs	2016

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Environmental geochemistry and treatment of organic pollutants in aquatic systems in the selected areas of China, India and Russia	Mandal, M.K Pal S. Choudhuri H.	DST- Govt. of India, under BRICS Calls	44 lakhs	2019
Forward-osmosis integrated membrane distillation coupled with solar-photocatalytic reactor for textile wastewater treatment: A sustainable approach for commercial exploitation	Sikder, J. and Adhikari, U.	Government of West Bengal Department of Science & Technology and Biotechnology	14,65,800/-	February 2019
Hetero-Structured nanocomposite Photo Catalyst with enhanced capability for the selective conversion of CO ₂ to Methanol under Visible Light	Mandal, M.K In collaboration with Dr. S Chakraborti (Amity University-Noida)	UGC-DAE Consortium for Scientific Research (UGC-DAE CSR) Kalpakkam Node, KOKILAMEDU-603 104, T.N	10.0 Lakhs	2017
Process Intensification of Biodiesel Synthesis from Non-edible Oil via Superheated Propanol Injection Technique	Halder G.N.	Department of Science and Technology, Government of India	31.51 lakhs	2017
Reclamation of Steel Industry Wastewater through Phycoremediation Technique Using Microalgae and Assessment of Biofuel Production from Algal Biomass	Dutta, S. and Chakraborty, J.	IMPRINT (Impacting Research Innovation and Technology) scheme of Ministry of Human Resources Development, Government of India	45.1152 lakh	2017
Targeting the elimination of antineoplastic compounds in hospital wastewaters: novel frontiers in sustainable treatment	Mandal, M.K. and Pal, P.	DBT-INNO INDIGO	209.168 lakh	2016

DEPARTMENT OF CHEMISTRY

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
DST-FIST	All Faculty members	DST, GOI	117 lakhs	2016
Investigation on the extracts of Swertia chirata, Butea monosperma, Tradescantia pallid and Madhica indica as green corrosion inhibitor for mild steel in acidic medium	Adhikari U.	DST, Govt. Of West Bengal	15.38 lakhs	2017
Inhibition of Corrosion Inhibition properties of newly synthesized green corrosion inhibitors against mild steel in acidic medium	Adhikari U.(PI) Sukul S. (Co-PI)	SERB, Govt. of India	68.02 lakh	2019
Fish fat transformation during processing, preservation, braising and its nutritional consequences in terms of food value	Chakrabarty J.	DST, Govt. Of West Bengal	33.62 lakhs (revised)	2017
Reclamation of steel industry wastewater through phycoremediation technique using microalgae and assessment of biofuel production from algal biomass	Chakrabarty J. Dutta S., PI; (Chem. Engg.), Bhattacharya P, (HIT, Kolkata),	IMPRINT, MHRD, Govt. of India	43.2 lakhs	2017
Ultracold Chemistry of molecular ions	Ghosal Subhas	SERB, GoI	24 lakhs	2019
To explore the new physics on magnetic interaction for the application in quantum technology	Ghosal S (Co-PI) Goswami B (PI)	TEQIP III	3 lakh	2019

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Spatial Distribution of Uranium in Three Districts (South 24 Pargana, Purba Medinipur and Pashim Medinipur) of West Bengal	Gupta S (B.U.) & Saha R N (Co-PI)	BRNS, DAE, GOI	27.52 lakhs	2018
Bio-transformation reactions of Pt(II)/Pd(II) and Pt(IV)-sulfur chelates to metal-DNA adduct with nucleobases: their kinetics, mechanistic pathway, bio-activity and theoretical aspects	Moi S. C.	SERB-DST, Govt. of India	44.66 Lakh	2017
Synthesis and characterization of Cis-platin based Pt/Pd(II) complexes: Their kinetics, mechanism, DNA- binding property and theoretical study	Moi S. C.	DST-DHESTBT, Govt. of West Bengal	24.991 Lakh	2018
Searching of less toxic and more effective Cis-platin based new Pt(II) anticancer agents: Kinetics, DNA binding, bio-activity and DFT study	Moi S. C	CSIR, Government of India	10.30 lacs	2018
A study on the water molecular dynamics of human Monoamine oxidase (hMAO): An attempt for Inhibitor Design	Mukhopadhyay B. P.	ICMR, Govt. of India	8.4 lakhs	2018
Development of highly efficient microwave absorber through controlled fluorescent nanoparticle localization in an immiscible polymer blend	Panja S.S.	SERB, Govt. of India	55 lakhs	2017
Chemically Modified Polysaccharide linked to Schiff Base Ligand-Metal Complex: a Novel Approach of Investigation towards the Antioxidant and Antitumor Activities	Saha T. K. Adhikari U	SERB, Govt. of India	21.83 lakhs	2017
Synthesis of Pharmacologically Active Heterocyclic Compounds via One Pot Three-Component Coupling Reaction Catalyzed by Bio-Inspired Nanoparticles	Saha T. K.	SERB, Govt. of India	31.22 lakhs	2017
Nano porous Transition Metal Based Semiconductors towards Catalysis and in Electrochemical Applications	Saha R N and Roy M	SERB, DST, GOI	19.20	2018
The Impact of Various Biochars on the Bioaccessibility and Bioaccumulation of Polycyclic Aromatic Hydrocarbons (PAHs) and Potentially Toxic Elements (PTEs) in Contaminated Soil	Saha R N (Mentor) and Gope M	SERB, DST, GOI	19.20	2018
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	Saha R. N. And Chakroborty J.	Department of Higher Education, Science & Technology and Biotechnology, Govt. of West Benga	3.15 lakhs	2018
Emerging Contaminants and their accumulation in ecosystem of lower stretch of Hooghly River	Saha R N (Co-PI) and Gupta (PI, BU)	Department of Higher Education, Science & Technology and Biotechnology, Govt. of West Bengal	5.98 Lakhs	2018
Emerging Contaminants and their accumulation in ecosystem of lower stretch of Hooghly River	Saha R N (Co-PI) and Mondal S (PI, NITD)	Department of Higher Education, Science & Technology and Biotechnology, Govt. of West Bengal	9.978	2018
Search for effective corrosion inhibitors based on benzothiazole derivatives: combined experimental and theoretical approach to establish structure-reactivity relationship	Sukul D and Banerjee P (CSIR-CMERI)	DST, WB	13.85 Lakhs	2018

DEPARTMENT OF CIVIL ENGINEERING

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Blast protection	Karmakar S	RIG, NIT Durgapur	5 Lakhs	2019
Design and development of crack detection system in steel bridges using acoustic emission technique	Topdar P. and Datta A.K.	DST-TSDP, Govt. of India	59.45 Lakhs	2017
Environmental geochemistry and treatment of organic pollutants in aquatic systems in the selected areas of China, India and Russia	Pal, S, Chaudhuri, H (Phys), Mandal M.K. (Chem. Engg.)	DST-Govt. of India under BRICS STI Framework Programme	44.0 Lakhs	2018
Prospects and study of floating offshore wind turbine (FOWT) platforms for wind energy harnessing	Banik A. K.	Department of Science & Technology, Higher Education, Govt. of WB,	8.5 Lakhs	2017
Seismic protection of Masonry buildings by Geosynthetic	Nanda R.P.	RIG, NIT Durgapur	7.2 Lakhs	2015

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
An Approach towards Conservation of Birds of West Bengal through creating an Intelligent Bird Identification System	Dr. S. Changder	Science and Technology and Biotechnology Department, Govt. of West Bengal	6,60,000	2019
ADKit: Smartphone Based Artificial Intelligence Enabled Portable Low-cost Anemia Detection Kit based on Observation of Nail and Palm Pallor	Anupam Basu, Dipankar Chakraborty, Suchismita Roy, Mamata Dalui, Bibhash Sen, Dakshina Ranjan Kisku	Meity, Govt of India	28.94 Lakhs	2018
Design and Development of Electrohydrodynamic Inkjet Printing System	Murmu, N.C. (CSRI-CMERI, Durgapur), Roy, S.S. (Dept. of ME, NIT Durgapur), Kisku, D.R. (Dept. of CSE, NIT Durgapur)	DST/TSG/AMT	116.837 Lakhs	2016
Empower SSE: A Linked Open Data Framework for the Empowerment of Social and Solidarity Economy Agents	Animesh Dutta	DST, Govt of India	10.6 Lakhs	2018
IntAirSense: Intelligent Air Pollution Monitoring	Suojoy Saha, Mousumi Saha, Jaydeep Howlader	West Bengal DST	12L (Approx.)	2019
Developing ICT-based kiosks for post disaster situational information management using opportunistic networking framework	Subrata Nandi. Sujoy Saha	West Bengal DST	15L (Approx.)	2018
CityProbe: City Scale Pervasive Sensing System:	Subrata Nandi, Sujoy Saha, Mousumi Saha	IMPRINT -I	60 L (Approx.)	2017
Neurocomputing and Cognitive Intelligence	Tarun Gandhi (IIT Delhi), Bibhash Sen, Suchismita Roy, Anupam Basu.	Meity, Govt of India	49.50 Lakhs	2019
Secure Architecture for FPGA based IoT Applications with enhanced physically unclonable function	Bibhash Sen, Suchismita Roy	DST-SERB (Core Research/EMR scheme)	16.24 Lakhs	2018
Design of light weight and cost effective PUF-Enabled secure architecture for authentication and FPGA based application	Bibhash Sen, Suchismita Roy	WB-DST	8 Lakhs	2018

DEPARTMENT OF ELECTRICAL ENGINEERING

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Modeling and Control of Electromagnetic Levitation Devices	Banerjee. S. Dr. (Co-PI) with IIT Delhi	SERB-DST	41.64Lakh	
Electrical Impedance Spectroscopy (EIS) Assisted Electrical Impedance Tomography (EIT) System for Biological Tissue Imaging with Optimum Frequency Scanning	Bera T.K. Dr.	RIG, NIT Durgapur	4.9950895 Lakhs	2019
Development of Advanced Power Quality Monitoring System Utilizing Signal and Data Processing Techniques	Bhowmik P. S. Dr.	NIT Durgapur	9.68	2016
Smart EV-charging solution to improve grid resiliency	Bhattacharya A. Dr.	RIG, NIT Durgapur	4.94187 Lakhs	2019
Improvement of Smart Microgrid Flexibility And Power Quality Using Phasor Measurement Unit	Bhowmik P. S. Dr.	SERB-DST	26.4 lakhs	2017
Protection and Transient Analysis of Distribution System with Renewables Integration using DIgSILENT Power Factory	Bohre A. K.Dr., Saha Roy B.K. Dr.	NIT Durgapur	10.00 Lakh	2019
Fault Diagnosis and Fault Tolerant Flight Control of Unmanned Quadrotor	Dey A. Dr.	RIG, NIT Durgapur	3.2043 Lakhs	2019
Cardiovascular Disease Risk Assessment Based on the Analysis of Retinal Fundus Images	Dhara A. K. Dr.	RIG, NIT Durgapur	5.0 Lakhs	2019
An Early Warning System for Electrical Power System Utility using Ultra-High Frequency Sensors	Koley C. Dr.	SERB, Gov. of India	38.63 lakhs	2017
Artificial Intelligence (AI) in Education Focus: Children with learning Disability	Koley C. Dr., Halder S.Dr., Bera T. K. Dr. (Co-PI)	MeiTY	81.37 Lacs	2020
Technological awareness development of Maduli Cluster, Bell and Brass Metal Cluster and Fishing, Hook Cluster under Directorate of Micro, Small, and Medium Enterprises, Government of West Bengal	Roy. N.K. Dr. (PI)	MSME, Govt of West Bengal	Rs 34 Lakhs	2017
Creation of Awareness of National Mission On Education Through Information Communication Technology (NMEICT)	Roy. N.K. Dr. (PI)	NMEICT, MHRD, Govt of India	Rs 10 Lakhs	2012
Analysis Of Different Aspects For The Connection Of Distributed Generations To The Power System Network	Sarkar. S. Dr.	NIT Durgapur	9.5 lakhs	2018
Control of multi Input Converter for Hybrid wind Solar battery based system	Saha T. K. Dr. Co. PI: Dey J Dr.	NIWE, under MNRE, Govt. of India	30.71 Lakhs	2017

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
28 GHz mmWave for 5G wireless in tropical region: short-range propagation and channel modeling	Chandra A.	SERB, DST	20 lakhs	2019
Development of Novel Time Modulated Antenna Arrays for the Present Communication Systems	Mandal, S. K.	SERB, DST	39.6 Lakhs	2017
Development of Flexible Environmental Gas Sensor based on 2D MoS ₂ Nanosheets	Ranwa, S.	SERB, DST	26.06 Lakhs	2019
Resistive Random Access Memory using HfO ₂ based Hetero-Structures for Flexible Electronics	Mahapatra, R.	SERB DST	45.96 lakhs	2017
Dielectric Engineering on GaN for Sustainable Energy Applications	Mahapatra R	UGC-UKIERI	9.51 lakhs	2018
Design and Implementation of Time Modulated Antenna Arrays with Optimal Radiation Pattern in Both Transmission and Reception	Mandal D	SERB, DST	31.17 Lakhs	2018

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Name of the Department	Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Department of Earth and Environmental Studies	Emerging Contaminants and their accumulations in Ecosystem of lower stretch of Hooghly River	Dr. Sandip Mondal	WB-DST	9,97,800	2018
Department of Earth and Environmental Studies + Civil Engineering	Land subsidence study	Dr. K. Adhikari Dr. S. Pal	Essar Oil Ltd.	8,00,000	2016
Department of Earth and Environmental Studies	Remobilization of arsenic enriched sulphides from anomalous base-metal mineralized zones from the Arunachal Himalaya, India: implications for potential source for arsenic contamination in Holocene aquifers	Dr. Manoj Kumar Ozha	Research Initiation Grand, Institute (NITD)	5,00,000	2019

DEPARTMENT OF MATHEMATICS

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Development of doubly-even self-dual binary codes of length 24k	S. Bagchi	SERB, DST, India	15.24 lakh	2017
Development of hybrid numerical tools to study the electrokinetic transport of bio-colloids	P. P. Gopmandal	SERB, India	6.6 lakh	2019
Dual Hamming codes from trace codes over a chain ring	S. Bagchi & L. K. Dey	NBHM, India	3.735 lakh	2019
Extreme events in networks of dynamical Systems	Indian PI – P. Pal, German PI - U. Feudel	DST, India and DAAD, Germany	11.80 lakh (Indian Side)	2019
In depth study of D-generalized metric spaces	L.K. Dey	NBHM, India	1.675 lakh	2016

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Nonlinear waves in dusty and quantum plasma	S. Maitra	CSIR, India	441833 (for the starting eleven months)	2019
Overstability in Rotating Magnetoconvection	P. Pal	SERB, India	6.6 lakh	2018
Study on metric fixed point results with possible applications	L.K. Dey	CSIR, India	12.97 lakh (up to second year except overhead)	2018

DEPARTMENT OF MANAGEMENT STUDIES

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Understanding the old age financial stress and retirement planning of workers in the unorganised sector in India	Dr. Amlan Ghosh	Indian Council of Social Science Research (ICSSR)	Rs.8,40,000/-	2019
The Social Impact of Corporate Social Responsibilities of the Major Public Sector Undertakings in India: A Case Study of West Bengal	Dr. Anupam De	Indian Council of Social Science Research (ICSSR)	Rs.9,45,000/-	2019

DEPARTMENT OF MECHANICAL ENGINEERING

Name of the Department	Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Mechanical Engineering	Study of Heat Transfer Enhancement with the application of Various Nanofluids in a Differentially heated cavity	Barman R. N.	The Institution of Engineers (India)	75000/-	August,2019
Mechanical Engineering	Template based fabrication for development of various micro nano structured surfaces and their characterization	Goswami A	Mechanical Engineering	23.93 lakhs	December 2019
Mechanical Engineering	Development of Assembly Auto Alignment Methodology	Hui N. B, Mitra R. K,	Advanced System Laboratory (ASL), Hyderabad, DRDO	19.435 lakhs	2020
Mechanical Engineering	Controlled assembly of main frame of the ballistic missile.	Hui N. B, Mitra R. K, De T. N.	Research Centre Imarat (RCI), Hyderabad, DRDO	22 lakhs	2019
Mechanical Engineering	Technological awareness and development of Bell and Brass Metal Cluster at Suklai, Bankura, through Soft Intervention	Principal Investigator (PI): Dr. K.Khan Co-PI (s): Dr. M.Mallik, Dr. M.K.Mondal, Dr. S.S.Roy, Dr. J. Howlader	MSME, Government of West Bengal	8.4 lakh	June 2017
Mechanical Engineering	Investigation of thermo-hydraulic performance of artificially Roughened Solar air heater Using Infrared Thermography Technique	Layek A.	SERB, DST, Govt of India	39.25 lakhs	Feb 2019

Name of the Department	Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Mechanical Engineering	A universal advanced low-cost nano-hybrid platform for air pollution, water, and bio-fluids	Mondal A. and Barman R. N.	Scheme for Promotion of Academic and Research Collaboration (SPARC), MHRD, GoI	58,46,065/-	June, 2019
Mechanical Engineering	Technological awareness and development of Fishing Hook Cluster at Lalbazar, Bankura through Soft Intervention	Principal Investigator (PI): Dr. M.Mallik Co-PI (s): Dr. S.S.Roy, Dr. K.Khan, Dr. M.K.Mondal, Dr. S. Mondal	MSME, Government of West Bengal	4.5 lakh	June 2017
Mechanical Engineering	Technological awareness and development of Bell and Brass Metal Cluster at Lalbazar, Bankura, through Soft Intervention	Principal Investigator (PI): Dr. M.K.Mondal Co-PI (s): Dr. S.S.Roy, Dr. K.Khan, Dr. M.Mallik, Dr. P.S.Bhowmik	MSME, Government of West Bengal	8.2 lakh	June 2017
Mechanical Engineering	Technological awareness and development of Maduli Cluster at Birshing, Bankura, through Soft Intervention	Principal Investigator (PI): Dr. S.S.Roy Co-PI (s): Dr. M.K.Mondal, Dr. K.Khan, Dr. M.Mallik, Dr. S. Saha	MSME, Government of West Bengal	10.3 lakh	June 2017
Mechanical Engineering	Design of a Smart Material Based Soft Lower Limb Exoskeleton to Assist Soldier	Roy S.S., Mukhopadhyay, Chattaraj N.	DRDO, New Delhi	84.46 Lakhs	2019
Mechanical Engineering	Design and Development of Force Reflecting Hand Exoskeleton (Haptic Device) for Application in Remote Handling in Defence	Roy S.S.	DRDO, New Delhi	16.95 Lakhs	2019
Mechanical Engineering	Heat Conduction in a Semi-infinite Solid	Weigand B., Pramanick A. K.	DAAD, Germany	2.6 lakh	May 2018

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Wear Behaviour of Al-Si Alloys at Room Temperature and at Elevated Temperature	Dr. Show B.K.	SERB-DST (Start Up Research Grant (Young Scientist))		
Development of self-lubricating nano-composite for wear-resistant applications	Dr. Show B.K and N. Mandal, H.Roy, K. Mukherjee (CSIR-CMERI)	DST Nanomission		
Technological awareness and development of Bell and Brass Metal Cluster at Lalbazar, Bankura, through Soft Intervention	Mondal M. K., Mallik M., Roy S. S., Khan K. & Bhowmik P. S.	District Industries Centre (DIC), Bankura, Directorate of MSME, Govt. of West Bengal		

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Technological awareness and development of Fishing Hook Cluster at Lalbazar, Bankura through Soft Intervention	Dr. M.Mallik, Dr. S.S.Roy, Dr. K.Khan, Dr. M.K.Mondal, Dr. S. Mondal	DIC, Bankura, Directorate of MSME, Govt. of West Bengal	450000/-	2017
Technological awareness and development of Bell and Brass Metal Cluster at Suklai, Bankura, through Soft Intervention	Dr. K.Khan, Dr. M.Mallik, Dr. M.K.Mondal, Dr. S.S.Roy, Dr. J. Howlader	DIC, Bankura, Directorate of MSME, Govt. of West Bengal	840000/-	2017
Technological awareness and development of Maduli Cluster at Birshing, Bankura, through Soft Intervention	Dr. S.S.Roy, Dr. M.K.Mondal, Dr. K.Khan, Dr. M.Mallik, Dr. S. Saha	DIC, Bankura, Directorate of MSME, Govt. of West Bengal	1030000/-	2017
Development of Al-Mg ₂ Si Composite through Novel Equal Channel Angular Squeeze Casting (ECASC) Technique	Dr. M. K. Mondal	Science & Engineering Research Board (SERB)	3045000/-	February 2019
Tailoring the architecture of microstructure in Al-based Al-Cu-Ni alloys to improve the mechanical properties	Dr. S. Bera, Dr. B.K.Show and Dr. S. Das	DST	Rs 44,19,900/-	February 2020
Development of Al-Si alloys with and without grain refiner or eutectic modifier by strain induced melt activation process	Dr. Mandal D	EEQ/SERB-DST, Govt of Ind	Rs.24,05,400/	Dec-2019
DST-FIST Program 2018	HOD, and All faculty members, MME	Ministry of Sci and Tech, DST-R&D Div, Govt of India	Rs. 1,47,00,000/-	June 2019
Effect of Y ₂ O ₃ Addition on Oxidation Behavior of Pressure-less Sintered ZrB ₂ -SiC Composite	Dr. M. Mallik	DST-SERB-CRG	Rs. 34,98,959/-	2020

DEPARTMENT OF PHYSICS

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Development of noble metal free electro catalyst for direct oxidation of ethylene glycol in direct ethylene glycol fuel cell (DEGFC)	Basu S. (PI)	SERB	Rs.4305109.00	2017
Developing module with teaching learning materials for mathematics, physics, chemistry and biology for school level.	Chaudhuri H. (Project Coordinator, Implementing Institution: NIT Durgapur)	Paschim Banga Sarvasiksha Mission, Govt. of W.B. and Govt. of India, MHRD	5.00 lakh	2018
Investigation on radioactive profile of geothermal areas	Chaudhuri H. (Implementing Institution: NIT Durgapur)	NIT Durgapur, Govt. of India, MHRD	10.00 lakh	2017
Environmental geochemistry and treatment of organic pollutants in aquatic systems in the selected areas of China, India and Russia	Chaudhuri H., Pal S., Mandal M. K., Dubey K., Savichev O., Sun Z.	DST (BRICS)	44.08 lakh	2019
Environmental geochemistry and treatment of organic pollutants in aquatic systems in the selected areas of China, India and Russia	Chaudhuri H., Pal S., Mandal M. K., Dubey K., Savichev O., Sun Z.	DST (BRICS)	44.08 lakh	2019

Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
Center for Research on Environment and Water	Chaudhuri H., NIT Durgapur (Working as coordinator)	HEFA, MHRD, Govt. of India	400.00 lakh	2019
Unnat Bharat Abhiyan 2.0	Chaudhuri H., NIT Durgapur (Working as coordinator)	UBA (MHRD)	7.50 lakh	2019
Optical studies of polyaniline based nanocomposites by steady state and time-resolved techniques	Chakraborty A. K. (Co-PI) & Sinha S (PI). Implementing institute Visva Bharati University	CSIR	Rs. 7 Lakhs	2016
Centre of Excellence in Advanced Materials	Chakraborty A. K. (PI & coordinator)	MHRD (TEQIP-III)	Rs. 3 crores	2018
Understanding Host-Circuit Interaction and Resource Sharing in Synthetic Biology	Ghosh S. (PI)	DST	Rs 35 Lakhs	2019
Development of some 2D transition metal dichalcogenide semiconductor nanostructures and nanocomposites for photocatalytic dye degradation, light energy harvesting and hydrogen production	Kumbhakar P. (PI)	CSIR	19.04 Lakh	2019
Synthesis of semiconductor and metal Nanostructures and the investigation of their Role as active or passive scatterer in random Laser generation	Kumbhakar P. (PI)	DSTBT Govt. of West Bengal	14.5 Lakh	2019
Development and characterization of functionalized carbon nanotubes-polymer nanocomposite having enhanced dielectric properties for Charge storage device	Meikap A. K. (PI)	DST-WB	14.46 lakhs	2019
Universal advanced low cost nano-hybrid platform for air pollution, water and bio-fluids	Mondal A. (Indian PI) Indian Co-PI: Barman R. N. Foreign PI: Nunzi J. M. Foreign Co-PI: Tameev A.	SPARC (IIT KGP), MHRD	Rs. 58.46065 lakhs	2019
To develop and fabricate an efficient TiO ₂ nanowire array based UV detector using plasmonic nanoparticles array	Mondal A. (PI)	CSIR	Rs. 17.9 lakhs	2016
Evaluation of the role of vitamin D in obesity cardiovascular disease and diabetes using SiO _x /TiO ₂ nanowire based sensor	Mondal A. (PI) & Ghosh M. (Co-PI)	SERB, DST Govt. of India	Rs. 48.64 lakhs	2017

ANNEXURE - 11.4(B) PROJECTS COMPLETED DURING 2019-20**DEPARTMENT OF BIOTECHNOLOGY**

Title of the Project	Investigator(s)	Sponsoring authority
Investigation of cross talk between MAP Kinase and light signaling pathways in Arabidopsis thaliana	Chattopadhyay, S. and Sinha, A.K., NIPGR, New Delhi	DST-SERB
Role of protein arginylation in cellular stress responses: A study using heat stress and oxidative stress models in arginylation deficient cell culture system	Saha, S.	DST-SERB
Evaluation of the role of vitamin D in Obesity, cardiovascular diseases and Diabetes using SiOX/TiO2 nanowire Based sensor	Mandal A., Ghosh, M.	DST-SERB

DEPARTMENT OF CHEMICAL ENGINEERING

Title of the Project	Investigator(s)	Sponsoring authority
Training SC/ST community in selected rural areas of Durgapur on Organic Agriculture and Bio-fertilizer production.	Mandal, T. and Krishnaraj, N.R.	DST, Govt. of India

DEPARTMENT OF CHEMISTRY

Title of the Project	Investigator(s)	Sponsoring authority
Investigation of modulation of transcriptional regulation of CAM 7 by COP1 and Ca/Mg Arabidopsis	Maji. M Chattopadhyay S.	SERB, Govt. of India

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title of the Project	Investigator(s)	Sponsoring authority
Heterogeneous Face Recognition for Law-enforcement	Kisku, D.R.	RIG, NIT Durgapur

DEPARTMENT OF CIVIL ENGINEERING

Title of the Project	Investigator(s)	Sponsoring authority
Potential use of fine grained clay soil as landfill liner for containment of pollutants in waste disposal site.	Pal, S., Adhikari, K.	RIG, NIT Durgapur

DEPARTMENT OF ELECTRICAL ENGINEERING

Title of the Project	Investigator(s)	Sponsoring authority
Control of Stand-alone Induction Generators	Mahato. S. N. Dr	NIT Durgapur
Main Phase of Project titled "Developing Suitable Pedagogical Methods for Various Classes, Intellectual Calibres and Research in E-Learning" under National ICT Mission (MAIN PHASE)	Roy N.K. Dr.	MHRD Govt of India
Development of Personalized and Performance based E- Learning tool for existing E-resources	Roy N.K. Dr.	DieTY, Govt of India

DEPARTMENT OF MECHANICAL ENGINEERING

Title of the Project	Investigator(s)	Sponsoring authority
Forward and Reverse Modelling of Flow Forming Process: Comparison between FE-based and soft computing-based modelling	Hui N. B.	DRDL, Hyderabad
Investigation of heat transfer and fluid flow phenomenon of artificially roughened duct using liquid crystal thermography system	Layek A.	SERB, DST, Govt of India
Heat transfer in self-similar boundary layers	Weigand B., Pramanick A. K.	DAAD, Germany

DEPARTMENT OF MATHEMATICS

Title of the Project	Investigator(s)	Sponsoring authority
Magnetoconvection of low Prandtl-number fluids	P. Pal	SERB, DST, India

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Title of the Project	Investigator(s)	Sponsoring authority
Development of ceramic particle dispersed Aluminium alloy composite	Bera S.	DST, India
Strengthening of PG & Research Facility of MME Dept	Ghosh K.S. & Other Faculty members of MMED	DST-FIST
IN-Vitro and IN-Vivo Electrochemical Study of Dental Amalgams of Various States in Oral Environments	Ghosh K.S.(Mentor)	DST
MD-Stochastic Model Based Design and Development of Nanofluids for Advanced Thermal Applications	Ghosh M.M.	DST, India
Application of Automation/Robotics/Simulation studies in steel plant process development.	Ganguly A.	Ministry of Steel Scholarship Scheme (2016-17)
Low grade material exploitation and waste utilisation for better steel plant economics.	Ganguly A.	Ministry of Steel Scholarship Scheme (2016-17)
An investigation on accelerated spheroidization and mechanical property evaluation of high carbon steel under cyclic forced air cooling	Maity J. & Show B. K.	SERB-DST
Study on Structure Property Correlation of Pressureless Sintered ZrB ₂ -Based Ultrahigh Temperature Ceramic Composites	Mallik M.	SERB-DST
Wear Behaviour of Al-Si Alloys at Room Temperature and at Elevated Temperature	Show B.K.	SERB-DST (Start Up Research Grant (Young Scientist))

DEPARTMENT OF MANAGEMENT STUDIES

Title of the Project	Investigator(s)	Sponsoring authority
Unleashing the trade potential of pineapple between India's NER and ASEAN	Ujjwal Kanti Paul	ASC, MEA

DEPARTMENT OF PHYSICS

Title of the Project	Investigator(s)	Sponsoring authority
Investigation of complex dynamics of nonlinear system like Plasmas and Gas-geochemical emissions from hot springs through experiments, nonlinear time series analysis and validation by modelling	Chaudhuri H., Iyengar A. N. S., Janaki M. S.	SERB
Development and characterization of magnetodielectric materials for the use of substrate in antenna miniaturization	Meikap A. K. (PI) & Sahoo S. (Co.PI) & Mandal M. K. (Co-PI)	DST-SERB
A unique technique for synthesis of InN Nano-wire assembly for the application of optical sensor	Mondal A. (PI)	BRNS, DAE
Phenomenology of boson, B meson decays, Higgs boson and new physics	Sahoo S. (PI)	SERB, DST Govt. of India

**ANNEXURE-11.4(C). RESEARCH PAPERS
PUBLISHED IN SCI / SCOPUS / WEB OF SCIENCE
JOURNALS DURING 2019-2020**

DEPARTMENT OF BIOTECHNOLOGY

- 1 Arul, A., Sivagnanam, S., Dey, A., Mukherjee, O., Ghosh, S., Das, P. (2020). The design and development of short peptide-based novel smart materials to prevent fouling by the formation of non-toxic and biocompatible coatings. *RSC Advances*. 10. 13420-13429.
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- 11 Dutta, S., Bhunia, B., Raju, A., Maity, N., Dey, A. (2019). Enhanced rapamycin production through kinetic and purification studies by mutant strain of *Streptomyces hygroscopicus* NTG-30-27. *Chemical Papers* 73, 2053–2063.
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- 13 Ghosh, T., Biswas, M.K., Aikat, K. (2020). A Eco-friendly management of seed borne mycoflora of Mustard (*Brassica sp.*) through botanicals and determination of antifungal activity by SEM. *Journal of Critical Reviews*. 7(1):546-561.
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DEPARTMENT OF CHEMICAL ENGINEERING

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**ANNEXURE-11.4(C) II. RESEARCH PAPERS
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DEPARTMENT OF MANAGEMENT STUDIES

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- 2 Banerjee.S,Gupta,S.,Ghosh.A,Bandyopadhyay.G,presented a conference paper titled "Optimum Portfolio Structure of Large Cap Mutual Funds using Generalized Reduced Gradient method: An Indian Perspective" in FORBS 2019 on DECEMBER 27 – 28, 2019.
- 3 Biswas.S., Bandyopadhyay.G, Guha. Banhi presented a conference paper titled "Comparing Dividend Payout Capabilities of FMCG and Consumer Durables Firms using Multi-Criteria Decision Analysis: Evidence from India" In International Conference on strategic management, decision theory and data science on 4-6 th January, 2020.
- 4 Chaki.R.M, Bandyopadhyay.G, Bhattacharjee.M, Guha.B, presented a conference paper titled "Mother Language in a New Avataar" in FORBS 2019 on DECEMBER 27 – 28, 2019.
- 5 Deb, D. & De, A., April 18-19, 2019. A critical study on Corporate Social Responsibility and Financial Implications of Indian Corporates. 12th Doctoral Thesis Conference, organized by IBS Hyderabad, India.
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- 7 Gupta,S., Sarkar.S, Bandyopadhyay.G, presented a conference paper titled "An Approach of Ranking Stocks using Supper-efficiency model of DDF (Directional Distance function)" in International Conference on strategic management, decision theory and data science on 4-6 th January,2020.
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DEPARTMENT OF MATHEMATICS

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DEPARTMENT OF MECHANICAL ENGINEERING

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- 5 De, S., Agarwal, P., Mondal, S., Bhattacharya, A., Mukhopadhyay, A., and Sen, S. Experimental Investigation on the Dynamics of Premixed Flame near Rich Blow-off (RBO), Proceedings of International Conference on Energy and Sustainable Development (ICESD 2020), February 14-15, 2020, Jadavpur University, Kolkata.
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- 7 Gautam, N., Pramanick, A.K., Numerical Studies of Melting Processes Employing Nano-enhanced Phase Change Materials for Two-dimensional Rectangular and Circular Geometries, International Conference on Petroleum, Renewable Energy & Environmental Sustainability, Dehradun, Uttarakhand, India, 26-27 March, 2020.
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ANNEXURE - 11.4(E) VISITS ABROAD DURING 2019-20**DEPARTMENT OF BIOTECHNOLOGY**

Name	Name of the Programme	Organized by	Date of the programme
Barik, A	Advances in Computational Biology Conference, Fostering Collaboration among Women Scientists, Barcelona	Barcelona Supercomputing Center	November 28-29, 2019
Dey, A	PARIS International Conference on Agriculture, Biological and Environmental Sciences	International Forum on Food, Agriculture and Biological Sciences	September 5-7, 2019
Dey, A	ICSD 2020 : 8th International Conference on Sustainable Development, 9 - 10 September 2020 Rome, Italy	European Centre for Sustainable Development	September 9-10, 2019
Ghosh, M	Laboratory Visit	Department of Electronic & Electrical Engineering, University Bath	May 11-25, 2019
Kazy, S.K.	International Conference "Deep Carbon 2019: Launching the Next Decade of Deep Carbon Science"	Deep Carbon Observatory (DCO), USA Washington DC, USA	October 24-26, 2019
Roy-Barman, S.	8th International Rice Blast Conference	Sichuan Agricultural University, Chengdu, China	May 27-31, 2019

DEPARTMENT OF CHEMISTRY

Name	Name of the Programme	Organized by	Date of the programme
Saha Rajnarayan	Presented a Paper in 2019 International Conference on Green Energy and Environmental Technology (GEET 19)	Université Paris 8, Paris, France	24-26 July 2019
Sujit S Panja	Presented a Paper in 2019 International Conference on Green Energy and Environmental Technology (GEET 19)	Université Paris 8, Paris, France	24-26 July 2019
Sukul Dipankar	Presented a Paper in 2019 International Conference on Green Energy and Environmental Technology (GEET 19)	Université Paris 8, Paris, France	24-26 July 2019
Moi SC	presented a paper in 2019 at Sixth International Conference, Indian Council of Chemists	Paris (France) and Brussels (Belgium)	6th -8th June 2019 Page-12-14

DEPARTMENT OF CIVIL ENGINEERING

Name	Name of the Programme	Organized by	Date of the programme
Pal, S	6th International Symposium on Soil and Groundwater (SG2019)	China Environmental Science Society, Shenzhen, China	October 26-28, 2019
Roy, P	13th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP13- 2019)	Seoul National University, Seoul, South Korea	May 26-30, 2019

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Name	Name of the Programme	Organized by	Date of the programme
Animesh Dutta	Thirty-fourth AAAI Conference on Artificial Intelligence (AAAI-20) in New York, USA, February 7-12, 2020.	Advancement of Associate for Artificial Intelligence (AAAI)	February 7-12, 2020.
Chandran Saravanan	11th International Conference on Neural Computation Theory and Applications (NCTA), Vienna, Austria	11th International Conference on Neural Computation Theory and Applications (NCTA)	17-19, September 2019

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name	Name of the Programme	Organized by	Date of the programme
Chandra, A.	National Scholarship Program (NSP), Slovak Republic	Slovak Academic Information Agency (SAIA)	10.06.2019 to 09.07.2019
Chandra, A.	European Signal Processing Conference (EUSIPCO), A Coruna, Spain	EURASIP and IEEE	02.09.2019 to 06.09.2019
Mondal, H. K.	Visiting Professor	Lab-STICC, University of Southern Brittany, Lorient, France	22.06.2019 to 29.06.2019
Mahapatra R	Joint Research Project, University of Liverpool, UK	UGC-UKIERI	15.09.2019-21.09.2020

DEPARTMENT OF ELECTRICAL ENGINEERING

Name	Name of the Programme	Organized by	Date of the programme
Chiranjib Koley	ICHVEPS, Bali, Indonesia	IEEE	October 1 -4, 2019
Partha Sarathee Bhowmik	ICHVEPS, Bali, Indonesia	IEEE	October 1 -4, 2019

DEPARTMENT OF MATHEMATICS

Name	Name of the Programme	Organized by	Date of the programme
Kar, S.	Collaborative Research	College of Management and Economics, Tianjin University, China	May 21 – June 08, 2019
Pal, A.	International Conference on Computer Applications in Industry and Engineering (CAINE 2019), San diego	ISCA, USA	Sep 30- Oct 02, 2019
Pal, P.	9th International Scientific Conference on Physics and Control	Innopolis University, Russia	September 8-11, 2019
Sarkar (Mondal), S.	2nd Conference of the Arabian Journal of Geosciences (CAJG 2019)	Springer and the Saudi Society of Geosciences (SSG), Tunisia, North Africa	Nov. 25-28, 2019

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Name	Name of the Programme	Organized by	Date of the programme
Ghosh M M.	Nanotech France 2019	SETCOR	26-29 June, 2019

DEPARTMENT OF MECHANICAL ENGINEERING

Name	Name of the Programme	Organized by	Date of the programme

DEPARTMENT OF PHYSICS

Name	Name of the Programme	Organized by	Date of the programme
Chakraborty AK	10th International Conference on Materials for Advanced Technologies (ICMAT-2019)	MRS-Singapore, NUS and NTU	June 23-28, 2019
Chaudhuri H	6th International Symposium on Soil and Groundwater (SG-2019) at Shenzhen, China, Shenzhen, China	Chinese society for environmental sciences	October 26-28, 2019
Chaudhuri H	BRICS Meeting	East China University of Technology, Nanchang, China,	October 29, 2019 November 4, 2019

ANNEXURE - 11.4(F) PH.D. DEGREE AWARDED DURING 2019-20 SESSION**DEPARTMENT OF BIOTECHNOLOGY**

Topic	Investigator	Supervisor(s)
Development, characterization and optimization of novel drug delivery system against degenerative diseases through statistical modelling	Hazra , Moumita	Dasgupta Mandal, D Mandal, T.
Assessment of biomarkers in respect to disease detection and treatment	Mukherjee, Rabibrata IIT KGP	Ghosh, M.
Studies on the Biological Treatment of Wastewater from Starch Industry for Pollution Control	Neogi, Shubhaneel	Dey, A. & Chatterjee, P.K- Ex. Chief Scientist and Head Thermal Engineering Division CSIR-CMERI Durgapur
Diversity and metabolic potential of indigenous microorganisms in petroleum contaminated sludge from oil field: prospects for bioremediation Sole supervisor awarded in 2019	Pal, Siddhartha	Kazy, S.K.
Exploration of Curcuma amada for Bioactive molecules and its Encapsulation for Therapeutic Applications	S., Rohini	Dutta, D.

DEPARTMENT OF CHEMICAL ENGINEERING

Title	Investigator	Supervisors
Modelling and Experimental Investigations on Pyrolysis and Oxy-fuel Combustion of Coal	Bhunias S.	Sadhukhan, A. K., Gupta, P. and Halder, S.
A study on sorptive elimination of Ibuprofen from simulated pharmaceutical wastewater by waste biomass	Chakraborty P	Halder G. N.
A Critical Investigation on Biodegradability, Morphology and Thermo-mechanical properties of Synthetic Polymer Blended with Modified Starch	Datta, D.	Halder, G.N.
Experimental investigation on transesterification of non-edible oil employing biocatalyst and indigenously developed carbon supported chemical catalysts	Dhawane, H. S.	Halder, G N.

Title	Investigator	Supervisors
Hydrodynamics and Erosion Studies for Flow of Particulate Slurries	Mishra, R.	Ghanta, K.C., Mallick, A.N. & Sinha, S.L.
Experimental study on defluoridation of simulated wastewater by biosorption coupled with bioremediation in integrated column reactor	Mukherjee, S.	Halder, G. N.
Modelling and experimental investigation on Gasification of coal	Prabhakar, A.	Sadhukhan A. K. Gupta, P.
Study on management of pharmaceutical industrial waste water by Advanced oxidation process	Sarkar, K.	Mandal, T.
Phycoremediation of Cr(VI) from Wastewater	Sen, S.	Dutta, S.

DEPARTMENT OF CHEMISTRY

Topic	Investigator	Supervisor(s)
Modelling Biological Ni Sites Supported by N,S-donor Ligands	Bhandari Anirban	Patra A. K.
Design, structural characterisation and catalytic activities of few transition metal complexes with different (N, N) and (N, O) donor sets	Chowdhury Biswajit	Maji M and Biswas B
Synthesis, spectroscopic characterization and biological reactivities of some transition metal complexes with different polydentate chelators	Das Subrata	Maji M and Biswas B
A study on the structural and functional role of some water molecules in human Monoamine oxidase B (hMAO B) by molecular dynamics simulation methods	Dasgupta Subrata	Mukhopaddhay, B. P
Synthesis, structural characterization and materialistic aspects of some transition metal complexes with different (N, N) and (N, O) donor ligands	Dey Abhranil	Maji M and Biswas B
Assessment of chemical and physico-chemical properties of micro and macro algal lipids for biodiesel production	Guha Thakurta Sohini	Chakrabarty J.
Assessment of Heavy Metal Pollution in Water, Sediment and Adjacent Soils of a Contaminated Channel in Durgapur Industrial Area and Development of Suitable Treatment Technique for Removal of Selected Heavy Metals	Pobi Krishnendu	Saha, R . N.
An experimental and theoretical investigation on Pt(II) and Pd(II) complexes: Their cytotoxic activity, kinetics, mechanism and DFT study	Reddy B, Venkata Pera	Moi S. C.
Development and study of Pyrene-based fluorescent sensors along with their applications	Sarkar Soma	Panja, S. S & Saha, R N

DEPARTMENT OF CIVIL ENGINEERING

Topic	Investigator	Supervisor(s)
A study of progressive collapse of steel-concrete composite buildings under blast loading	Mohamed Ahmed Galal	Dr A K Banik
Biological treatment of effluents from bulk drug industries	Mukhopadhyay, Miriganka Sekhar	Dwivedi, V.K., Bhattacharya, S., Mukhopadhyay, S.S.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Topic	Investigator	Supervisor(s)
An Efficient Service Oriented Middleware for SOC in Mobile Ad Hoc Network	Bikash Choudhury	Subhrabrata Choudhury, Animesh Dutta
A Framework for Measuring the Semantic Relatedness between Concepts	Abhijit Adhikari	Animesh Dutta
Design and Analysis of Cost Efficient Reliable QCA Logic Circuit with Enhanced Reconfigurability	Goswami Mrinal	Dr. Bibhash Sen
	Vikash Kumar Singh	S. Mukhopadhyay
	Shyamapada Mukherjee	Suchismita Roy
Power Aware Design Methodologies in High Level Synthesis	Khushbu Chandrakar	Suchismita Roy

Topic	Investigator	Supervisor(s)
Studies on Multicast Routing and Wavelength Assignment in WDM Optical Networks Model-wide Solutions to the Issues of Routing and Energy in Delay Tolerant Network	Subhendu Barat Priyanka Das	Tanmay De Tanmay De
ECE	Dr. Jayavrinda V. Vadakkeparambil,	Prof. G. K. Mahanti and Dr. C. Saravanan
Chemical Engineering	Dr. Navanietha Krishnaraj R.,	Prof. P. Pal and Dr. C. Saravanan
Civil Engineering	Dr. Satanand Mishra	Prof. V. K. Dweidi and Dr. C. Saravanan
Computer Science and Engineering	Dr. Satya Bhushan Verma	Dr. C. Saravanan

DEPARTMENT OF ELECTRICAL ENGINEERING

Topic	Investigator	Supervisor(s)
Model Based Control Framework for Pneumatic Conveying and Drying Process	Biplab Satpati	Koley C.& Dutta S.
Incipient Fault Detection in 3-phase Induction Motor Inverter Drive using Novel Signal Processing and Data Classification Tools	Indrayout Bandhopadhya	Koley C. & Purkait P.
Development of Detection Method for Harmonic Compensation of Variable Frequency Drives using Shunt Active Power Filters	Minati Ghosh	Koley C. & Roy N. K.
Investigation on condition Assessment of insulating oils Using high dielectric constant Nanofluids for power Transformer application.	R. T. Arun Ram Prasath	Mahato S. N. & Roy N. K.
PMU Placement using soft-computing techniques, post-mortem analysis and state estimation with PMU data	Tapas Maji	Parimal Acharjee
Study on the Dynamics of Solar Wind Speed & Terrestrial Wind Speed Using Statistical Signal Processing Approach	Tushnik Sarkar	Banerjee S. & Khondekar H M

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Topic	Investigator	Supervisor(s)
Some Studies on Synthesis of Linear and Circular Array Antennas Using Evolutionary Algorithms	Basu Banani	Mahanti G.K.
Synthesis of Concentric Ring Array and Rectangular Array Antennas Using Soft Computing Techniques	Chatterjee Anirban	Mahanti G.K.
Some Studies on Synthesis of Time-Modulated Array Antenna using Evolutionary Algorithms.	Mandal Sujit Kumar	Mahanti,G.K.
Some Studies on Antenna Array Failure Correction Using Evolutionary Algorithms	Muralidharan R	Mahanti,G.K.
Design of Multilayer Microwave Absorbers using Evolutionary Algorithms	Tewary Jyotirmay	Mahanti,G.K.
Enhancing energy efficiency of 802.15.4 networks using relays	Biswas Sankalita	Chandra, A., Dhar Roy, S.
Relay node placement for maximizing energy efficiency in wireless networks	Ghosh Biswajit	Chandra, A.
Electronics & Communication Engineering	Madhumita Sinha	Dr. R Mahapatra & Dr. R. Ghosh
Performance Parameters' Estimation Of On-Chip VLSI Interconnections	Vikas Maheshwari	R. Kar, D. Mandal, S. P. Ghoshal
Optimal digital filter design using evolutionary optimization techniques	Suman Kumar Saha	R. Kar, D. Mandal, S. P. Ghoshal
Evolutionary Optimization based Radiation Pattern Synthesis of Antenna Arrays With and Without Time Modulation	Gopi Ram	D. Mandal, R. Kar, S. P. Ghoshal

Topic	Investigator	Supervisor(s)
Optimal Design of VLSI Circuits using Evolutionary Optimization Techniques	Bishnu Prasad De	R. Kar, D. Mandal, S. P. Ghoshal
Performance Improvement of Antenna Arrays using Evolutionary Optimization	Sudipta Das	D. Mandal, R. Kar, S. P. Ghoshal
Optimal Digital IIR Filter Design using Evolutionary Optimization Techniques	Prashant Upadhyay	R. Kar, D. Mandal, S. P. Ghoshal
Synthesis of Hybrid Antenna Arrays using Evolutionary Optimization Techniques	Rajesh Bera	D Mandal, R Kar, S P Ghoshal
Optimal sizing and design of CMOS analog circuits using evolutionary optimization techniques	Soumen Mallick	R Kar, D Mandal, S P Ghoshal
Antenna Array Optimization Considering the Mutual Coupling Effect Using Evolutionary Optimization Techniques	Avishek Das	D Mandal, R Kar,
Synthesis of Hybrid Antenna Arrays using Evolutionary Optimization Techniques	Rajesh Bera	D Mandal, R Kar, S P Ghoshal
Optimal sizing and design of CMOS analog circuits using evolutionary optimization techniques	Soumen Mallick	R Kar, D Mandal, S P Ghoshal
Antenna Array Optimization Considering the Mutual Coupling Effect Using Evolutionary Optimization Techniques	Avishek Das	D Mandal, R Kar

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Topic	Investigator	Supervisor(s)
Reappraisal of the depositional setting of Upper Barakar coal bearing strata from Raniganj Basin, India- a sedimentological, ichnological and coal petrographic approach.	Dr. Sudipto Banerjee	K. Adhikari & S. Bandyopadhyay

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Topic	Investigator	Supervisor(s)
Post humanism and Trans humanism in the 21st Century Dystopian Novels	Patra, I	Rai, S.K
Postcolonial Study of Derek Walcott	Sengupta , T	Rai, S.K
Thematic Study of Contemporary Indian English Poets	Karmakar, G	Rai, S.K
Diaspora and Economic Development	Kahali. A.	Sengupta P. P.

DEPARTMENT OF MANAGEMENT STUDIES

Topic	Investigator	Supervisor(s)
Role of Product Information on Purchase of Durables A Competitive system on low literacy Urban language in the State of West Bengal	Bhattacharjee, M	Dr.Bandyopadhyay, G
The Market Impact of Corporate News Release: Indian evidence	Bhattacharjee, N.	Dr. De, A.
Determinants of the Pharmaceutical Education Service Quality: An Empirical Quest based on Eastern India	Gupta Hemant	Mondal K.
An Empirical Quest for Various Aspects of Brand Switching	Majhi, S	Dr.Bandyopadhyay, G

DEPARTMENT OF MATHEMATICS

Topic	Investigator	Supervisor(s)
Results on some non-linear contractions with applications	Chanda, Ankush	Dey, L.K.
Models of Dynamical Systems in Different Environments	Debnarayan Khatua	Kar, S. & Maity, K.
Some New Probability Distributions: Properties and Statistical Inference	Dey, Mithu	Sarkar (Mondal), S. & Maiti, S. S.
Transition to synchronization in complex networks: role of frustration	Kundu, Prosenjit	Pal, P.

Topic	Investigator	Supervisor(s)
Data Mining Techniques for Social Network Analysis	Mandal, Shrabanti	Pal, A.
Efficient Authentication Protocols Design for Security and Privacy in RFID Systems	Maurya, Pramod Kumar	Bagchi, S.
Riemann and Riemann-type integration of functions with values in a Banach space and related topics	Mondal, Pratikshan	Dey, L.K. and Ali Sk. J.
A study on some collective phenomena in coupled nonlinear dynamical systems	Nandan, Mauparna	Pal, P.
Study on codes over various algebraic structures and its consequences	Pal., Joydeb	Bagchi, S.
Reliability Analysis & Optimization of Certain Systems in Deterministic & Fuzzy Environment	Samanta, Aniruddha	Basu, K.

DEPARTMENT OF MECHANICAL ENGINEERING

Topic	Investigator	Supervisor(s)
Development and testing of solar dryers integrated with thermal energy storage for drying of medicinal herbs and high value agricultural products	D. V. N. Lakshmi	Layek A., P. Muthukumar
Investigation on Fluid Flow and Heat Transfer of Solar Air Heater Having Artificially Roughened Absorber Plate	Gharai, Shibendra Kumar	Layek A.
Performance, Emission and Combustion Characteristics of a VCR Engine Using Blends of Diesel and Waste Cooking Oil Methyl Esters with Ethanol as Additive	Kathirvel, S.	Layek A. P. Muthuraman
Thermodynamic Analysis and Performance Improvement of Coal-Fired Thermal Power Plants	Khankari Goutam	Karmakar Sujit
Performance Analysis Of Solar Air Heater Having Twisted Rib As Artificial Roughness Over The Absorber Plate	Kumar Anup	Layek A.
Coordinated Navigation of Multiple Mobile Robots	Pradhan Buddhadeb	Hui N. B., Sinha Roy D. (NIT Meghalaya)
Combined Nanoindentation and Finite Element Modeling of Elastoplastic Solids	Porwal Deeksha	Kallol Khan, NIT Durgapur Arjun dey, Scientist ISRO, Bangalore
Optimization of design parameters of an internal combustion engine operating on biogas diesel dual fuel mode	Singh Huiem Neeranjana	Layek A.
Performance evaluation and simulation of an aero engine shrouded compressor blade (Jan 2020)	Vinayaka N.	Nilotpal Banerjee

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Topic	Investigator	Supervisor(s)
Carbon based Metal Sulfide hybrid nanostructures for Energy storage and harvesting: from Synthesis to Applications	Sarkar Atreyee	Prof. A.K. Chakraborty and Dr. S. Bera
Development of high strength wear resistant low carbon steel by cyclic heat treatment	Subhani Amir Raza	Maity J. & Mondal D. K.

DEPARTMENT OF PHYSICS

Topic	Investigator	Supervisor(s)
Carbon nanotube and graphene base metal oxide composites for supercapacitor applications	Chakrabarty N	Chakraborty AK
Development and Characterization of Polymer-Nanocomposites for Enhanced Dielectric Properties	Das AK	Meikap AK
Anomalous Electrical Transport Properties of Disordered Solids at low Temperature	Jana RN	Meikap AK
Studies on Synthesis, Optical and Photocatalytic Properties of Some Nanostructures of ZnO and ZnS and their Nanocomposites	Kumbhakar P	Kumbhakar P

Topic	Investigator	Supervisor(s)
Phenomenology of Boson and B Mesons Kumar M	Sahoo S	
Studies on Optoelectronic and Electronic Performance of Glancing Angle Deposited Low Dimensional Erbium Doped TiO ₂ Material	Lahiri R	Mondal A
Synthesis of Chemically Modified Zinc Oxide Nano-Structures for detection of Organic Hazards	Maikap A	Meikap AK Mandal BN
Studies on all-optical conventional and reversible logic processors	Mandal D	Mandal MK & Garai SK
Investigation on Geochemical and Geophysical aspect of Geothermal Exploration at Bakreswar-Tantloi Geothermal Area.	Maji C	Chaudhuri H
Studies of exact solutions and cosmological model based on Einstein-Cartan Theory	Manna B	Sahoo S
A study on electrical transport properties of some rare earth chromate nanocomposites	Sinha R	Meikap AK Basu S
Carbon based Metal Sulfide Hybrid Nano structures for Energy Storage and Harvesting: from Synthesis to Applications	Sarkar A	Chakraborty AK & Bera S (MME)

ANNEXURE - 11.4(G) ONGOING DOCTORAL PROGRAMME

DEPARTMENT OF BIOTECHNOLOGY

Topic	Investigator	Supervisor(s)
Production of biofuel and other value-added products from oleaginous microorganisms in a biorefinery approach	Barik, Sudhir K.	Aikat, K.
Identification and functional characterization of CAM7 protein complex in Arabidopsis thaliana	Basu, Riya	Chattopadhyay, S.
Cloning and Functional analysis Leishmania donovani Amastin- like surface Protein	Biswas, Bapi	Ghosh, M.
Dependence of MoWISH on cAMP-dependent signalling pathway	Biswas, Mousumi	Roy-Barman, S.
Activation of monocytes and cancer cells by interleukin 13 (IL-13) and its effects on cellular function	Biswas, Pritam	Bhattacharjee, A. and Mukhopadhyay, S.S.
Investigation of the possible functional interrelation between Calmodulin7 (CAM7) and Cyclin Dependent Kinase B2 (CDKB2) in Arabidopsis seedling development	Biswas, Srabasthi	Chattopadhyay, S.
Exploration and Exploitation of Microalgae for Sustainable Biofuel Production	Bobde, Kiran Ashok	Aikat, K and Bhattacharjee, A.
Potential of β -cryptoxanthin as a cosmeceutical	Brahma, D.	Dutta, D.
Deciphering the signalling axes interphase between gut microbiome and host exome in obese patients.	Chanda Deep	De, D.
Study of functional polymeric nanoparticles for biomedical application	Chatterjee, Manosree	Mahata, N.
Role of Adenosine 5'-Monophosphate (AMP)-activated protein kinase [AMPK] in controlling the expression and function of Monoamine Oxidase A (MAO-A) in response to Th2 cytokines	Das, Payel	Bhattacharjee, A.
Role of Src kinase and Pyk2 in Monocyte migration	Das, Pradip	Bhattacharjee, A. and Mukhopadhyay, S.S.
Production of Biosurfactant	Dasgupta, Arpan	Chaudhuri, S.
Introducing protein folding paradigm in misfolding diseases: An attempt to redefine the structural understanding of amyloid aggregation following nucleated conformational conversion pathway	DasGupta, Bodhisattwa	Mondal, S
Stat-dependent expression and function of Monoamine Oxidase-A (MAO-A) in IL-13-activated A549 cells	Dhabal, Sukhamoy	Bhattacharjee, A. and Mukhopadhyay, S.S.

Topic	Investigator	Supervisor(s)
Production and characterization of nanostructures containing beta-cryptoxanthin for food fortification	Dutta Debasmita	Dutta, D
Computational study on conformational changes of intrinsic disordered regions in macromolecular complexes	Dutta, Som Subhra	Barik, A.
Application of bimetallic nanoparticles as antibiofouling agent	Ganguly Parna	Chaudhuri, S.
Extraction, purification and characterization of bioactive compounds from food waste	Gehlot, Sameep	Chaudhuri, S. and Bhattacharjee, A.
Studies on seed borne mycoflora associated with oilseed (mustard) and cereal crop (rice) of Indo-Gangetic area and their eco-friendly management	Ghosh, Tanmay	Aikat, K. and Biswas, M.K.
Non invasive detection methods of Helicobacter pylori infection and gastric ulcer.	Halder, Arpita	Mukherjee, O.
Dampening of macrophage function in innate immunity through the involvement of pattern recognition receptors (PRRs)	Halder, Sudeshna	Mahata, N.
Fermentative Production of Xylitol from Water Hyacinth	Jadhav, Rohan	Dey, A.
MCM3AP: A novel S phases replication checkpoint protein and its relation to Fanconi anemia protein.	Jain Khatur, Sneha	Mukhopadhyay, S.S.
Nanoscale Delivery Systems for improved Immuno-Therapy in Cancer Management	Jaiswal, Namita	Mahata, N.
Bioremediation & Biosorption of Heavy metals from tannery Effluent	Kumar, Prakash	Aikat, K.
Molecular and functional characterization of a Pt(IV) based pro- drug for targeted anti-nonsmall cell lung carcinoma immunotherapy	Maji, Moumita	Ghosh, M.
Studies on valuable Bioactive compounds characterization, extraction and application.	Majumdar, Shubhasree	Dasgupta Mandal, D.
Exploring microbial communities and metabolic processes in deep subsurface continental crust at Koyna region, Western India	Mandal, Sunanda	Kazy, S. K.
Role of protein arginylation in oxidative stress response	Naga, Rahul	Saha, S.
Investigation of the function of mitogen activated protein kinase in Arabidopsis seedling development	Ojha, Madhusmita	Chattopadhyay, S.
Investigation of the function of MYB4 in Arabidopsis seedling development	Pal, Abhideep	Chattopadhyay, S.
Assessment of biomarker for early stage disease detection and therapeutic analysis	Pal Doel	Ghosh, M.
Diversity and metabolic potential of indigenous bacteria in petroleum contaminated sludge from oil field: prospects for bioremediation	Pal, Siddhartha	Kazy, S. K.
Fatty acids induce Monoamine Oxidase A (MAO-A) gene expression in A549 lung carcinoma cells	Pal, Suchandra	Bhattacharjee, A
Identification and characterization of interacting partner of CAM7/ZBF3 in Arabidopsis seedling development	Parvez, S.W.	Chattopadhyay, S. and Mandal, N.C.
Studies on role of biosurfactant on bacterial delignification	Paul, Indrani	Dasgupta Mandal, D.
Studies on hazardous impact of pollutants on host and its biological remediation.	Ranjan, Jyoti	Dasgupta Mandal, D.
Genetic engineering of rice for enhanced blast disease resistance	Raut, Ravindra	Roy Barman, S.
Transposable elements and blast resistance in rice	Raut, Ravindra	Roy-Barman, S.
Engineering of cellulase enzymes of Aspergillus fumigatus NITDGPKA3 for enhancing their activity and development of recombinant cellulosic Saccharomyces cerevisiae for bioethanol production from rice straw.	Reddy, Subba Dodda	Mukhopadhyay, S.S. and Aikat, K.
Production of beta-cryptoxanthin under stress condition	Saha, Sanhita	Dutta, D.
LaeA - Its role in molecular pathogenesis of Magnaporthe oryzae	Saha, Pallabi	Roy-Barman, S.
Biodegradation of organochlorine pesticides	Sahoo, Banishree	Chaudhuri, S.

Topic	Investigator	Supervisor(s)
Antimicrobials from natural sources	Saini, Swamini	Chaudhuri, S., Ghosh S and Dutta, D.
RNAi-based resistance to rice blast fungus	Sarkar, Atrayee	Roy-Barman, S.
Studies on biodegradation of 4-Nitro phenol by indigenous microbial consortium isolated from agricultural soil	Sarkar, Priyanka	Dey, A.
Bacterial and Enzymatic bioconversion of Lignin from Lignocellulosic biomass into value added products	Singh, Gaurav	Dasgupta Mandal, D.
Mitochondrial role of FA protein FANCD2	Singh Kapur, Bishwajit	Mukhopadhyay, S.S.
Regulation of 15-lipoxygenase expression and function	Swaroop, Surbhi	Bhattacharjee, A.
Delivery of anticancer phytochemicals and drugs via PDMS nanoparticles	Verma Madhu	Chaudhuri S, Sivakumar S and Dutta, D
Fermentative production of Pectinase enzyme by <i>Aspergillus</i> spp	Verma, Heena	Dey, A. and Goswami, S.
Microbial production of lactic acid for the production of bioplastic	Verma, Reshmi	Aikat, K.

DEPARTMENT OF CHEMICAL ENGINEERING

Topic	Investigator	Supervisor(s)
Phycoremediation of pollutants from wastewater using marine algae	Anjali K. P.	Dutta, S. and Geetha Devi M., National University of Science and Technology, Oman
Microbial Production of Gluconic Acid	Banerjee S.	Pal P.
Application of Nanotechnology in Environmental Remediation	Banerjee, P.	Dr. Rajib Ghosh Chaudhuri
Development of Novel Solvent and Optimum Process Configuration for CO2 Capture from Power Plant Flue Gas	Banerjee, S.	Mondal, B.K.; Das, B.
Production Management through Optimization Strategy	Basu Sanghita	Pal P & Roy M
Numerical Simulation of Bubble Dynamics in Boiling (Thesis Submitted)	Bhati, J.	Paruya, S.
Removal of fluoride from groundwater using naturally available low cost materials	Bishayee B.	Dutta, S. and Ruj. B., CMERI, Durgapur
Assessment of Indian Coal for Coalbed Methane Production	Chattaraj S.	Halder. G.N.
Centre for Technological Excellence in Water Purification (CTEWP)	Chatterjee A.	Mandal T
Hydrodynamic and Thermal Study of Flow through Micro Channel	Chatterjee S.	Ghanta K.C. & Hens, A.
Application of Artificial intelligence for reactor modelling and optimization	Choudhury S.	Lahiri SK, Hens, A.
Gas-Solid reaction kinetics in converging vertical riser	Dhurandhar R.	Sarkar J. P., Das, B.
Studies on rotating fluidized bed for intensifying drying performance	Dutta S.	Sadhukhan A. K., Chatterjee P. K. Gupta. P.
Effect of Waste Plastics on the Physical Structure and Subsequent Anaerobic Digestion of Vegetable Waste Landfill Bed.	Ghosh A.	Das B., Sarkar J. P.
CFD based simulation of multiphase flow	Kumar I.	Hens, A, Lahiri S. K
Modeling and Experimental Investigation on Pyrolysis and Gasification of Biomass	Kamila B.	Gupta P.
Experimental study on the role of hybrid technique towards treatment of leather industrial waste water for reduction of toxic effects	Kannaujiya M. C.	Mandal T
Biodiesel production through superheated propanol injection technique	Karmakar B.	Halder. G.N.
Studies and development of suitable treatment strategies to remove 2,4-Dichlorophenoxy acetic acid from contaminated wastewater of agricultural field	Majee S.	Mandal T

Topic	Investigator	Supervisor(s)
Selenium Removal by Nanofiltration	Malhotra Meenakshi	Pal P
Studies on the design and development of plasma Torch for disposal of Municipal Solid Waste	Manna S.	Gupta. P, Chatterjee P. K. and Sadhukhan A.K.
Hydrodynamics and Thermal studies for Flow of Particulate Slurries	Mishra S.	Gahnta K.C., Mullick A.N. & Sinha, S.L.
Ethanol Production from Waste Starchy Biomass and its Utilization in Ethanol Stoves	Mondal P.	Sadhukhan A.K. Gupta. P. and Ganguli A.
Hydrodynamic and Thermal Study on Two-Phase Flow	Mondal P.	Ghanta K.C. & Lahiri S.
Thermal Treatment of Plastic Wastes and Recovery of Value- Added Products	Mukherjee A.	Gupta P, Ruj B. Sadhukhan A. K.
Investigation on bubble dynamics in natural circulation boiling loop: visualization technique	Naik L., J.	Paruya, S.
GO based membrane for wastewater treatment	Pal M	Mandal, M.K., Paine, T.K.
Photo-Catalytic membrane for hospital waste water treatment	Pandey, Shailesh Kumar	Mandal M. K. and Pal P
Simultaneous Physicochemical Separation, treatment and reuse of industrial wastes to save the natural resources.	Pathak U.	Mandal T, Das Papita, Kumar Tarekeswar
Treatment of Coke Oven Waste Water Using Hybrid Technology	Pramanik. S.	Dutta, S. and Ghanta, K. C.
Treatment of Organic-compounds containing wastewater for biogas generation	Rahaman W. U.	Halder. G.N.
Bioremediation of pollutants from cokeoven wastewater	Rai A.	Dutta, S. and Dr. J. Chakrabarty, Deptt of Chemistry
CFC-Replacement via Pressure Swing Adsorption Technique	Roy Z.	Halder. G.N.
Nonlinear Model Predictive Control of Complex Density Wave Oscillations in Boiling Channe	Roy, K.	Paruya, S.
Nonlinear Phenomena of Bubble Collapse in Subcooled Liquid	Roy, S.	Paruya, S.
Treatment of industrial wastewater using nanomaterials	Sangeetha B.M.	Dutta, S. and Geetha Devi M., National University of Science and Technology, Oman
Study on management of pharmaceutical industrial waste water by Advanced oxidation process	Sarkar K.	Mandal T
Novel Techno-economic Evaluation for Conversion &Re-refining of Used Lubricating Oils to Base Oil	Sarkar S.	Das B, Mondal, B. K.
Bioremoval of heavy metals from Industrial Effluent using algae and cyanobacteria	Seragadam P.	Dutta, S. and Ghanta, K. C. and Srinivas B., (Gayathri Vidya Parisad College of Engg, Vishakapatnam)
Removal of enrofloxacin from aqueous solution	Sharma D. D.	Halder. G.N.
Study of droplet and multiphase flow inside microchannel	Chatterjee S.	Hens, A, and Ghanta, K. C.
Sorptive removal of anti-inflammatory drug	Show S.	Halder, G.N.
Pyrolysis of Plastic Waste for Recovery of Fuel and Value Added Products	Singh R. K.	Gupta P, Ruj B. Sadhukhan A. K.
Treatment of Saline Water Pollutants by Solar Nano Photo Catalysis	Varghese M. J.	Dutta, S. and Feroz, National University of Science and Technology, Oman

DEPARTMENT OF CHEMISTRY

Topic	Investigator	Supervisor(s)
Protein and other biochemical components of fish and their nutritional effect	Banerjee Indrani	Chakrabarty J. and Bhattacharjee, A. (BT)
Three component coupling using nanocatalyst	Bera, Partha Sarathi	Saha, T. K.
Synthesis and characterisation of Pt(II) & Pd(II) complexes with bidentate carrier (1 o and 3 o amine) : their kinetics & mechanism, bio-activity and theoretical study.	Bhaduri, Rituparna	Moi, S. C.
Development of Novel Screening Material for Harmful Electromagnetic Radiation Using Designed Fluorescent Molecules Conjugated with MWNTs and Magnetic Nanoparticles	Biswas Sourav	Panja S S
Development of an Advanced Treatment Scheme for the Degradation of the Toxic Organics Associated with Pharmaceutical Wastewater	Chakraborty Sucharita	Saha R. N.
Synthesis and characterisation of Pt(II) & Pt(IV)/Pd(II) complexes as anticancer agents to reduce the toxicity: their kinetics & mechanism, bio-activity and theoretical aspects.	Chandra Krishnendu	Moi, S. C.
Chemistry of various p- and d-block metal complexes having different N,O donor sites: catalytic and sensor applications	Chatterjee Sourav	Sukul D., Banerjee P. AND Chattopadhyay T.
Synthesis & catalytic aspects of a few transition metal complexes towards different organic transformations	Garai Mamoni	Maji M., Biswas B. (Rahunathpur College)
Ground Water Remediation by Nanoscale Zero Valent Iron	Ghosh Ananya	Saha R. N.
Isolation, Purification and Structural Characterization of Polysaccharides from Some Indian Fruits	Hazra Surajit	Adhikari U.
Kinetics and mechanistic study of Pt(II)/Pd(II) metal ion systems with bio-relevant molecules: their bioactivity and theoretical study	Mahata Sujoy	Moi S. C.
Biological Cu Sites Modelling	Mishra, Saikat	Patra, A. K.
Design and synthesis of chromogenic and fluorogenic chemoreceptors for selective sensing of anions	Mondal Amita	Chakrabarty J. and Banerjee, P. (CSIR-CMERI)
Carbon carbon bond formation via Redox Reactions: Green chemistry exercise and role of nano architecture	Mondal Bibhas	Adhikari U.
Removal of Arsenic by modified Adsorbent	Mondal Prasanta	Saha R. N., Ruj B.(CMERI Durgapur) and Debbarma S.R.(CMERI Durgapur)
Synthesis and photophysical investigation of aggregation induced emission (aie) active molecules and its potential application	Mondal Tapashree	Panja S S
Synthesis, characterization and modification of Pt(II) and Pd(II) complexes as anticancer agent based on cis-platin: their kinetics, bio-activity and DFT investigation.	Mondal Saikat	Moi, S. C.
Metal Complexes of Schiff Base Ligand Having Different Functionalities: Synthesis, Characterization and Biological Studies	Mondal Shyam Sundar	Saha T. K.
Synthesis of Fe, Co oxide/carbonate using urea as neutralizing agent and evaluation of their electrochemical sensing properties	Mukherjee Priyanka	Adhikari U.
The molecular dynamics simulation studies on Thyroid hormone receptor	Mukherjee Soumita	Panja S S
Investigation on the extracts of Tradescantia pallida, Swertia chirata, Butea monosperma and Amaranthus gigasticus as green corrosion inhibitors for mild steel in hydrochloric acid medium.	Mukhopadhyay Shipra	Adhikari U.
Synthesis and characterisation of Pt(II) & Pt(IV)/Pd(II) complexes as anticancer agents: their kinetics & mechanism, bio-activity and theoretical aspects.	Pan, Angana	Moi, S. C.

Topic	Investigator	Supervisor(s)
Bioremediation of pollutants from cokeoven wastewater	Rai Abhilasha	Chakrabarty J. and Dutta, S. (CH)
Nutritional and biochemical importance of changes in fish lipids during preservation and cooking	Sadhu Tithli	Chakrabarty J. and Bhattacharjee, A. (BT)
Anti-corrosive activity of certain bio-relevant molecules: study of synergistic effect	Satpati Sanjoy	Sukul D. and Banerjee P.
Recycling of cooking oil & its evaluation as biodiesel and culinary media	Singh Sunita	Chakrabarty J.
Intermediate identification during photocatalytic oxidation Of organic compound	Som, Ipsita	Saha, R. N.
Corrosion Inhibition of Mild Steel and Copper in Acid Medium By Benzothiazole Derivatives: Structure reactivity correlation study.	Suhasaria, Aditya	Sukul D.
Effect of bidentate heteroamine as carrier ligand in Pt(II)/Pd(II) complexes as anticancer agents to reduce the toxicity: their synthesis, characterisation, kinetics, bio-activity and DFT study	Tarai Swarup	Moi, S. C.

DEPARTMENT OF CIVIL ENGINEERING

Topic	Investigator	Supervisor(s)
Performance assessment of efficacy of hybrid constructed wetland for removal of antibiotics and polyaromatic hydrocarbons in wastewater	Adhikari, A	Pal, S
Investigation on characteristic strength and behaviour of concrete confined with UPVC tube.	Bandyopadhyay, Atrayee	Samanta A.K., Singha Roy D.K.
Numerical Modelling of highway pavements under dynamic conditions	Banerjee, Arijit	Topdar P., Datta, A.K.
Strengthening of brickmasonry building with Geogrid reinforcement	Behera, B.	Nanda R. P
Efficacy Evaluation of Azadiracta Indica (Neem) and Moringaoleifera (Drumstick) seed shell blended clay soil as liner material in Chromium (VI) laden waste containment structures	Bhadra, Chandrima	Pal S., & Adhikari K
Reliability-Based Design of Earth Retaining Structures	Bhattacharya, Koundrik	Roy, P.
Forecasting and monitoring of flood of Mayurakshi river reach at Tilpara barrage, Suri, Birbhum-W.B., India	Biswas, R	Pal S., Bhattacharya, S.
Optimization of Sustainable integrated municipal solid waste management system through case studies	Chattopadhyay, Arpan	Adhikari, K. & Pal, S
Geo-Information System based assessment of Flood Induced Crop Damages for Crop Insurance Industries - A Case Study of Cuttack District, Odisha, India	Chhabra, Ajeet	Dwivedi, V.K.
Performance Study of Asymmetric Structures under Static & Dynamic Loads	Das, Debiprasad	Das, D., Topdar, P.
Characterization of Pavements Using Acoustic Emission Technique	Das, Soumyodip	Datta, A.K. & Topdar P.
Runoff prediction in Lower Gangetic Basin amid climate change variation	Dey, Kush Kumar	Dwivedi, V.K.
A study of stability designs of the different types of Floating Offshore Wind Turbine (FOWT) system by integrated-coupled analysis under environmental loadings	Dey, Swarnadip	Banik, A.K. & Roy P.
Evaluation of the compacted lateritic soil amended with bentonite and fly ash used as composite liner material for ash pond sites of thermal power plants	Dutta Mazumdar, Shyamal Kumar	Pal, S
Earthquake response of pile foundation in liquefiable soil	Dutta, S.	Nanda, R.P.
Experimental analysis for plan form development and erosion around an island in a natural stream	Ghosh, Snigdhadip	Dwivedi, V.K.
Effect of wind induced vibrations on highway bridge	Haldar Puja	Karmakar S
Strengthening of Brick masonry panels with Geosynthetic	Khan, H.A.	Nanda, R.P., Das, D.
Modelling of reservoir sedimentation using remote sensed technique	Kumar, Ritesh	Dwivedi, V.K.
Effect of protective barrier under blast loading	Kutti Goutam	Karmakar S

Topic	Investigator	Supervisor(s)
Strengthening of RC beam by using Geosynthetics	Majumdar, S.	Saha, S.
Active and passive vibration control of nonlinear flexible systems	Mandal, Saikat	Banik, A.K. & Mitra R. K.
Evaluation of the Compacted Laterite Soil Amended with Bentonite and Fly Ash used as Composite Liner Material for Ash Pond Sites of Thermal power Plant	Mazumdar, S.K.D	Pal S
Experimental Investigation on the Strength and Behaviour of Plate Reinforced Concrete Beam	Mondal, Prakash	Singha Roy D.K., Samanta A.K.
Effect of high speed train induced vibration on adjacent structures	Mukherjee, R	Datta, A.K., Topdar P.
Development of vibration based structural damage detection, localization and assessment strategy	Paral, Animesh	Singha Roy, D.K & Samanta, A. K.
Role of additives on remediation and improvement of geotechnical properties of heavy metal contaminated soils by solidification/stabilization technique	Raja, Ramiz	Pal S
Machine Learning-Based Reliability Analysis of Structures	Rajak, Pijush	Roy, P.
Rutting Analysis By Using Construction And Demolished Waste For Low Volume Roads	Ray, Arpan	Nanda R. P & Roy, P.
Acoustic Emission Technique for Damage Localisation	Roy, Parikshit	Topdar P.& Datta, A.K.
Coupled Nonlinear Analysis of Floating Offshore Structures	Roy, Shovan	Banik, A.K.
Effect of blast on highway bridge	Saha, Shuvra	Karmakar S
Modelling for avulsion of river Kosi System lying in India and Nepal	Saha, Dripta	Dwivedi, V.K.
Thermo-mechanical effects on sustainable concrete containing industrial waste	Sahani, Ashok Kr.	Samanta, A.K., Singha Roy, D.K
Analytical and Numerical Analysis of Free Spanning Offshore Pipelines Emphasising Different Geotechnical Aspects	Sarkar, Goutam	Roy, P.
Vibration Control of Structures under Multi-hazard Scenario	Sen, A.	Das, Diptesh, Chakraborty S. (IEST Shibpur)
Vibration Control of Offshore Structures	Som, A.	Das, D.
Effect of landuse /landcover dynamics on the spatio-temporal changes of urban heat islands and its effect on the environment	Yadav, Naval Kishor	Samanta A.K., Santra A.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Topic	Investigator	Supervisor(s)
Internet Traffic Data Flow Analysis & Modeling using Statistical Signal Processing.	Subhasish Debroy	Chakraborty, B., Bhattacharjee, A.K.
OCR in Bangla script	Amit Mukhopadhyay	Chakraborty, B., Nani D, Pal, U (ISI, Kolkata)
Analysis of language and cognitive abilities of the reading disabled children using statistical measures	Jaya Banerjee	Chakraborty, B., Prof. Basu, A.
NLP based Knowledge Management Systems in Bengali Language.	Kailash Pati Mondal	Chakraborty, B.
NLP based Knowledge Management Systems	Prasenjit Mukherjee	Chakraborty, B.
Natural Language Information Interpretation and Representation	Partha Sarathy Banerjee	Chakraborty, B.
Smart NLP based knowledge systems using Bengali POS Tagger.	Dipa Mondal	Chakraborty, B.
Developing Knowledge Management System for Fault Detection and Diagnosis.	Sumana De	Chakraborty, B.
A Novel Secured Routing Protocol for MANET	Subrata Joardar	Dr Prasenjit Choudhury
A Cross Domain Group Recommender for Conf , Research Article & Books	Avick Kumar Dey	Dr Prasenjit Choudhury

Topic	Investigator	Supervisor(s)
A Novel Cross Platform Context Aware Recommender System for Online Commercial Stores	Pradeep Kumar Singh	Dr Prasenjit Choudhury
Some Aspects of Community Structures in Real Networks and its Applications	Dhananjay Kumar Singh	Dr Prasenjit Choudhury
Designing a Computing Infrastructure for Processing In-Campus IOT-Data Using Smartphone Crowd Computing	Pijush Kanti Dutta Pramanik	Dr Prasenjit Choudhury
Dynamic Pricing Strategies for Selling Agricultural Produce in Electronic Retailers	Tumpa Banerjee	Dr Prasenjit Choudhury
Design of Personalized Recommendation System for Ubiquitous Learning	Saurabh Pal	Dr Prasenjit Choudhury
Social Media Mining from Twitter Data: A Subject Oriented and Time Variant Perspective	Manob Roy	Dr Prasenjit Choudhury
Pest Identification and Plant Disease Detection in Agricultural Crops	Monalisha Mishra	Dr Prasenjit Choudhury
A Graph Data Model in Semantic Web Environment	Sangeeta Sen	Animesh Dutta
Multi-agent Based Job Scheduling and On-demand Rescheduling	Krishnendu Kundu	Animesh Dutta
Coalition Formation in Multi-agent System	Samridhi Sarkar	Animesh Dutta
Location Prediction in Social Media using Hybrid Modelling	Amit Paul	Animesh Dutta
Design and Analysis of Light Weight Physically Unclonable Function (PUF) Targeting Cost Effective Hardware Security	Mahalat, Mahabub Hasan	Sen, Bibhash
Hardware Trojan: Analysis of Attacks and Detection in the Context of Hardware Security	Mondal, Anindan	Roy, Suchismita Sen, Bibhash
Grid Coverage in Discrete Domain	Madhumita Sardar	Deepanwita Das
Information Retrieval from Biomedical Images for Early Detection of Neuro Diseases	Amish Kumar	Nandi, D.
Brain MR Image Segmentation and Early Detection of Neurodegenerative Diseases Using Machine Learning Techniques	Palash Ghosal	Nandi, D., Chakraborty, J.
Novel evolutionary algorithms for multilevel image thresholding	Falguni Chakraborty	Nandi, D., Roy, P.K.
OCR in Bangla script	Amit Mukhopadhyay	Chakraborty, B., Nandi D, Pal, U (ISI, Kolkata)
Statistical analysis and enhancement of ultrasound image	Suchismita Maiti	Nandi D.
Deep Neural Network for screening tools of Interstitial Lung Diseases and Lung Cancer	Sunita Agarwala	Nandi D., Dhara A.K.
Super-resolution Reconstruction and segmentation of B-mode Ultrasound Images	Dipannita Ghosh	Nandi D.
Deep Neural Network for Medical Image Registration and Segmentation	Sanjib Saha	Nandi D.
Design of Computer Aided Diagnostic System for Glaucoma Detection	Arindam Chowdhury	Nandi D.
Machine Learning Approach for CT Image Analysis in cancer detection.	Tiyasa Chakraborty	Nandi D.
Design of Low Cost, Low Resolution Single Camera based Stereo Vision System for Computer Vision Applications	Narayan Murmu	Nandi D.
Microwave System Design for Biomedical Applications	M Moutusi Mondal	Nandi D
Pattern approaches in different lungs airways diseases using CT/HRCT images.	Samiran Kumar Banik	Nandi D
Hardware Trojan Attack: Threat Analysis, Counter Measures Targeting Enhanced Cache Performance in a Many-core System	Hazra, Suvadip	Dalui, M.
Non-invasive devices for estimation of blood haemoglobin level	Kesarwani, Abhishek	Dalui, M.
Intelligent biomedical devices	Das, Sunanda	Dalui, M.
Journey towards the development of Geographical Information System and Services for Crisis Situation using an Opportunistic Networking Framework	Partha Sarathi Paul	Subrata Nandi, Sujoy Saha

Topic	Investigator	Supervisor(s)
Quantifying Driver's Performance in Developing Regions Through Smartphone Sensors	Munshi Yusuf Alam	Subrata Nandi, Mousumi Saha & Sujoy Saha
Design of Effective Data Mining Techniques for Various Sources of Situational Data in Disaster Response Scenarios	Tamal Mandal	Sujoy Saha & Indrajit Bhattacharya (KGEC)
Non-invasive Multiple Human Activity Recognition using Heterogeneous Sensors.	Arindam Ghosh	Sujoy Saha, Mousumi Saha , Sandip Mandal
Optimal Resource Planning for Extraction of Situational Information During Post-Disaster Scenarios.	Krishnandu Hazra	Subrata Nandi & Sujoy Saha
IoT Based Indoor Environment Data Modelling & Prediction	Praveen kumar Sharma	Sujoy Saha & Tanmay De
Energy Aware Delay Tolerant Network Framework Design	Kashi Nath Datta	Sujoy Saha
Floorplanning Solutions in new FPGA Architectures	Suchandra Bannerjee	Suchismita Roy
Testing of FPGA Interconnect Networks	Shukla Banik	Suchismita Roy, Bibhash Sen
Steiner Tree Generation and Global Routing	Sudeshna Kundu	Suchismita Roy, Shyamapada Mukherjee, (NIT Silchar)
Trojan detection for hardware security	Anindan Mondol	Bibhash Sen, Suchismita Roy
Building a pluggable sharding subsystem for MySQL	Narayanan Venkateswaran	S Changder
Towards Design and Implementation of Image Denoising Techniques	Aparna Sarkar	S Changder
Different Text Steganography Algorithms for Secured Information Hiding	Anandapova Majumder	S Changder
Soft Computing based approaches towards Information Security using Visual Cryptography.	Ram Barik	S Changder
A Machine Learning Approach to Assess the Aesthetic Quality of Photographs in a Computational Way.	Soma Debnath	S Changder
Study and Design of Continuous Authentication Algorithms for Smartphone using Behavioral Biometrics	Rayani Praveen Kumar	S Changder
Building a pluggable sharding subsystem for MySQL	Narayanan Venkateswaran	S Changder
Different Text Steganography Algorithms for Secured Information Hiding	Anandapova Majumder	S Changder
Soft Computing based approaches towards Information Security using Visual Cryptography.	Ram Barik	S Changder
A Machine Learning Approach to Assess the Aesthetic Quality of Photographs in a Computational Way.	Soma Debnath	S Changder
Study and Design of Continuous Authentication Algorithms for Smartphone using Behavioral Biometrics	Rayani Praveen Kumar	S Changder
Multicast Traffic Grooming Routing and Spectrum Allocation in Elastic Optical Networks with Survivability [Thesis submitted on July 2020]	Panchali Datta Choudhury	Tanmay De
Studies on Dynamic Traffic Grooming in Elastic Optical Networks [Thesis submitted on July 2020]	Prasanta Majumdar	Tanmay De
On Some Network Optimization Problems through Evolutionary Algorithms [Thesis submitted on July 2020]	Joydeep Dutta	Tanmay De

Topic	Investigator	Supervisor(s)
Efficient Communication between Optical and Wireless Hybrid Networks	Deepa Naik	Tanmay De [Jointly supervise with Dr. S. Kar, Dept of Mathematics, NIT DGP]
Some Studies on Data Communication and Applications in VANETs	Rangaballav Pradhan	Tanmay De
IoT based Indoor Environment Data Modeling and Prediction	Praveen Kumar Sharma	Tanmay De [Jointly supervise with Dr. S. Saha, Dept of CSE, NIT DGP]
A Novel Secured Routing Protocol for MANET	Subrata Joardar	Dr Prasenjit Choudhury
Memory Forensics: Methods and Techniques	Trushna parida	Suvrojit Das
e-Government Security and Forensics	Saibal Sarkar	Suvrojit Das
Application portability in Cloud Systems and Container Security	Sanjeet kumar	Suvrojit Das
DISTRIBUTED UNMANNED AERIAL VEHICLE (UAV) CONTROL STRATEGIES FOR DYNAMIC OIL SPILL AREA MAPPING	Abhijit Banerjee	Suvrojit Das and D Ghosh
Analysis and Modeling of Colour Image Compression for Multimedia, viva completed	Thafseela Koya Poolakkachalil	Saravanan Chandran
Offline Recognition of Malayalam Handwritten Text, viva completed	Ajay James	Saravanan Chandran
Implementation and Synthesis of Biswajit Das Efficient Computing Reversible Arithmetic and Logical Circuits to design a reversible ALU, under revision		Saravanan Chandran
Salient Object Feature Extraction from Jose Hormese Remote Sensed Images		Saravanan Chandran
Investigation and Development of Sunil Kumar Patel Steganography Schemes		Saravanan Chandran
Topic yet to decide Raj Kumar Paul		Saravanan Chandran
Topic yet to decide Kshitiza Vasudeva		Saravanan Chandran
Topic yet to decide Ved Prakash Singh		Saravanan Chandran

DEPARTMENT OF ELECTRICAL ENGINEERING

Topic	Investigator	Supervisor(s)
Fibre Optic based Partial Discharge detector for High Voltage Power Apparatus	Adhikari Krishanlal	Roy N. K.
Application of Signal Processing and Machine Learning Tool in Micro Grid for Detection and Classification of Transient Events	Banerjee Sannistha	Bhowmik P. S.
Power Electronics And Machine Drives	Barman J.C.	Saha T. K.
Time Delay Estimation Techniques for Localization of Partial Discharge Sources using Radiated UHF Signals	Bhukya Anitha	Koley C
Power System optimization using soft-computing technique	Chandra Subhadip	Acharjee P.
Some Studies on Analysis and Control of Self-excited Induction Generator	Chatterjee Himadri Sekhar	Mahato S. N.
Control System	Chatterjee Poulomi	Dey J.
Bio-Medical Engg.	Choudhary Sunil Kumar	Bera T.K.
Investigation on the modulations of autonomic nervous System based on metabolic syndrome risk factors	Das Ashis Kumar	Halder S.
On-board charging of Electric Vehicles	Das Rana	Ahmed I.
Power System	Das Sandip Kumar	Sarkar S
Electric Vehicle Charging Scheduling and Expansion Planning of Distribution Network	Das Sourav	Acharjee P, Bhattacharya A.
Design optimization of Electrical Machines	Das Pratyush Prasanna	Mahato S. N.
Power Electronics and Machine Drives	Das Rana	Ahmed I.

Topic	Investigator	Supervisor(s)
Application of Advanced Controllers in Maglev System	Dey Soham	Banerjee S, Dey J
A Partial Discharge Monitoring System for Electrical Power System Utility using Ultra-High Frequency Sensors	Dhara Sourav	Koley C.
Power Electronics And Machine Drives	Ganesh Reddi	Saha T. K.
Some Studies on Analysis and Control of Six-Phase Induction Generator	Ghosh Saikat	Mahato S. N.
Standalone PV Application in Electric Drives for Different Applications	Ghosh Sourav	Saha T. K.
Development of Internet of Things (IoT) enabled Tool for Condition Monitoring of Transformers and High Voltage Test Facilities	Jasper D	Roy N K
Optical Microphone based Partial Discharge detector for High Voltage Power Apparatus	Khaandai Sujit	Roy N. K.
Modelling of PMU for Measurement and Islanding detection in Smart Grid	Kumar D.	Bhowmik P. S.
Investigation of Cardio-Pulmonary Data Based on Various Body Postures and Physical Conditions	Kumar Prashant	Halder S.
Optimal placement of Phasor Measurement Unit for State Estimation of Power Systems	Kundu Shubhrajoti	Thakur S S
Design & Implementation of Modified Selective Harmonic Elimination (SHE) & Selective Harmonic Minimization (SHM) PWM Techniques for improving Performance of Multilevel Inverters	Kundu Sourabh	Banerjee S
Control and Modulation Strategies of Neutral Point Clamped Inverters for Electric Vehicle Applications	Mukherjee Sarbani	Banerjee S, Giri S. K
Enhancement of available transfer capability incorporating FACTS devices for large scale power systems by using meta-heuristic algorithms.	Mazumder Kingshuk	Banerjee S, Roy P
Power System	Mandal Biswajit	Bhowmik P. S.
Novel Algorithms of Line Outage Detection Using Synchro-Phasor Measurements	Meheub Alam	Thakur S. S.
Design of Full mode Half mode and corrugated substrate integrated waveguide (SIW) band pass filter in microwave band	Moitra S.	Bhowmik P. S.
Control and Analysis of Distributed Generation Systems	Mishra Rupa	Saha T. K.
Power System	Mishra Biswaranjan	Thakur S. S.
Instrumentation	Mitra Sukanya	Koley C.
Development and Design of Fractional Order Compensator	Mondal Reetam	Dey J., Halder S.
Power System	Mukherjee Manas	Saha Roy B. K.
Power System	Niti Rani	Bhattacharya A., Bohre A.K.
Power Electronics and Machine Drives	Pandey, Anuj Kumar	Ahmed I.
On Some Aspects of Decoupling Control for MIMO Systems	Pandey Sumit Kumar	Dey J, Banerjee S
Identification, Analysis And Location Of Power System Transients Using Signal Processing And Artificial Intelligence	Pullabhatla Srikanth	Koley C
Analysis and Control of Isolated Induction Generators	Ray Sambaran	Mahato S. N., Roy N. K.
Design, Fabrication & testing of some advanced dc-dc switch mode power converters.	Rana Kumar Niroj	Banerjee S
Some Studies on Analysis and Control of Stand-Along Induction Generator	Samajpati Dipanjan	Mahato S. N.
Power System	Saw Bikash Kumar	Bohre A. K.
Generator Modelling and Control for Renewable Energy Applications	Sekhar T. N. S. C.	Saha T. K.
Application of soft computing techniques in constrained compensated power systems	Sen Deepro	Acharjee P.
Control and Analysis of Multi-Input Converter for Hybrid Wind-Solar-Battery based System	Sen Dibyendu	Dey J., Saha T. K. .
Power Electronics And Machine Drives	Sur Debasish	Saha T. K.
Control System	Sri Mannarayana Poluri	Dey A.
Discrete Time Sensorless IM Control for Electric Vehicles	Swargiary Manoj	Dey J.,Saha T. K.
Magnetic Induction Spectroscopy (MIS)	Toushik Maity	Bera T.K.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Topic	Investigator	Supervisor(s)
Statistical signal processing based reconnaissance to explore the kinematics of coronal mass ejection & its impact on Earth	Chattopadhyay Anirban	Chandra, A.
Millimeter wave for 5G	Bhunja Nilkamal	Chandra, A.
Recurrence based nonlinear analysis of heart rate variability	Sarkar Sudhangshu	Chandra, A.
Performance of relayed hybrid free space optical communication over turbulent channels	Bag Banibrata	Chandra, A. (with C. Bose, JU)
Performance analysis of free space optical communication channel with transmit and receive diversity	Das Akinchan	Chandra, A. (with C. Bose, JU)
Performance evaluation of Cellular IoT systems	Barnwal, Alope	Dhar Roy, S. and Kundu, S.
Studies on Vertical Handoff Algorithms for Next Generation Wireless Network	S. Reddy Vamshidhar Reddy	Dhar Roy, S.
Device to Device Communication for Disaster Management	Ghosh Sayanti	Dhar Roy, S.
Multi-hop Cognitive Radio Networks with RF Energy Harvesting	Monda Soumen	Dhar Roy S, Kundu Sumit
Physical Layer Security in Cognitive Radio Network with Cooperative Jamming	Sharma Shashibhushan	Kundu Sumit
Physical Layer Security with Energy Harvesting Relays in Cognitive Radio Networks	Pranabesh Maji	Kundu Sumit, Dhar Roy S
Efficient Interconnection Architectures for Neuromorphic Computing System	Patra Ramapati	Mondal, Hemanta Kumar
Application of Defective Ground Structures on Designing Microstrip Patch Antennas	Acharjee J.	Mandal S. K., Mandal K. (IRPE, CU)
Study on Design of Multiband Microstrip-Patch Antennas for Wireless Devices	Goswami S.	Mandal, S. K.
Studies on Improving Radiation Characteristics of Time- Modulated Antenna Arrays	Mandal, S	Mandal, S. K.
On-chip Antenna : Fabrication and Characterization	Mandal, Sanjukta	Mal, A. K Mahapatra, R Mandal, S. K
Synthesis of Different Antenna Array Geometries using Evolutionary Algorithms and Time Modulation Strategies	Mukherjee A.	Mandal, S.K. Ghatak, R.
Some Studies on Synthesizing Power Patterns in Time-Modulated Antenna Arrays using Evolutionary Algorithms	Patra S.	Mandal, S. K., Mahanti, G. K.
On-Chip Antennas for Bio-Telemetry Application	Singh H.	Mandal, S. K.
Fabrication and Characterization of Environmental Gas Sensors Based on 2-D MoS ₂ Nanostructures	Shreerupa Biswas	Ranwa, S.
Studies on Planar Ultrawideband and Superwideband Antennas for Emerging Wireless Systems Applicability	Abhik Gorai	Dr. Rowdra Ghatak
Studies on Design and Performance of Planar Ultrawideband Bandpass Filters	Puja Kumari	Dr. Rowdra Ghatak
Studies on Substrate Integrated Waveguide based Wideband and Multiband Antennas	Deblina Chowdhury	Dr. Rowdra Ghatak
Studies on Broadband and Multiband Planar Antennas Based on Reactive Impedance Surface and Composite Right/Left- Handed Transmission Line	Shyam Sundar Jash	Dr. Rowdra Ghatak
Studies on Reconfigurable Multiband and Wideband Microwave Bandpass Filters	Anjan Bandyopadhyay	Dr. Rowdra Ghatak
VLSI Circuit Design optimization using evolutionary optimization techniques	Kanchan Baran Maji	R Kar, D Mandal, S P Ghoshal
Radiation Pattern Synthesis of Time Modulation Antenna Arrays	Madhab Dhali	D Mandal, R Kar, Gopi Ram (NITW)
Optimal Design and Implementation of Time Modulation based Antenna Arrays	Avishek Chakraborty	D Mandal

Topic	Investigator	Supervisor(s)
Optimal design and implementation of Fractional Order analog and digital filters	Shibendu Mahata	R Kar, D Mandal, S Saha (NITR)
Performance Optimization of Double-Gate MOSFETs for Nano-Electronics Circuit Design Using Evolutionary Techniques	Dibyendu Chowdhury	R Kar
Radiation Pattern Synthesis of Conformal Antenna Array using Different Optimisation Tools	Shashank Kumar Singh	D Mandal
Analysis and Performance Optimization of Innovative Nanowire Tunnel FET for Low Power Sensors Design	Navaneet Kumar Singh	R Kar, D Mandal
Resistive memory devices	Maji S	Mahapatra R
Adiabatic logic circuits	Samanta S	Mahapatra & A K Mal
Graphene based materials for sensing application	Pal H	Mahapatra R & S Chatterjee
Compact modelling of LD-MOS devices	Sahoo J	R Mahapatra
Dielectric Engineering for GaN HEMT Devices	Das P	Mahapatra R & Chakraborty A K
Gas Sensors	Tiwary P	Mahapatra R & Chakraborty A K
Doping effect on Resistive Memory Devices	Paul, A. D	Mahapatra, R
Air Pollution Management using IoT framework	Bej D	Chattaraj, N

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Topic	Investigator	Supervisor(s)
Impact of chemical pesticides and fertilizers on the environment as a whole – A case study	Adhikary Mayukh	A. Gangopadhyay, K. Bramhachari, Sandip Mondal
Optimisation of Sustainable Integrated Municipal Solid Waste Management System through Case Studies.	Arpan Chattopadhyay	K. Adhikari, S. Pal
A comprehensive study on Environmental Management System (EMS) as practiced in selected industries in West Bengal, India and its impact on society	Ghosh Bipasha Mridha	A. Gangopadhyay, Sandip Mondal
Investigation of Emerging Contaminants effect on Hooghly River Ecosystem at Kolkata Stretch, West Bengal	Lokenath Chakraborty	Sandip Mondal, Subir Kumar Nag
Registration not completed	Nilesh Kr. Meshram	K. Adhikari
Registration not completed	Om Prakash Sudhanku	S. Mondal
Removal of fluoride from aqueous solution using modified low cost materials.	Rakesh Kumar	S. Mondal
Registration not completed	Reeya Ghosh	M. K. Ozha
Hydrochemical and Mineralogical Evaluation of the shallow (<80m) aquifer of Murshidabad District, West Bengal, India	Rhitwik Chatterjee	K. Adhikari
Registration not completed	Susmita Goswami	S. Mondal
Analysis of potential impacts of open cast coal mine on hydrogeological dynamics in Barjora Area, West Bengal, India.	Ujjal Mal	K. Adhikari
Development of Quantitative Tool for Assessment of Regional Sustainability of Coal Mining Area	Vineeta Prasad	K. Adhikari

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Topic	Investigator	Supervisor(s)
Exploration of Parsi culture, Rituals, Rites and their Nostalgia: A Study of Deena Mehta, Perin Barucha, Boman Desai and Farrukh Dhondy	Biswas Ujjwal	Banerjee J.
DISCERNING THE FAMILIAR - An insight into the women's condition during the Taliban Regime	Mukherjee Marjana	Banerjee J.
The Fictions of Amit Chaudhuri: Creation of a Tradition	Roy Arnab	Banerjee J.
Theatre, Resistance and Activism in Postcolonial India: A critique of emerging Voices of Dissent with special reference to the plays of Utpal Dutt, Vijay Tendulkar and Safdar Hashmi	Roy, Oliva	Banerjee J.
Foregrounding Social, Moral and Psychodynamic Perspectives of Empathy: A Study of Indian Graphic Novels	Mondal, Kavita	Banerjee J.
Voices of the Margin: A feministic reading of the diasporic demarcation and minority discourse in the works of Chitra Banerjee Divakaruni	Sengupta Debalina	Banerjee J.
Foregrounding Social, Moral and Psychodynamic Perspectives of Empathy: A Study of Indian Graphic Novels	Mondal, Kavita	Banerjee, J
Roberto Classo's Ka: A Critical Study	Bhattacharyya, S	Rai, S.K.
Gerontology and Bengali Cinema: A Critical Study	Mandal, A	Rai, S.K
Post 9/11 Novels and Islam	Paul, S	Rai, S.K
ICT and Technical Higher Education in India	Mukherjee, U.C.	Sengupta, P.P.
FDI and Economic Performances in Developing Countries	Sinha, Madhabendra	Sengupta, P.P.
Decision Making Process of Farmers	Mukhopadhyay, Partha	Sengupta, P.P.
Risk Management in Industries	Nandi, Anita	Sengupta, P.P.
Marketing Management in Selected Indian Industries Women Empowerment	Lal, Seema	Sengupta, P.P.
Gender, Performance and Problematics of Identity in Select Autobiographies of Female Stars in Indian Cinema	Rana, Raju	Banerjee, S.
The Insignia of Modernity: Untangling the Complex Local-Global Intersection in Women's (Re)Presentation in Late Colonial Bengal	Kankaria, Lipika	Banerjee, S.
Negotiating Normative Spaces: Reading Transgressive Bodies in Select Contemporary Indian Narratives in English	Ankita Chatterjee	Banerjee, S
Unmasking Masculinities in Urban Spaces: A Study on Select Hindi Web Series	Amrita Mitra	Banerjee, S
A Life of Her Own: Problematizing the Discourses of Single Women in Contemporary Indian English Novels and Popular Culture	Subhasnata Mohanta	Banerjee, S
Impact of Sustainability Issues on Consumer Purchase Decision Making: Special Emphasis on Indian Middle-Class Consumers	Amit Kumar Banerjee	Chakraborty, D.
Productivity and Efficiency of Steel Industry in India	Dhiraj Kumar	Chakraborty, D.

DEPARTMENT OF MANAGEMENT STUDIES

Topic	Investigator	Supervisor(s)
Economic Sustainability and Strategic Management of Cultural Capital: An Exploratory Study with Special Reference to West Bengal	Basu, A.	Dr. De, A.
A Study on Corporate Social Responsibility and its Impact on the Performance of Indian Corporate Sector	Deb, D.	Dr. De, A.
Frauds in Public Sector Banks of India: A Study to Find out the Factors and Impact	Ghosh, S. K.	Dr. De, A.
An Approach for Efficient Portfolio Selection Strategy in Indian Capital Market Using Soft-Computing Techniques	Gupta Sayan	Bandyopadhyay, G.,
Factors Affecting Investment Behaviour In Mutual Fund Industry-An Indian Perspective	Banerjee Soumya	Bandyopadhyay, G., Ghosh.A.

Topic	Investigator	Supervisor(s)
Empirical Inference of Investment Decision Making from Operations Research Context: An Insight of FMCG and Consumer Durable Sectors in India.	Biswas, S.,	Bandyopadhyay, G.,
Harnessing The Association Between Inherent Interests Of Employees With Key Leadership Competencies For Organisational Development In Indian Industries.	Chaki, Mainak Ranjan	Bandyopadhyay, G.,
A Study on Workplace Adaptability: An Indian Perspective	Bose Sujata.	Pal D.
In Search of nature of Relationship Between Internal Marketing and Financial Performance of the Company: A Study of Hotels, Hospitals and Banks operating in Kolkata	Chattopadhyay Rituparna	Mondal K.
Estimation of systemic risk and identification of systemically important firms in India	Karmakar, S.,	Bandyopadhyay, G.,
A study on effective management of national economic planning using soft computing based techniques	Chandra, M. M.,	Bandyopadhyay, G., & Banerjee, N.
A quest for relationship among socio demographic variables and various facets of sales promotion	Chel, Saswati	Mondal K.
Registration pending	Ghosh P	Roy M
A study on various aspects of consumer behavior in context to different products and services –A comparison between consumers in India and USA	Samanta Jyotirmoy	Banerjee, Neelotpaul
Comparative analysis of listed banks using financial Indicators and stock returns in Indian scenario.	Shaw.K.V.,	Bandyopadhyay, G.,
Sustainable strategy development towards low carbon Economy	Basu, S	Roy M., Pal, P

DEPARTMENT OF MATHEMATICS

Topic	Investigator	Supervisor(s)
News vendor Problems in uncertain environments	Adhikary, K.	Kar, S.
Overstability in rotating magnetoconvection of electrically conducting fluids	Banerjee, Ankan	Pal, P.
Some fuzzy inference techniques and their applications to different fields	Basak, Sanghamitra	Panigrahi, G., Jana D, Maiti M
Non-linear analysis	Bera, Ashis	Dey, L.K.
Study on Some Inventory Problems	Bhattacharya, Sandipa	Sarkar (Mondal), S.
Codes over rings	Bhowmick, Sanjit	Bagchi, S.&Bandi, R.
Some Transportation Problems in Different Imprecise Environments	Bhowmik, Sarbari	PanigrahiG, Jana D, Maiti M
Fixed point theory and Topology	Chanda, Ankush	Dey, L.K.
Computations in generic model and applications to cryptography	Das, D.	Basu, K.
Some Bio-Mathematical Models In Crisp and Uncertain Environments	De, Anupam	Panigrahi G, Maity Kalipada, ManoranjanMaiti
Some Inventory Models with Transportation in Supply Chain	Debnath, Sudeshna	Sarkar (Mondal), S. & Maiti, M.
Robust optimization in network optimization problems	Dey Sarkar, Debapriya	Basu, K.
Topological fixed point theory	Garai, Hiranmoy	Dey, L.K.
Nonlinear Differential equations	Ghosh, Arindam	Maitra, S
Magnetoconvective instabilities in liquid metals	Ghosh, Manojit	Pal, P.
Graph labelling and its applications	Ghosh, Sumonta	Pal, A.
Topological fixed point theory	Karmakar, Surajit	Dey, L.K.
Interplay of structure and dynamics in multilayer networks	Khanra, Pitambar	Pal, P.

Topic	Investigator	Supervisor(s)
Models on Dynamical System in Different Environments	Khatua D.	Kar, S.
Train Platform Allocation Problem for a Terminal Railway Station	Kumar R.	Kar, S.
Topological Fixed Point Theory	Kumari, Rashmi	Dey, L.K.
Some Inventory Models for deteriorating/Breakable Items In Different Environment	Kundu, Anindita	Panigrahi G, Das B, Maiti M
Modelling of Some Earthquake Processes in Different Media during Aseismic Period	Kundu, Piu	Sarkar (Mondal), S
Topology and Functional Analysis	Laha, Supriti	Dey, L.K.
Electrokinetics of composite soft particles	Mahapatra, Paramita	Gopmandal, PP
Data Mining Techniques for social network analysis	Mandal, Shrabanti	Pal, A.
Oscillatory magnetoconvection	Mandal, Sutapa	Pal, P.
Study of some neutrosophic graphs with applications	Mohanta, Kartick	Pal, A.
Some Theoretical Models of Earthquake Processes due to Finite and Long Faults	Mondal, Debabrata	Sarkar (Mondal), S
Study on some graph invariants and their applications	Mondal, Sourav	Pal, A.
On Some NP hard problems Using Heuristic Method	Mukherjee, Anupam	Panigrahi G, Maiti Manoranjan
Auction Adaptive participatory Sensing	Mukhopadhyay, Jaya	Pal, A.
Geometry of Hyperbolic Metric	Nurezamman, Md	Ali, M. F.
Pre-Schwarzian and Schwarzian derivative	Pal, Sanjit	Ali, M. F.
Harmonic Mappings	Pandit, Sushil	Ali, M.F.
Development of effective estimation strategies for Population parameters in sample surveys	Parichha, Partha	Basu, K. and Bandyapadhyay A
Mathematical Ecology	Patra Rajesh	Maitra S
Inventory Problems with Imperfect Production in Supply Chain Management	Prasanta Ghosh	Kar S. & Dey, J. K.
Mathematical Modelling for the Control of Infectious diseases	Roy, Argha	Sarkar (Mondal), S., & Sahoo, Bansidhar
A Mathematical Study of Eco-epidemiological Model with Special Emphasis on Chaotic Dynamics and its Controllization	Roy, Prodip (Thesis submitted)	Sarkar (Mondal), S., Das, K.P. & Karmakar, P.
A Generalization of Toeplitz-Hausdorff Theorem and Birkhoff-James Orthogonality	Roy, Saikat	Bagchi, S.
Mathematical models of some decision making problems in uncertain environments	S. Bera	Basu, K. and Maiti M and Jana D K
Inventory Management	S. Kar	Basu, K. and Sarkar B
Reliability analysis & optimization of certain systems in deterministic & fuzzy environment	Samanta, A.	Basu, K.
Various Kind of Approximation in Rough Set Theory and Applications	Sandip Majumder	Kar, S.
Study of Some Mathematical Behavior of Topological Indices	Sarkar, Prosanta	Pal, A.
Rotating magnetoconvection	Sharma, Lekha	Pal, P.

DEPARTMENT OF MECHANICAL ENGINEERING

Topic	Investigator	Supervisor(s)
Design and control of Soft Lower Limb Exoskeleton	Arora Aman	Roy S.S.
Supply Chain Management	Bera Pravanjan	Hui N. B.
FE-based Modeling of Backward Flow Forming Process	Banerjee Prabas	Hui N. B.
Study and analysis of particulate secondary flows	Banerjee Arka	Sengupta S., Pramanik S.

Topic	Investigator	Supervisor(s)
Thermodynamic Analysis of Oxy-Coal fired Thermal Power Plants	Chatterjee Soumya Jyoti	Karmakar Sujit
Modelling and Optimization of Electrohydrodynamic Inkjet Based Microfabrication System	Das Raju	Roy S.S.
Computational and experimental study of performances of S-shaped defuser	Asim Kr Das	Rana S. C.
Condition Monitoring of Industrial Fans using Soft Computing	Dutta Anup	Hui N. B.
Manufacturing Analytics	De Tarak Nath	Hui N. B.
Interaction of Rigid bodies and point vortices in Potential flow	Deb Sudipta	Banerjee Nilotpal
Design of expert system in manufacturing processes	Dhar Ananda Rabi	Roy S.S.
Power Generation from Municipality Waste	Dwivedi Krishna Kant	Pramanick, A. K., Cjatterjee, P. K, Karmakar, M.
Investigation On Fluid Flow And Heat Transfer Of Solar Air Heater Having Artificially Roughened Absorber Plate	Gharai Shibendra	Apurba Layek
Design and Control Of Smart Material Based Actuators For Robotic Assembly	Ghosh Bhaskar	S. Mukhopadhyay, Roy S.S., Jain R.K
Optimization Of Design Parameters Of An Internal Combustion Engine Running On Alternate Fuel	Huirem Neeranjan	Apurba Layek
Analysis Of Bimodular Material Laminated Beam Using Equivalent Stiffness Method	Hasan Nasir Sk	Kallol Khan
Performance, Emission And Combustion Characteristics Of A Variable Compression Ratio Engine Using Blends Of Diesel And Waste Cooking Oil Methyl Esters With Ethanol As Additive	Kathirvel S.	Apurba Layek
Analysis Of Bimodular Material Laminated Curved Beam Using Equivalent Stiffness Method	Kumar Amarandra	Kallol Khan
Non-linear Analysis of Nuclear Pipe Bends Subjected to Complex Loadings.	Kumar Manish	Kallol Khan, Pronab Roy
A study on typical condensations: mathematical theories, analyses, and engineering-applications	Kar Uttam Kumar	Sengupta S., Pramanik S.
Performance Analysis Of Solar Air Heater Having Twisted Rib As Artificial Roughness Over The Absorber Plate	Kumar Anup	Apurba Layek
Thermo-Hydraulic Performance Enhancement Of Solar Air Heater Using Winglet Type Vortex Generator	Kumar Amit	Apurba Layek
Thermodynamic Analysis of Advanced Coal based Power Generation Systems with CO ₂ Capture	Kumar Rajesh	Karmakar Sujit
Hybrid energy for sustainable building	Kumar Nagendra	Jana K and Karmakar Sujit
Design & analysis of redundant manipulator for under water applications	Kumar Virendra	Roy S.S., Sen S.
Experimental Investigative Studies of Chatter in High Speed	Kamalkishor J. Uke	Banerjee Nilotpal & Majumder M.C.
Investigative study of 'Stirling Engine' based Solar Thermal Power Generation	Man Singh Azad	Apurba Layek
Heat transfer and fluid flow through the twisted duct	Mahato Shambhu Kumar	Rana S. C., Barman R. N.
Active, passive control and dynamic stability of nonlinear flexible systems	Mondal Saikatsuvra	Ranjan Kumar Mitra and Atul Krishna Banik
Thermal Performance Improvements of a Fin arrayed Horizontal sinks	Mandal Pabitra Kumar	Rana S. C., Bhanja D. (NIT Silchar)
Dynamic Analysis, Model Development and Control of a Multi-functional Flexible Manipulator	Prasenjit Saekhel	Banerjee Nilotpal & Hui Nirmal Baran
Thermodynamic Analysis of Integrated Gasification-fuel Cell Combined Cycle based Power generation Systems	Pruthvi Deep A	Karmakar Sujit

Topic	Investigator	Supervisor(s)
Experimental Analysis Of Using Raw Vegetable Oil And Its Blends With Diesel In Ci Engine	Roy Debabrata	Apurba Layek
A STUDY OF MICRO AERIAL VEHICLE (MAV) DYNAMICS FOR A SCALABLE DESIGN	UMESH PATKAR	Banerjee Nilotpal & Majumder M.C
Performance study of Vortex Tube	Singh Ravi Kant	Pramanick A.K., Rana S. C.
Experimental study of stability analysis of rotating shaft using various types of bearings and lubricants	Sharma Praveen	Barman R. N., Rana S. C.
Development and performance evaluation of self-lubricating ZTA ceramic inserts for high speed machining of steel	Singh Bipin Kumar	Roy S.S., Mandal N.
Fluid flow and heat transfer	Sharma Biswajit	Barman, R. N.
Optimum Design of Flow Modifier in Tundish of Slab Caster using CFD	Verma Deepak	Mullick A. N.
Study and analysis of nonlinear behavior of passive suspensions in passenger vehicles	Varude Vinay	Banerjee Nilotpal
Thermodynamics	Selvapandian Ebinezer	Pramanick, A.K., Ramachandran, K.P.
Hot Embossing of polymers (tentative)	Swarup Deshmukh	Goswami A..
Non conventional Machining of ceramics (tentative)	Subir Datta	Goswami A.
A study of micro aerial vehicle (MAV) dynamics for a scalable design	UMESH PATKAR	Banerjee Nilotpal & Majumder M.C

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Topic	Investigator	Supervisor(s)
Design and development of Cu based nanocomposites with W particles reinforcement for use in heat sinks in advanced electronic devices	Bandyopadhyay Krishnan	Ghosh M. M. & Ghosh K. S.
Severe plastic deformation processing of in-situ cast Al-Mg ₂ Si composites	Bhandari Rahul	Mondal M. K. & Mallik M.
Structure properties correlation of in-situ Al-Mg ₂ Si composite with and without modifier	Biswas Prosanta	Mondal M.K. & Mandal D.
An approach for effective joining of dissimilar metals used in super critical boilers	Chatterjee Suvam	Maity J. & Mondal M. K.
Effect of Strain Induced Melt Activation (SIMA) Process on Microstructure and Mechanical Properties of Al-Si alloys Modified by Al-5Ti-1B Grain Refiner	Choudhary Chandan	Mandal D. & Sahoo K.L (CSIR-NML, Jamshedpur)
Study on mechanical working of reduced pure iron oxide briquettes	Das Ritwik	Pramanik S. & Mondal M. K.
Design and Development of Highly Efficient Water and Ethylene Based Nanofluids Containing Cu-Ag Alloy Nanoparticles for Advanced Heat Transfer Applications	Das Sujoy	Ghosh M. M.
Detailed study on tribological behaviour of different Al-Si alloys (Tentative)	Hazra Biplab	Show B.K. & Bera S
Low-Cost Synthesis and Characterization of Boron Nitride Reinforced Aluminum Based Metal Matrix Composite	Jaiswal Arvind Kumar	Maji B. & Maity J.
Corrosion and Nanomaterials	Kar Palas	Ghosh K.S. & Ghosh M.M.
Design and development of surface nanostructured structural materials	Kumar Hrishikesh	Ghosh M. M. & Pramanik S.
Development of Al-Cu-Ni alloys with novel microstructures	Maity Shubhadeep	Bera S. & Show B.K.
Multi-scale modeling and experiments on carbon fiber reinforced epoxy resins composites for applications in aircraft.	Mishra Ajay Kumar	Ghosh M.M & Show B.K
Development of high entropy bulk metallic glass for structural and biomedical applications	Paul S	Bera S & Mandal Durbadal

Topic	Investigator	Supervisor(s)
Structure-property correlation on ZrB ₂ based ultrahigh temperature ceramic composites.	Paul Tanay Rudra	Mallik Manab & Mondal M. K
Design and development of Ti-Ni based alloy for biomedical applications	Sadhukhan Pritam	Maji Barnali & Ghosh M.M.
Development of aluminium based metal matrix composite systems with hybrid reinforcements processed through powder metallurgy route and comparative study of their properties	Saha Samata	Ghosh Manojit (BESU, Shibpur) & Maity J.

DEPARTMENT OF PHYSICS

Topic	Investigator	Supervisor(s)
Theoretical study of boson, B meson decays, Higgs boson and new physics beyond the standard model	Biswas S	Sahoo S.
Photocatalytic studies using metal oxide and carbon nanostructures for water splitting and purification	Chatterjee P	Chakraborty AK
Characterisation and Reliability prediction studies of lead free solder joint interface for electronics application	Char M	Chakraborty AK, Kar A (JBNSTS)
Green Synthesis of Some Nanocrystalline Biomaterials and Study of Gas Sensing Properties of Hydroxyapatite Based Nanocomposites: Their Microstructural and Electrical Characterization	Chatterjee T	Meikap AK, Pradhan SK
Synthesis of GeO _x and GaO _x lowdimensional materials and photodetector	Choudhury A	Mondal A, Das S
Electronic and optoelectronic applications of MgO/TiO ₂ and V _x O _y /TiO ₂ heterostructure nanowires	Dalal A	Mondal A
A unique technique of InN nanowire for optical sensor application	Dwivedi SMMD	Mondal A
Synthesis of Metal nanostructure for application as an active and passive scatter in generation of random laser	Dey A	Kumbhakar P
Studies on Dynamics of the localized modes of ferroelectric materials with defects	Giri P	Mandal MK & A. Biswas
Graphene/metal oxide nanohybrids for gas sensors	Gupta S	Chakraborty AK
Studies on Synthesis, Optical properties and Catalytic Activities of Some Metal oxide and Metal sulfide Nanostructures Materials	Karmakar S	Kumbhakar P
Development of metal-oxide based polymer nanocomposites for opto-electronics application	Karmakar R	Meikap AK
Sparse Representation of Signals and its Applications	Karmakar J	Mandal MK
Investigation on physics of nonlinearity of the earth system data	Khutia S	Chaudhuri H
Synthesis of nano material for degradation of antibiotics	Mukherjee S	Chaudhuri H
Holography	Mandal R	Ghosh A
Investigations on Synthesis, Linear and Nonlinear Optical Properties of Some Carbon Nanomaterials and Nanocomposites	Mondal K	Kumbhakar P
Ring Oscillator and its Applications in Communication Systems	Mondal H	Mandal M.K
Development and Characterization of Polymer-Multiferroic Nanocomposites for Enhance Magneto Dielectric Behavior	Atta S	Meikap AK
Studies on Erbium doped TiO ₂ / Ag nanoparticle based plasmonic UV photodetectors	Mondal S	Mondal A
Theoretical study of boson, B meson decays, and Higgs boson	Mahata S	Sahoo S.
Phenomenology of boson, B mesons, Higgs boson and new physics	Maji P	Sahoo S.
Phenomenological implications of boson in B meson mixing and decays	Nayek P	Sahoo S.
A complete study on spin polarized nuclear matter and finite nuclei with finite range simple effective interaction	Pal M	Sahoo S., Sahoo B. & Chakraborty S.
Studies on Sparse Representation for Data Processing and Applications	Pathak A	Mandal M.K.

Topic	Investigator	Supervisor(s)
Theoretical study of the coexistence of superconductivity, antiferromagnetism and Jahn-Teller distortion in iron based superconductors	Kumar PP	Sahoo S., Pradhan B.
Metal oxide/hydroxide and graphene hybrid nanostructures for gas sensing application	Tiwari P	Chakraborty A.K., Mahapatra R. (ECE)

ANNEXURE-11.4(H)I PH.D. DEGREE AWARDED TILL 2019-20

Name of the Department	Investigator	Supervisor(s)
Biotechnology	Dr. H. R. Bairagya	Dr. B. P. Mukhopadhyay
Biotechnology	Dr. B. Bhunia	Dr. A. Dey
Biotechnology	Dr. B. Basak	Dr. A. Dey
Biotechnology	Dr. S. Chakraborty	Dr. A. Dey
Biotechnology	Dr. G. Goswami	Dr. D. Dutta & Dr. S. Chaudhuri
Biotechnology	Dr. N. Sarkar	Dr. K. Aikat
Biotechnology	Dr. R. Das	Dr. Kazy S. K.
Biotechnology	Dr. A. Ganguly	Dr. A. Dey, Dr. P.K. Chatterjee (CMERI Durgapur)
Biotechnology	Dr. N. Gupta	Dr. S. Chattopadhyay
Biotechnology	Dr. Kumar Pranaw	Dr. D. Dutta, Dr. Lata N. & Dr. S. Chaudhuri
Biotechnology	Dr. J.P. Maurya	Dr. S. Chattopadhyay
Biotechnology	Dr. V. Singh	Dr. S. Chattopadhyay and A. Nandi (SLS, JNU)
Biotechnology	Dr. S. Mondal	Dr. A. Dey, Dr. S.S. Mukhopadhyay, and Dr. B. Mondal (CMERI, Durgapur)
Biotechnology	Dr. P. Verma	Dr. Kazy S. K., Dr. A. Suman (IARI, New Delhi)
Biotechnology	Dr. D. Senapati	Dr. S. Chattopadhyay
Biotechnology	Dr. K. Sinha	Dr. K. Aikat and Prof. S. Datta & Dr. P. Das (both of Jadavpur University)
Biotechnology	Dr. S. Mondal	Dr. K. Aikat & Dr. G. Haldar (Chemical Engg)
Biotechnology	Dr. M. Behera	Dr. D. Dasgupta Mandal
Biotechnology	Dr. J.C. Bose K.	Dr. S. S. Mukhopadhyay
Biotechnology	Dr. B. Laha	Dr. M. Ghosh
Biotechnology	Dr. M. Chakraborty	Dr. S. Chattopadhyay
Biotechnology	Dr. A. K. Samanta	Dr. D. Dutta and Dr. S. Chaudhuri
Biotechnology	Dr. R. Priyadarshinee	Dr. D. Dasgupta Mandal
Biotechnology	Dr. S.S. Prasad	Dr. K. Aikat
Biotechnology	Dr. A. Verma	Dr. M. Ghosh
Biotechnology	Dr. N. Sabnam	Dr. S. Roy-Barman
Biotechnology	Dr. S. Bera	Dr. D. Dutta
Biotechnology	Dr. A. K. Srivastava	Dr. S. Chattopadhyay
Biotechnology	Dr. S. Dutta	Dr. A. Dey
Biotechnology	Dr. S. Neogi	Dr. A. Dey
Biotechnology	Dr. A. Roy	Dr. S.K. Kazy
Biotechnology	Dr. S. Deepthy T	Dr. M. Ghosh
Biotechnology	Dr. R. Samadarshi	Dr. D. Dutta
Biotechnology	Dr. S. Pal	Dr. S.K. Kazy
Biotechnology	Dr. M. Hazra	Dr. D. Dasgupta Mandal
Chemistry	Dr. M. Banerjee	Dr. R. S. Konar
Chemistry	Dr. S. Chatterjee	Dr. R. S. Konar
Chemistry	Dr. B. R. Guha	Dr. S. N. Banerjee

Name of the Department	Investigator	Supervisor(s)
Chemistry	Dr. S. Basu	Dr. S. N. Banerjee
Chemistry	Dr. U. Satpathi	Dr. R. S. Konar
Chemistry	Dr. P. K. Banerjee	Dr. S. N. Banerjee
Chemistry	Dr. S. Saha	Dr. N. Kurmaiah
Chemistry	Dr. V. K. Soi	Dr. N. Kurmaiah
Chemistry	Dr. S. Sarkar	Dr. R. S. Konar
Chemistry	Dr. M. S. Adhikary	Dr. R. S. Konar
Chemistry	Dr. S. Guchait	Dr. R. S. Konar
Chemistry	Dr. R. Roy	Dr. M. M. Nandi
Chemistry	Dr. P. Debnath	Dr. M. M. Nandi
Chemistry	Dr. S. Mishra	Dr. S. N. Banerjee
Chemistry	Dr. J. Chowdhuri	Dr. M. M. Nandi
Chemistry	Dr. S. Tarot	Dr. M. M. Nandi
Chemistry	Dr. T. K. Chatterjee	Dr. G. C. Bhaumik
Chemistry	Dr. A. K. Sarkar	Dr. N. Kurmaiah
Chemistry	Dr. N. Dey	Dr. R. S. Konar
Chemistry	Dr. S. C. Mitra	Dr. R. S. Konar
Chemistry	Dr. S.C. Moi	Dr. A. K. Ghosh
Chemistry	Dr. T. Kundu	Dr. A. K. Ghosh & Dr. P. Chowdhury
Chemistry	Dr. B. Chakrabarti	Dr. B. P. Mukhopadhyay
Chemistry	Dr. T. K. Nandi	Dr. B. P. Mukhopadhyay
Chemistry	Dr. S. Samui	Dr. A. K. Ghosh & Dr. P. Chowdhury
Chemistry	Dr. B. Ghosh	Dr. B. P. Mukhopadhyay
Chemistry	Dr. Ranjana	Dr. M. M. Nandi & Dr. M. Maji
Chemistry	Dr. G. K. Ghosh	Dr. S. C. Moi & Dr. A. K. Patra
Chemistry	Dr. S. Mahata	Dr. M. M. Nandi & Dr. B. N. Mondal (CMERI)
Chemistry	Dr. H. S. Borah	Dr. S. S. Panja, Dr. S. Choudhury
Chemistry	Dr. S. Roy	Dr. A. K. Patra
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Mechanical Engineering	Dr. J. Basu	Dr. S. K. Basu
Mechanical Engineering	Dr. B. Bhaduri	Dr. S. K. Basu
Mechanical Engineering	Dr. M. S. Mukhopadhyay	Dr. D. K. Pal
Mechanical Engineering	Dr. M. R. Patkar	Dr. D. K. Pal & Dr. S. K. Basu
Mechanical Engineering	Dr. S. Chakraborty	Dr. D. K. Pal
Mechanical Engineering	Dr. M. A. Venkatesh	Dr. D. K. Pal
Mechanical Engineering	Dr. N. P. Mukherjee	Dr. D.K.Pal
Mechanical Engineering	Dr. S. Mukherjee	Dr. S.N.Sengupta & Dr. M.C.Majumder
Mechanical Engineering	Dr. Balamurugan Gopla	Dr. S. Ghosh, Dr. B.N Mondal. (CMERI)
Mechanical Engineering	Dr. Chandan Chatteraj	Dr. M. C. Majumder

Name of the Department	Investigator	Supervisor(s)
Mechanical Engineering	Dr. A. G. Mathew	Dr. M. C. Majumder, Dr. K. P. Ramachandran (CCE, Oman)
Mechanical Engineering	Dr. G. K. Vijayaraghvan	Dr. Majumder M.C., Dr. K. P. Ramachandran (CCE, Oman)
Mechanical Engineering	Dr. S. Vishnupriyan	Dr. K. P. Ramachandran (CCE, Oman), Dr. M. C. Majumder
Mechanical Engineering	Dr. Debroy Pradip	Dr. S.Ghosh
Mechanical Engineering	Dr. Maity Atanu	Dr. S.Ghosh Dr. S. Majumder (CMERI)
Mechanical Engineering	Dr. Murali R. V.	Dr. A. B. Puri & Dr. Khalid
Mechanical Engineering	Dr. Gangopadhyay S.	Dr. M. C. Majumder & Dr. N. R. De
Mechanical Engineering	Dr. Ray D. N.	Dr. Mukherjee S. & Dr. S. Mazumder
Mechanical Engineering	Dr. C. Bhattacharya	Dr. N. Banerjee & Dr.H. Sarkar (WBPCB)
Mechanical Engineering	Dr. R. V. Murali (2012)	Dr. A. B. Puri
Mechanical Engineering	Dr. Debashis Nandi (2015)	Dr. A. B. Puri and Prof. I. Basak
Mechanical Engineering	Dr. Mithilesh Dikhshit (2016)	Dr. A. B. Puri and Dr. Atanu Maity
Mechanical Engineering	Dr. Arup Kumar Biswas	Dr. A N Mullick, Dr. P K Sinha & Dr. B Majumdar
Mechanical Engineering	Dr. Debajyoti Banerji	Dr. I. Basak & Dr. J. Bose (CMERI)
Mechanical Engineering	Dr. Avik Chatterjee	Dr. I. Basak & Dr. S. Majumder (CMERI)
Mechanical Engineering	Dr. Tapas Gangopadhyay	Dr. I. Basak & Dr. D.K. Pratihari (IITKgp)
Mechanical Engineering	Dr. Bibhiti Bhusan Naya	Dr. A N Mullick & Dr. D Chatterjee
Mechanical Engineering	Dr. Kanchan Chatterjee	Dr. N. B. Hui & Dr. D. Chatterjee (CMERI)
Mechanical Engineering	Dr. Jagannath De	Dr.N. Banerjee & Dr.A. K. saha
Mechanical Engineering	Dr. Anirban C. Mitra	Dr. Nilotpal Banerjee
Mechanical Engineering	Dr. Saravanan V.	Dr. Nilotpal Banerjee
Mechanical Engineering	Dr. Swapan Barman	Dr. A. B. Puri & Nagahanumaiah
Mechanical Engineering	Dr. Bikramjit Podder	Dr. N. B. Hui & Dr. K. Ramesh Kumar (DRDL Hyderabad)
Mechanical Engineering	Dr Robin Kr Biswas	Dr Manik Chandra Majumder, Dr S K Basu
Mechanical Engineering	Dr. Swapan Kumar Aditya	Dr Manik Chandra Majumder, N.R De
Mechanical Engineering	Dr. Arka Sen	Dr Manik Ch Majumder, Dr Sumit Mukhopadhyay, Dr Robin Kr Biswas
Mechanical Engineering	Dr. A K chattopadhyay	Dr Manik Ch Majumder, S K Basu
Mechanical Engineering	Dr Lokesh M	Dr Manik Ch Majumder , Dr K P
Mechanical Engineering	Dr Sureh Babu	Dr Manik Ch Majumder Dr A Ram Prasad
Mechanical Engineering	Dr S. Sundaravali	Dr Manik Ch Majumder
Mechanical Engineering	Dr Sumit Mukhopadhyay	Dr Manik Ch Majumder, Dr S N Sengupta
Mechanical Engineering	Dr. Abhijit Mahapatra	Dr. S. S. Roy, Prof. D.K.Pratihari
Mechanical Engineering	Dr. Biswajit Bera	Self-supervision
Mechanical Engineering	Dr. Anup Kumar	Dr. A. Layek
Mechanical Engineering	Dr. Sibendra. Gharai	Dr. A. Layek
Mechanical Engineering	Dr. D. V. N. Lakshmi	Dr. A. Layek
Mechanical Engineering	Dr. S. Kathirvel	Dr. A. Layek
Mechanical Engineering	Dr. Huirem Niranjan Singh	Dr. A. Layek
Mechanical Engineering	Dr. Atul Vasant Karnjkar	Dr. Nilotpal Banerjee
Mechanical Engineering	Dr. Vinayaka N.	Dr. Nilotpal Banerjee
Mechanical Engineering	Dr. Dilip Kumar Adhwarjee	Dr. N. Banerjee & Dr.M.C. Majumder
Mechanical Engineering	Dr. Buddhadeb Pradhan	Dr. N. B, Hui, Dr. D. Sinha Roy
Mechanical Engineering	Dr. Deeksha Porwal	Dr. Kallol Khan
Mechanical Engineering	Dr. Goutam Khankari	Dr. Sujit Karmakar

Name of the Department	Investigator	Supervisor(s)
Physics	P. Kumbhakar	Kumbhakar P
Physics	S. Biswas	Kumbhakar P
Physics	S. Chakraborty	Kumbhakar P
Physics & Elec. Engg.	A.Chatterjee	Roy NK and Kumbhakar P
Physics	N. Choudhury	Sinha MS
Physics	A. K. Das	Sinha MS
Physics	P. Ghosh	Kumbhakar P and Sen B (VTTC, Midnapore)
Physics	B. C. Nandi	Sinha MS
Physics	P. S. Basu	Sinha MS
Physics	G. S. Roy	Sinha MS
Physics	(Mrs.) R. Sen	Chatterjee SK
Physics	D. Biswas	Meikap AK & Chattopadhyay SK
Physics	S. Sahoo	Maharana L & Meikap AK
Physics	A. Sarkar	Meikap AK & Chatterjee SK
Physics & Elec. Engg	S. Karmakar	Roy NK and Kumbhakar P
Physics	J. Ghosh	Chatterjee SK
Physics	P. Kr. Singha	Mitra AK
Physics	A Mukherjee	Basu S & Pal M
Physics	M. Chattopadhyay	Kumbhakar P
Physics	S. Ghatak	Meikap AK
Physics	K. Gupta	Meikap AK & Jana PC (V.U.)
Physics	R. Sarkar	Kumbhakar P & Mitra AK
Physics	K. Talukdar	Mitra AK
Physics	G. Chakraborty	Meikap AK
Physics	P. Ghosh	Meikap AK
Physics	S.M.Hossain	Basu S & Pal M
Physics	R.Paul	Mitra AK
Physics	R.K.Agarwalla	Chakraborty AK & Mitra AK
Physics	S. Chakraborty	Sahoo S & Sahoo B (TDB College, Ranigang)
Physics	C.K. Das	Sahoo S & Maharana L
Physics	H.S. Desarkar	Kumbhakar P & Mitra AK
Physics	A.Ganguly	Mondal A, Yadav RK
Physics	Dr. (Mrs.) K. Usha	Kumbhakar P and Mondal B(CSIR-CMERI Durgapur)
Physics	A. Kole	Kumbhakar P
Physics	S.K.Sahoo	Sahoo S, Sahoo BK (NIT Raipur)
Physics	K. Mukherjee	Meikap AK, Kumbhakar D
Physics	S. Sinha	Meikap AK, Chatterjee SK
Physics and ECE	Jay Chandra Dhar	Mondal A
Physics and ECE	Naorem Khelchand Singh	Mondal A
Physics and ECE	Shubhro	Mondal A
Physics and ECE	B. Chowdhury	Mondal A & Saha A
Physics and ECE	C. Ngangbam	Mondal A. & Dev S.
Physics	V. Meriga	Chakraborty AK
Physics	S. Saha	Meikap AK & Pradhan SK
Physics	S. Choudhury	Meikap AK & Mandal M K
Physics	P. S. Mukherjee	Meikap AK
Physics	M. Goswami	Meikap AK & Ghosh R

Name of the Department	Investigator	Supervisor(s)
Physics	D. Banerjee	Sahoo S
Physics	A. K. Das	Meikap AK
Physics	R. N. Jana	Meikap AK
Physics	A. Maikap	Meikap AK & Mandal BN
Physics	R. Sinha	Meikap AK & Basu S
Physics & EMPA, Switzerland	Chakraborty Souvik	Chakraborty AK & Barbezat M
Physics & MME	Sarkar Aatreyee	Chakraborty AK & Bera S
Physics	Chakraborty Nilanjan	Chakraborty AK
Physics	D. Banerjee	Sahoo S
Physics	B. Manna	Sahoo S
Physics	M. Kumar	Sahoo S
Physics	M. Banerjee	Basu S
Physics	S K Kundu	Basu S
Physics	D K Rana	Basu S
Physics & IT	D. Chattopadhyay	Mandal MK & Nandi D
Physics	M. Kar	Mandal MK
Physics	A. K. Das	Mandal MK
Physics & Women's College Burdwan	S. Mandal	Mandal MK & Garai SK
Physics & Women's College Burdwan	D. Mandal	Mandal MK & Garai SK
Physics and ECE	Lahiri R	Mondal A
Physics	Ghosh A	Mondal A
Physics	Maji C	Chaudhuri H.

ANNEXURE - 11.4(H) II PROPOSED PLAN FOR RESEARCH

DEPARTMENT OF BIOTECHNOLOGY

- Anti-microbials from plant/food sources.
- Anti-obesity therapeutics
- Assessment on the removal of heavy metals and dye using low cost adsorbents.
- Bio functionalization of sensor component
- Biodegradation of pesticides
- Bioenergy
- Biofuels
- Biological pigments
- Bionanotechnology
- Bioprospecting microbial diversity for biomolecules
- Bioremediation of oil refinery sludge
- Bioremediation of polyaromatic hydrocarbons, pesticides and textile dye
- Biosensor
- Biosurfactant production and application
- Cancer Biology
- Chemical Biology
- Developmental Biology and Signal Transduction
- Development of novel nanomaterials based on peptide self-assembly
- Disease detection through biosensors
- Drug delivery system
- Ecotoxicology of nanomaterials
- Encapsulation of bioactive compounds
- Environmental Microbiology and Biotechnology
- Host-pathogen interaction in bacterial infections
- Inflammation and Cell Signalling
- Intrinsic disordered proteins
- Macromolecular interactions
- Metabolic disorders
- Microbial fermentation
- Microbial genomics and metagenomics
- Microbial production of ethanol using lignocelluloses
- Microbial production of lactic acid, using natural substrates, for production of bioplastic
- Microbiology of arsenic contaminated groundwater
- Microbiology of deep subsurface biosphere
- Microbiome and its role in human diseases
- Molecular mechanism of inflammation
- Molecular Plant Pathology
- Nanoparticles for heavy metal remediation
- Nanomedicine
- Non-coding RNAs
- Parasite immunology and cell signalling
- Parasite metagenomics

- Pesticides and other chemicals from plant sources
- Petroleum microbiology
- Plant Biotechnology
- Production of lipids for use as biofuels and other value-added products from microalgae and other oleaginous microorganisms
- Regulation of stress response in mammalian cells
- Role of nutraceuticals in Lifestyle Disorders
- Screening of Novel Enzymes
- Stem cell Biology

DEPARTMENT OF CHEMICAL ENGINEERING

- Acetic acid production in membrane-integrated bioreactor system
- Arsenic removal by membrane technology
- Artificial intelligence based modelling of industrial processes
- Biochemical Utilisation of Petroleum Wax (Biochemical Conversion / SCP Production)
- Biodiesel Synthesis from Microalgae Oil and Neem Oil
- Biogas Production by Co-Digestion of Sewage Sludge, Waste paper and Waste Grown Algae
- Biological treatment of coalmine waste water
- Bioremediation of pollutants from industrial wastewater
- Boiling flow instabilities; Bubble dynamics and heat transfer; Optimization and control
- Bubbling Fluidized Bed Combustion
- Catalytic membrane reactor
- CFD modelling of boiling, multiphase flow and reactors
- CFD modelling of Pyrolysis, Combustion and Gasification of Coal and Biomass
- Characterisation of nanomembranes
- Chlorofluorocarbons Replacement
- Circulating Fluidized Bed Combustion & Gasification
- Clean Technology development for chemical processes
- Clean Technology for Chemical Processes
- Clean water production by membrane technology
- Comparative Studies on Hydrodynamic and Gas-Particle Heat Transfer in Uniform and Converging Riser
- Computer Aided Analysis of Biodiesel Synthesis Using Lipase – Immobilized Inverse Fluidized Nanosilica Particles
- Co-pyrolysis, Combustion and Gasification
- Defluoridation of contaminated groundwater by bioremediation
- Design and Analysis of Circulating Fluidised Bed Bioreactors employing
- Design and Analysis of Fluidized / Semifluidized Bed Bioreactors for Biodiesel Synthesis
- Design and Analysis of Semi Fluidized Bed Bioreactors
- Design of Three Phase Fluidised Bed Combustion Equipment for Colloidal Fuels (Coal-
- Design of Three Phase Fluidised Bed Combustion Equipment for Colloidal Fuels (Coal- Oil Suspension)
- Development of Contour Model of Settling of Air-borne Dust from Cement Plant and Power Plant Chimneys
- Diesel Particulate Filter-A CFD Modelling
- Dry beneficiation of coal
- Dynamic modelling of integrated coke-oven wastewater treatment plant
- Effect of Waste Plastics in Physical Structure of Municipal Solid Wastes stored in Landfills and Anaerobic Digestion.
- Fluidized Bed Combustion
- Gasification of coal and biomass
- Gas-Particle Mass Transfer in a Short Converging Riser
- Heterogeneous catalysis for the for the production of biodiesel
- Immobilised Enzyme Nanoparticles
- Inverse Fluidization
- Kinetic Studies on Biochemical Production of Phosphatic Biofertiliser from Rock Phosphate Ore
- Kinetic Studies on Biochemical Production of Phosphatic Biofertiliser from Rock Phosphate Ore
- Methane enrichment by TSA technology
- Methanogenesis of low grade Indian coal
- Modeling transport through nanomembranes
- Modelling & Simulation of Integrated physico-chemical and biological treatment of wastewater
- Modelling & Simulation of lactic acid production in membrane-integrated hybrid system
- Modelling and simulation of industrial reactors and distillation columns
- Modelling and simulation of PSA-VSA integrated system
- Modelling nanofiltration of arsenic removal by membrane-integrated hybrid system
- Modelling of Diesel Particulate Filter (DPF)
- Modelling of Pyrolysis, Combustion and Gasification of Coal and Biomass
- Molecular dynamics simulations of nanodroplet and nano-channel flow
- Multiphase flow
- Nanofiltration
- Nature inspired meta heuristic optimization of industrial processes
- Noncatalytic Gas-Solid Reactions
- Novel Techno-economic Evaluation for Conversion & Re-refining of Used Lubricating Oils to Base Oil
- Oil Suspension
- Optimization and control
- Optimum gas absorption process development
- Performance Characteristics of Inverse Fluidized Bed Bioreactors with Special Reference to Bioplastic Synthesis
- Performance Analysis of Circulating Fluidised Bed Bioreactors employing Immobilised Enzyme Nanoparticles
- Phycoremediation of pollutants from industrial wastewater and assessment of biofuel production

- Pneumatic Drying of Wet-Particle in an uniform and Converging Riser Duct
- Pressure Swing Adsorption Mechanism for Separation
- Process Intensification towards sustainable technology
- Production of Biodegradable Plastics (PLLA) from Cheese Whey
- Production of plastic to petrol
- Pyrolysis of weeds
- Real time application of modelling and optimization of industrial processes
- Realistic nanoseparation modelling through on-line streaming potential measurement
- Refining of used lubricating oil
- Removal of Industrial Pollutant in an Inverted Fluidized Bed using Palm-seed Activated Charcoal
- Removal of phenol using shale
- Replacement of Chlorofluorocarbons from Conventional refrigeration systems
- Slurry Flow Modelling
- Studies on gas separation by nano-composite membrane
- Studies on Hydrodynamics and Mass Transfer in a Converging Inverted Fluidized Bed.
- Studies on Immobilised Cell / Enzyme Nanoparticles
- Studies on Synthesis of Lactic Acid from Agricultural / Food Wastes in Down Flow Stationary Fixed Film (DSFF) Bioreactors
- Surface modification of activated carbon by inert gas activating agent
- Synthesis of Lactic Acid from Cheese Whey and Molasses in Semifluidised Bed Biofilm Reactors
- Treatment of Industrial Wastewater
- Two phase flow modelling in pipeline and micro channel
- Fluorescence Spectroscopy, Development of Fluorescence sensor
- Isolation, Purification, Characterization and Chemical Modification of Polysaccharide
- Kinetics & mechanism of bio-inorganic reactions for modification on Pt(II) and Pd(II) based anticancer agents: Their Bioactivity, Speciation and DFT study
- Kinetics and mechanism of inorganic and bioorganic reactions
- Lipid and fatty acids of different fish species
- Lipid Chemistry in the field of biodiesel production
- Lipids analysis from different biomaterials
- MD simulation and modelling of biomolecules
- Medicinal Chemistry
- Modelling biological Ni and Cu sites supported by N,S donor ligands
- Organic synthesis of small molecules
- Organometallic chemistry
- Pollutants Present in Petro-Chemical, Pharmaceutical & Coke-Oven Wastewater.
- Polysaccharide chemistry and biochemistry
- Protein structure and dynamics
- Quality and quantity of different lipids in natural food resources
- Spatial and Temporal Variations of Ambient Air Quality
- Surface Chemistry
- Synthesis and application of nanomaterials for the reduction of environmental contaminants
- Synthesis and Characterisation of Cu- & Fe complexes
- Treatment of Textile and Dye Wastewater

DEPARTMENT OF CHEMISTRY

- Application of Bio-inspired Nanoparticles in Multicomponent organic transformations
- Application of Fenton's, Lime & Biological Treatment & their Comparative Assessment for the
- Application of Photo-Fenton's Oxidation & Biological Oxidation for Degradation of Selected
- Bioorganic Chemistry
- Chemistry of Transition metal-Schiff base ligand complexes
- Corrosion chemistry: Highly efficient Green and synthetic corrosion inhibitor
- Corrosion inhibition study using inhibitors
- Development of a suitable treatment scheme of common effluent generating from iron & steel, Thermal Power Plants and Chemical industries located in Durgapur industrial area.
- Development of natural fibre reinforced polyester composite material.
- Evaluation of Arsenic distribution through food chain contamination.

DEPARTMENT OF CIVIL ENGINEERING

- Analysis and design of offshore pipelines
- Application of machine learning techniques in Civil Engineering
- Auditing & maintenance of bridges
- Bioremediation and Nanotechnology
- Blast & wind impact on bridge
- Concrete Technologies
- Construction & Quality Control
- Contaminant migration through soil
- Development of Decision Support System for water resource management
- Development of Smart Concrete Structures.
- Engineering Limnology
- Environmental Geotechnics
- Experimental mechanics of concrete structures, Biodeposition on concrete
- Experimental set up for formation of river bed form and erosion around an island

- flood mitigation of river Kosi system lying in India and Nepal
- Impact of Climate change on water resources in a natural stream
- Mix design of pumpable concrete
- Pipe-soil interaction
- Reliability in Geotechnical Engineering
- Removal of heavy toxic metal from ground water using nanotechnology.
- Rural water management
- Setting up of a center of low-cost housing facilities.
- Soil-Structure Interaction
- Solid waste management
- Stability analysis of OC mine slopes
- Structural Control
- Structural reliability
- Wind energy Studies

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- Biometrics
- Computer Vision
- Deep Learning
- Digital Forensics
- Evolutionary Computing
- Fuzzy Decision Making
- Hardware Security and applications
- Human Activity Recognition
- Image Processing
- Information Security
- Machine Learning
- Medical Imaging
- Multi-Objective Optimization
- Multiprocessor and Multi-core Architecture
- Optimization of Multi-agent-systems
- Pattern Classification
- Semantic web technology
- Theory and applications of Cellular Automata
- Optical Networks
- Big Data and Social Network Analysis
- Multi Agent System
- Semantic Web

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

- Air pollution control, modelling and remediation strategies
- Arsenic remediation techniques
- Biological and pharmaceutical waste remediation strategies
- Contaminant transport through porous media
- Environmental impact on coal mining areas
- Geochemistry of sulphides from Kunderkocha Gold Mines
- Groundwater availability and its management

- Groundwater contaminant transport and its removal
- Groundwater Management technique
- Heavy metal removal from wastewater
- Impact of industrial pollution on the environment
- Remobilization of sulphides from Arunachal Himalaya
- Removal of Fluoride from groundwater
- Use of remote sensing in detection of subtle and obscure geological structure
- Water and Wastewater treatment technology
- Water purification systems

DEPARTMENT OF ELECTRICAL ENGINEERING

- Application of synchrophasor measurements in transmission and distribution system
- AGC with renewable energy systems, FACTS and PSS in restructured power systems
- Biomedical Instrumentation
- Control and Trajectory Tracking of Multi-link Robot arm manipulator, State and parameter estimation, target tracking
- Distributed Generation planning, Distribution network reconfiguration, renewable energy generation
- Design & real-time Implementation of Periodic Control for Non-minimum Phase time Delayed systems
- Electric vehicle planning in distribution system
- Estimation of dynamic system
- ELD, Evolutionary optimization techniques
- Electrical Power Systems State Estimation, Detection and Identification of bad data etc.
- Electromagnetic Levitation
- FACTS
- Feature Extraction from Biological Signals
- ICT enabled High Voltage Test system
- Investigation of Haematological disorders from blood cells using soft computing techniques
- Modelling of breakdown voltages using soft computing techniques
- On-line Monitoring of Partial Discharge in Transformer Oil
- Optimal Power Flow Studies
- Optimization in DSP Filter Designs
- Power System Stabilizer
- Price Forecasting
- Pulsewidth Modulation Techniques for Multilevel Inverters
- Side Lobe Reduction in Antenna Arrays
- Small Signal Stability Analysis in Power Systems
- State of Charge, State of Health estimation of Li-ion batteries.
- Synthesis and Characterization of Lanthanum Doped Barium Titanate Zirconate
- Unification of field forces and to explore some of the unanswered phenomena in nature and science
- Biomedical Instrumentation
- Analysis and control of self-excited induction generators

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

- Antenna Array Synthesis using Evolutionary Algorithms
- Antenna and Microwave Frontend Circuit components
- Array antenna failure detection and Correction
- Assistive technology
- Cellular IoT
- Cognitive Radio Networks
- Cooperative Communication
- Cognitive Radio Femtocell Networks
- D2D Communication
- Digital Signal processing
- Energy Harvesting using Piezoelectric devices
- Energy Harvesting based Relay Networks
- Fabrication and Characterization of On-Chip Antenna
- Free space optics
- GaN Power Electronics
- Gene Silencing
- Handoff issues in 5G
- IoT Infrastructure for Agriculture Industry
- LDMOS Devices
- Millimeter wave channel modelling
- Signal Processing
- Nanoscale Semiconductor Devices
- Neuromorphic System for Healthcare Applications
- Physical Layer Security
- Resistive Memory Devices
- Wireless Communication
- Sensors and Actuators
- Instrumentation and System Design

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

- Agricultural Economics
- Applied Linguistics
- Cultural Studies
- Canonical English Literature
- Development Economics
- Diaspora and Transnational Studies
- Digital Humanities
- Entrepreneurship Development
- Gender and Women Studies
- Globalization and Sustainable Development
- Industrial Economics
- Intercultural Communication
- International Economics
- Labour Economics
- Literary Theory
- Literature and Cinema
- Literature and Religion

- Managerial Economics
- Migration Studies
- Popular Culture
- Population Studies
- Postcolonial Studies
- Subaltern/Indigenous Studies
- Translation Studies
- Urban Economics

DEPARTMENT OF MANAGEMENT STUDIES

- Application of DEA for evaluating performance efficiency in Banking Sector,
- Application of DEA in Tourism/Destination Marketing,
- Application of optimization techniques in Business,
- Application of statistical software's in Marketing & Human resource Management,
- Banking sector,
- Behavioural Finance,
- BOP markets
- Business Environment,
- Capital Market,
- Causes and Impact of Fraud in Banking Sectors
- Corporate Finance
- Corporate Social Responsibility
- Digital Marketing
- Dividend Policy
- Efficiency Measurement with the Help of Data Envelopment Analysis
- Employee Engagement
- Employee Green Behaviour
- Financial market data analysis using soft computing techniques
- Impact of Corporate Social Responsibility
- Insurance Sector,
- Micro-Finance
- Mutual Funds,
- Pension sector,
- Portfolio optimization,
- Product & Brand Management
- Psychological Capital
- Public policy on Financial Services
- Sales & Distribution Management
- Service Marketing
- Stock Market Analysis
- Workplace Adaptability
- Workplace Resilience

DEPARTMENT OF MECHANICAL ENGINEERING

- Alternative fuels in IC Engine
- Analytical and semi-analytical solution techniques of problems of thermodynamics, heat transfer and fluid mechanics

- Application of thermodynamic principle in heat transfer and fluid mechanics problems
- Artificial roughness in Heat transfer
- Condensation in various engineering applications
- Fabrication of structured polymers through Hot Embossing.
- Fundamental Principle of Thermodynamics viz., Constructal Law, Law of Motive Force.
- Interacting flame dynamics (Experiment and modelling)
- Modelling of vortex induced vibration
- Micro additive Manufacturing
- Supply chain management
- Soft Robotics & Assistive Technology
- Solar thermal application
- Synchronization in pulse combustion
- Thermal Power Plant System Analysis with CO₂ Capture
- Water-energy nexus

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

- Corrosion fatigue/environmental assisted cracking of aluminium alloys and stainless steels and their weldments.
- Development of Al-based alloys for high temperature application
- Development of Al alloy based composites for wear resistant applications.
- Development of cast microalloyed steel.
- Development of high entropy alloys
- Development of TiC reinforced aluminium based metal matrix composite with and without a second reinforcement.
- Development of new metallic alloys for bio-implant application.
- Development of higher strength weather resistant metallic charge materials for BF/EAF use
- Development of the nickel free nitrogen bearing stainless steel by direct smelting through plasma route
- Development of thermal insulation bricks from integrated steel plant waste removal of impurities from liquid steel
- Design and development of nanocomposites for advanced electronic devices
- Development of in-situ Al-Mg₂Si composite for automobile application
- Effect of cyclic heat treatment on microstructure and properties of various grades of plain carbon steels.
- Effect of Y₂O₃ Addition on Oxidation Behaviour of Pressure-less Sintered ZrB₂-SiC Composite
- High temperature corrosion behaviour of steel in Industrial environment
- Semi-solid heat treatment of Al alloys. Mechanism of microstructural modification and subsequent improvement in properties by semi-solid heat treatment of some non-ferrous alloys.
- Severe plastic deformation of alloy and composites
- Structure-property correlation on ZrB₂ based ultra high temperature ceramic composite
- Structure-property correlation on ZrB₂-MoSi₂-SiC based ultra high temperature ceramic composites

- Study of high temperature wear behaviour of different materials.
- Synthesis and characterization of metallic glass matrix composite
- Synthesis and characterization of materials for biomedical application
- Synthesis and characterization of water based nanofluids
- The deformation behaviour of in-situ Al-Mg₂Si composites processed by severe plastic deformation
- Thermo-mechanical processing of micro alloyed steels

DEPARTMENT OF MATHEMATICS

- Algebraic Coding Theory
- Bio-mathematics
- Complex Analysis
- Computational Graph Theory
- Cryptography
- Electrokinetic Transport Phenomena
- Finite Field Theory
- Fixed Point Theory
- Fluid Dynamics
- Functional Analysis
- Fuzzy Mathematics
- Geophysics
- Hypergraphs
- Information Theory
- Integration Theory
- Mathematical Modelling
- Microfluidics and Nanofluidics Modelling
- Nonlinear Analysis
- Nonlinear Dynamics
- Nonlinear Waves
- Operations Research
- Optimization of dynamics system
- Plasma Physics
- Population Dynamics
- Portfolio Optimization
- Soft Computing
- Statistical Analysis
- Supply-chain Management
- Theoretical & Computational Fluid Dynamics
- Topology
- Uncertainty Theory

DEPARTMENT OF PHYSICS

- Bio-inspired Physics
- Characterization of optical detector and biosensor
- Characterizations and Study of Optical and Nonlinear Optical Properties of Semiconducting and Metallic Nanoparticles and Quantum Dots.
- Complex systems and Nonlinear dynamics

- Data-driven Computational modeling
- Development and characterization of nanomaterials using laser.
- Development of electrochemical fuel cell
- Development of polymer nanocomposites for flexible electronics devices
- Development of room temperature multiferroic materials
- Design of chaos based encryption algorithm for image encryption.
- Darwinian evolution and the emergence of structure-function relationship in biomolecules
- Development of a network of MPOs (Multi-parametric Geophysical Observatories): Geochemical precursors, Electromagnetic (EM) precursors, seismo-geochemical & seismo-geophysical modeling of earthquake precursors.
- Development of CW pumped random laser for speckle free imaging application.
- Electrokinetic treatment of soil.
- Experimental search of neutrinoless double beta decay
- Emergence of biological information processing in the primordial era
- Fabrication of Li-ion batteries using graphene based anode materials
- Fabrication of nanowire and optical detector
- Fluid velocity measuring instrument design and development using optical technique.
- Glancing angle and oblique angle deposition technique for nanostructure fabrication
- Graphene and high energy physics
- Graphene based low cost solar cells
- Graphene based low-cost highly selective gas sensors
- Graphene-metal oxide nanohybrids for supercapacitors
- Integrated and sustainable technology solutions for organic wastewater treatment
- Integrated and sustainable technology solutions for organic wastewater treatment
- Investigation on Geochemical and Geophysical Aspect for Geothermal Exploration and Helium Exploration.
- Investigation on Multi-parametric and Multi-station based Geochemical Precursors for Earthquakes.
- Investigation on Nonlinearity present in geochemical signals.
- Integrated and sustainable technology solutions for removal of organic contaminants from water bodies
- Integrated and sustainable technology solutions for removal of antibiotics from waterbodies
- Investigation on Geochemical and Geophysical Aspect for Geothermal Exploration
- Investigation on Earthquake Precursory Signals
- Large scale Extraction of helium from petroleum deposits and hydrothermal gas and its purification.
- Laser based instrument design and development.
- Large scale Extraction of helium from petroleum deposits and hydrothermal gas and its purification
- Low temperature characterization of nano-composites, conducting polymers and disordered alloys
- Mathematical modeling and nonlinear analysis of geochemical & geophysical data and medical data (EEG signals)
- Mathematical modeling and nonlinear analysis of bio-medical data (EEG signals, ECG signals)
- Mathematical epidemiology
- Metal extraction from flash
- Measurement of radioactive hazards
- Preparation and characterization of advanced polymer composites with carbon nanostructures
- Radiation monitoring (Radon-222) in soil, water and air of Damodar basin
- Simulation studies of Carbon Nanotubes and graphene based devices
- Simulation studies for background model for double beta decay experiment
- Studies on phenomenology of π - Boson, B-meson decays, Higgs boson and new physics.
- Speckle Metrology
- Synthesis of nano material for degradation of organic pollutants in wastewater
- Synthesis of nano material for degradation of antibiotics in water bodies
- Sparse based image processing.
- Synchronous communication system, studies on multiphase oscillator, nonlinear dynamics
- Synthesis and characterization of nanostructured materials.
- Synthesis and properties of carbon nanotube reinforced polymer nanocomposites
- Synthesis of high quality graphene by Chemical vapour deposition method
- Synthesis of Metal Nanoparticles by Laser Ablation and Study of Optical Properties
- Statistical physics of living systems
- Theoretical study of electronic, mechanical and thermal properties of graphene.
- Theoretical study of quantum Hall effect and high energy physics phenomena in graphene.
- Theoretical study of massive neutrino, black hole, gravitational wave, dark matter and dark energy.

ANNEXURE-11.4(I) TESTING & CONSULTANCY SERVICES RENDERED DURING 2019-20**DEPARTMENT OF CIVIL ENGINEERING**

Department	Title of the Project	Amount (Total)
Civil Engineering	Technical rate vetting of rural drinking water projects	0.3687 Lakh
Civil Engineering	Vetting of Design & Engineering of 20000 litres capacity underground water storage tank	0.295 Lakh
Civil Engineering	Testing & Consultancy to G+4 Bldg WSFL, Asansol Police Commisionarate	0.52 Lakh
Civil Engineering	Vetting of Layout & Civil Foundation /Structural drawings -2 Nos and Design Document for Domestic Water plant for IOCL Haldia	0.4 Lakh
Civil Engineering	Mix Design fot L& T Construction bankura	2.7 Lakh
Civil Engineering	Vetting of design & drawing for launching scheme of Bridge nos. (1) 63D between stations Diyodar and Mitha and (2) 76B between stations Bhabhar and Devgam.	1.8 Lakh
Civil Engineering	Vetting 1) G+5 Type-B Qtr. & 2) Transit Block for AAI Agartala	1.5 Lakh
Civil Engineering	Scrutiny /Vetting of Design Note & Drawings of Proposed Cargo Terminal Building at Agartala Airport	.975 Lakh
Civil Engineering	Concrete NDT for IPD BLOCK, AIIMS Kalyani Project, West Bengal..	1.26 Lakh
Civil Engineering	Scientific study of OC mines pit slope, dump slope stability and monitoring of slope at Gourangdih ABC OCP at Raniganj coalfield area.	7.67 Lakh
Civil Engineering	Testing and consultancy service for the expansion works for construction of G+3 sports hostel building and indoor sports facility at the University of Burdwan complex.	5.074 Lakh
Civil Engineering	Different types of proof checking on structural design and drawing	18.0 Lakh
Civil Engineering	Different types of proof checking on structural design and drawing	13.0 Lakhs
Civil Engineering	Consultancy charges for proof-checking/ vetting of erection scheme (cantilever) of Bridge No. 77 (2x45.7m – 25T loading) – cantilever launching scheme	0.708 Lakh
Civil Engineering	Consultancy charges for proof-checking/ vetting of erection scheme (cantilever) of Bridge No.: a) 76B (1x76.2m welded through type open web girder) and b) 63D (1x76.2m welded through type open web girder)	2.655 Lakh

DEPARTMENT OF ELECTRICAL ENGINEERING

Department	Title of the Project	Amount (Total)

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

Department	Title of the Project	Amount (Total)
ECL (Kenda Area)	Demographic and Socio-Economic Survey of Siduli (UG+OCP)	Rs. 15.34 Lakh

DEPARTMENT OF MECHANICAL ENGINEERING

Department	Title of the Project	Amount (Total)
Mechanical Engineering	Water sample collection and analysis of 10 numbers big outfalls in Damadar at Asansol area.	Rs.1,92,170

DEPARTMENT OF MANAGEMENT STUDIES

Department	Title of the Project	Amount (Total)

11.5(A) NUMBER OF FACULTY IN POSITION

Name of Department	Professor	Associate Prof	Assistant Professor (Grade I)	Assistant Professor (Grade II)	Trainee Teacher
	In position	In-position	In position		In position
Biotechnology	06	05	03	03	-
Chemical Engg	07	03	03	02	-
Chemistry	05	02	03	01	-
Civil Engineering	09	05	01	01	-
Computer Science & Engineering	05	11	11	04	-
Electrical Engg	08	02	06	05	01
Electronics & Communication Engineering	07	05	01	04	-
Earth & Environmental Science	01	00	01	01	-
Humanities and Social Sciences	01	03	01	01	-
Management Studies	02	06	00	02	-
Mathematics	03	05	02	01	-
Mechanical Engineering	08	06	07	07	02
Metallurgical & Materials Engg.	02	06	03	02	-
Physics	03	05	00	04	-
Total	67	64	42	38	03

ANNEXURE-11.5(B) LIST OF FACULTY**DEPARTMENT OF BIOTECHNOLOGY**

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Barik Amita, Ph.D.	Assistant Professor	Macromolecular interactions, RNA Bioinformatics, Intrinsic Disordered Proteins	amita.barik@bt.nitdgp.ac.in, amita.barik@gmail.com
Bhattacharjee Ashish, Ph.D.	Associate Professor	Cell Biology, Molecular mechanism of Inflammation and Cancer, Cell Signaling	ashish.bhattacharjee@bt.nitdgp.ac.in ashish15lo@yahoo.com
Chattopadhyay Sudip, Ph.D.	Professor	Developmental Biology and signal transduction	sudip.chattopadhyay@bt.nitdgp.ac.in sudipchatto@gmail.com
Chaudhuri Surabhi, Ph.D.	Professor	Biochemical Engineering, Food Biotechnology	surabhi.chaudhuri@bt.nitdgp.ac.in surabhi_c@yahoo.com
Dasgupta Mandal Dalia, Ph.D	Professor	Molecular toxicology, Bioremediation, Drug delivery system	dalia.dasgupta@bt.nitdgp.ac.in dasguptadalia@yahoo.com
De, Debojyoti, Ph.D.	Assistant Professor	Stem cells & Chemical Biology, Metabolic disorders	debojyoti.de@bt.nitdgp.ac.in debojyoti.de1984@gmail.com
Dey Apurba, Ph.D.	Professor	Biochemical Engineering, Environmental Biotechnology	apurbadey1960@gmail.com apurba.dey@bt.nitdgp.ac.in

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Ghosh Monidipa, Ph.D.	Associate Professor	Development and optimization of biosensor in disease detection; Parasite immunogenetics	gmonidipa@yahoo.com
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Mahata Nibedita, Ph.D.	Assistant Professor	Biochemistry, Cell Biology, and Immunology	nibedita.mahata@gmail.com nibedita.mahata@bt.nitdgp.ac.in
Mondal, Sudipta, Ph.D.	Assistant Professor	Peptide self-assembly, Protein folding and amyloid. Bionanotechnology	sudipta.mondal@bt.nitdgp.ac.in; sudiptamondal1983@gmail.com
Mukherjee Oindrilla, Dr.rer.nat	Assistant Professor	Host-pathogen interaction; Immunology; Microbiome	oindrilla.mukherjee@bt.nitdgp.ac.in mukherjee.oindrilla@gmail.com
Mukhopadhyay Sudit Sekhar, Ph.D.	Professor	Molecular Biology of Cancer, Human Genetics, Animal Biotechnology	suditmukhopadhy@yahoo.com
Roy Barman Subhankar, Ph.D.	Associate Professor	Molecular plant – fungus interactions, Plant molecular biology	subhankar.roybarman@bt.nitdgp.ac.in sroybarman@gmail.com
Saha, Sougata, Ph.D.	Assistant Professor	Cell and Molecular Biology, Cellular Stress responses, Obesity	sougata.saha@bt.nitdgp.ac.in sougatasaha2009@gmail.com

DEPARTMENT OF CHEMICAL ENGINEERING

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Ghanta K. C.	Professor	Multiphase Flow, Slurry Flow Modelling, Waste water treatment	kartik.ghanta@che.nitdgp.ac.in kartikghanta@gmail.com
Ghosh Chaudhuri R	Assistant Professor	Colloids and Interfacial science, Nanotechnology	rajib.ghoshchaudhuri@che.nitdgp.ac.in
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Lahiri, S. K.	Associate Professor	simulation, process modelling and optimization of industrial processes, artificial intelligence in process industry, Advance Process Control, Meta heuristic Optimization, soft sensor, slurry flow modelling	sandipkumar.lahiri@che.nitdgp.ac.in
Mandal M. K.	Associate Professor	Membrane Seapartion Processes, Catalytic Membrane Reactor, Nano material for Water and energy, Modeling and Simulation	mrinalmandal@gmail.com mrinalkanti.mandal@che.nitdgp.ac.in

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Paruya S.	Assistant Professor	Boiling Two-phase Flow, Optimization & Control	swapan.paruya@che.nitdgp.ac.in swapanparuya@rediffmail.com
Sadhukhan A. K.	Professor	Modelling and Simulation of Pyrolysis, Combustion and Gasification of Coal and Biomass	anupkumar.sadhukhan@che.nitdgp.ac.in t_sadhu@yahoo.com
Sikder J.	Associate Professor	Membrane Synthesis, Biofuels and byproducts, Photocatalysis, Process Optimization, Fermentation	jaya.sikder@che.nitdgp.ac.in umunique1@gmail.com

DEPARTMENT OF CHEMISTRY

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Adhikari Utpal, PhD	Assistant Professor	Synthesis of small molecules, carbohydrates and polysaccharides, Corrosion inhibition studies	utpal.adhikari@ch.nitdgp.ac.in utpalshuchi1@gmail.com
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Mukhopadhyay Bishnu Prasad, PhD	Professor	Bioinformatics – Protein Modelling, Molecular Modelling, Computer Aided Drug Design, Cancer (human) inhibitor Design, Protein Dynamics	bisnu.mukhopadhyay@ch.nitdgp.ac.in bpmk2@yahoo.com
Panja Sujit Sankar, PhD	Associate Professor	Fluorescence Spectroscopy Development of sensor	sujit.panja@ch.nitdgp.ac.in Sujit.panja@gmail.com
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Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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DEPARTMENT OF CIVIL ENGINEERING

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Roy Pronab PhD	Assistant Professor	Application of Machine Learning Techniques, Structural Engineering, Structural Reliability, Probability and Applied Statistics, Analysis and Design of offshore Pipelines, Pipe-soil interaction.	pronab.roy@ce.nitdgp.ac.in pronabroy@rediffmail.com
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Singha Roy Dilip Kumar, PhD	Professor	Structural Engineering-Composite & Experimental mechanics of Concrete and Composite structures/retrofitting & strengthening and Concrete technology with conventional & non-conventional materials	dsr_rec_dgp@yahoo.com dilip.singharoy@ce.nitdgp.ac.in dilip.sroy@gmail.com
Topdar Pijush, PhD	Associate Professor	Smart structures, composite and sandwich structures, structural rehabilitation and structural health monitoring	pijush.topdar@ce.nitdgp.ac.in, topdar72@yahoo.co.uk

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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Subhankar Majhi, M.Tech	Assistant Professor	VLSI, Computer Graphics	subhankar@cse.nitdgp.ac.in, subhankar_nitd@hotmail.com, skm.it.nitd.edu@gmail.com
Chandran Saravanan, PhD	Associate Professor	Digital Image Processing, Image Compression, Quality Of Images, Color Image Processing, Load Forecasting, Bio-Informatics	cs@cc.nitdgp.ac.in, dr.cs1973@gmail.com
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Dutta Animesh, Ph.D.	Associate Professor	Multi-agent systems modelling, Semantic web	animesh@cse.nitdgp.ac.in, animeshnit@gmail.com
Das Deepanwita, PhD.	Assistant Professor	Distributed Algorithms, Swarm Robotics	deepanwita@cse.nitdgp.ac.in
Sen Bibhash,	Associate Professor	Software Engineering, Design and Testing of Digital Logic around Quantum-dot Cellular Automata and Reversible Logic	bibhash.sen@cse.nitdgp.ac.in
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Sujoy Saha, PhD	Assistant Professor	Modelling & System Development for Challenged Network Scenarios. Internet of Things. Urban Computing: (a) Intelligent Transport System (b) Environment Monitoring & Prediction Visible Light Communication System	sujoy.saha@cse.nitdgp.ac.in
Kisku Dakshina Ranjan, PhD	Associate Professor (On Contract)	Biometrics, Human Activity Recognition, Machine Learning, Machine Vision, Pattern Recognition, Digital Forensics	drkisku@cse.nitdgp.ac.in drkisku@gmail.com

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Adhikari Kalyan, PhD	Professor	Groundwater, Contaminant transport, GW Modelling, Remediation, Application of RS & GIS in Environmental problems, contaminant removal through adsorption technique	k_adh@yahoo.com kalyan.adhikari@ees.nitdgp.ac.in
Mondal Sandip, PhD	Assistant Professor	Environment, Groundwater Contaminant Transport and its Removal, Pollutants removal from water and wastewater	san.mondal@gmail.com sandip.mondal@ees.nitdgp.ac.in
Ozha Manoj Kumar, PhD	Assistant Professor	Ore Geology, Geochemistry, and Metamorphic Petrology	manojzh@gmail.com manoj.ozha@ees.nitdgp.ac.in

DEPARTMENT OF ELECTRICAL ENGINEERING

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Rajdip Dey	Trainee Teacher	Use of power electronics converters in power system, Future grids	dey.raj09@gmail.com rajdip.dey@ee.nitdgp.ac.in
Ahmed Irfan	Assistant Professor	Multilevel Inverters, Pulse-width modulation techniques for multilevel inverters, Electric and Hybrid Electric Vehicles	ahmed.irfan@ee.nitdgp.ac.in irfan_nit@rediffmail.com
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Bhattacharya Aniruddha	Assistant Professor	Power System Analysis, Power System Small Signal Stability, Power System Operation, Microgrid Operation, Power System Reliability, Optimization	aniruddha.bhattacharya@ee.nitdgp.ac.in bhattacharya.aniruddha@gmail.com
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Bera Tushar Kanti	Assistant Professor	Biomedical Instrumentation, Measurement, Sensing and Imaging	tkbera77@gmail.com tusharanti.bera@ee.nitdgp.ac.in
Saha Roy Biman Kumar	Assistant Professor	Use of synchrophasor measurements in Power System	bk.saharoy@ee.nitdgp.ac.in

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Bhattacharjee Anup Kumar, PhD	Professor	Cryptography, Antenna, Microwave	anupkumar.bhattacharaya@ece.nitdgp.ac.in akbece12@yahoo.com
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Maji Banshi Badan, PhD	Professor	Microwave, Electronics Devices, Electromagnetics	banshibadan.majhi@ece.nitdgp.ac.in
Majumder Aurpan	Assistant Professor	Image Processing, Communication, Pattern Recognition	aurpan.majumder@ece.nitdgp.ac.in reach2am@yahoo.com
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Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Sapana Ranwa, PhD	Assistant Professor	Micro and Nanoelectronics, Gas sensors, Nanodevice Fabrications	sapana.ranwa@ece.nitdgp.ac.in
Nilanjan Chattaraj	Assistant Professor	Electromechanical sensors and actuators	nilanjan.chattaraj@ece.nitdgp.ac.in

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Sengupta, Partha Pratim	Professor	International Economics, Globalization & Development, Managerial Economics, Entrepreneurship Development	parthapratim.sengupta@hu.nitdgp.ac.in
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Modak, Arindam	Associate Professor	Canonical English Literature, Literary Theory	modak.arindam@hu.nitdgp.ac.in
Rai, Shri Krishan	Associate Professor	Religion, Cinema, and Literary Theory	shrikrishanrai@hu.nitdgp.ac.in
Chakraborty, Debasis	Assistant Professor	Labour Economics, Urban Economics, Development Economics, Migration Studies, Agricultural Economics	debasis.chakraborty@hu.nitdgp.ac.in
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DEPARTMENT OF PHYSICS

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Chakraborty Amit, PhD	Professor	Graphene, carbon nanotubes & their composites with polymer, metal, semiconductors for solar photovoltaics, supercapacitors, gas sensors and hydrogen evolution by photocatalysis	amit.chakraborty@phy.nitdgp.ac.in
Chaudhuri Hirok, Ph.D	Associate Professor	Geothermal Exploration Helium Exploration. Nonlinear analysis of geochemical & geophysical data, bio-medical data Earthquake precursory signals Integrated and sustainable technology solutions for organic wastewater treatment.	hirok.chaudhuri@phy.nitdgp.ac.in
Das Soumik, PhD	Assistant Professor	Double beta decay, experimental physics	soumik.das@phy.nitdgp.ac.in
Ghosh Abhijit, PhD	Assistant Professor	Applied Optics (Holography, Interferometry, Optical Metrology, Optical Instrumentation, Laser Application)	
Ghosh Sayantari, PhD	Assistant Professor	Statistical physics of complex systems; Dynamics of nonlinear natural systems; Early warning signatures of regime shifts; Social networks and information diffusion; emergent dynamics, criticality and stochasticity in synthetic and systems biology;	abhijit.ghosh@phy.nitdgp.ac.in
Hemachander Subramanian, Ph.D	Assistant Professor	Theoretical biophysics, Soft condensed matter physics, computational modeling	hemachander@gmail.com hemachander.subramanian@phy.nitdgp.ac.in
Kumbhakar Pathik, PhD	Professor & Head	Nanophotonics, Nonlinear Optics, 2D Materials, Random Laser, Green synthesis, Carbon Quantum Dots, Energy Harvesting, Triboelectric nanogenerators, Photocatalytic effects, Hydrogen Energy Evolution	pathik.kumbhakar@phy.nitdgp.ac.in

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Meikap Ajit Kumar, PhD	Professor & Dean (R&C)	Low Temperature Characterisation, Thin-film Technology, Conducting polymers, Nanocomposites	ajit.meikap@phy.nitdgp.ac.in ak_meikap@yahoo.com
Mondal Mrinal Kanti, Ph. D.	Associate Professor	Electronics	mrinalkanti.mandal@phy.nitdgp.ac.in nitmkm@yahoo.co.in
Sahoo Sukadev, Ph. D.	Associate Professor	Theoretical High Energy Physics: Phenomenology of τ boson, B meson decays, Higgs boson and new physics. Quantum Hall effect and high energy physics phenomena in graphene	sukadev.sahoo@phy.nitdgp.ac.in sukadevsahoo@yahoo.com
Mondal Aniruddha, Ph.D	Associate Professor	Fabrication of 1d metal oxide semiconductor nanostructure by using glancing angle deposition technique and fabrication of UV-Vis detector, plasmonic detector, hybrid semiconductor detectors.	aniruddha.mondal@phy.nitdgp.ac.in, aniruddhamo@gmail.com
Ghosh Abhijit, Ph.D.	Assistant Professor	Holographic Optical Elements, Photovoltaic Concentrator, Laser based Instrumentation, Speckle Metrology	abhijit.ghosh@phy.nitdgp.ac.in

DEPARTMENT OF MANAGEMENT STUDIES

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
Bandyopadhyay Gautam	Associate Professor	Portfolio optimization ,Application of DEA in Tourism/Destination Marketing, Application of DEA for evaluating performance efficiency in Banking Sector, Application of optimization techniques in Business, Application of statistical software's in Marketing & Human resource Management, Financial market data analysis using soft computing techniques.	math_gb@yahoo.co.in
Banerjee Neelotpaul	Associate Professor and HOD	Advertising, Consumer Behaviour, Marketing Communications, Neuromarketing Services Marketing Social Media Marketing	neelotpaul.banerjee@dms.nitdgp.ac.in
De, Anupam,	Associate Professor	Corporate Finance, Capital Structure Issues, Working Capital Management, Financial Ratio Analysis, Capital Budgeting, Banking and Insurance, Behavioural Finance	anupamde.ca@gmail.com; anupam.de@dms.nitdgp.ac.in
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Pal Durba,	Associate Professor	Psychological Capital, OCB, Employee Engagement, Organizational Spirituality, Workplace Adaptability, Employee Green Behaviour, Workplace Resilience, Sports Psychology	durba.pal@dms.nitdgp.ac.in dr.durba.pal@gmail.com

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Sarkar, Subhadip	Assistant Professor	SCM, OR, TQM	rajsarkar77@yahoo.co.in

DEPARTMENT OF MATHEMATICS

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Pal Pinaki, PhD	Associate Professor	Nonlinear Dynamics, Instabilities in Rayleigh Benard convection, Complex Dynamical Systems	pinaki.math@gmail.com, pinaki.pal@maths.nitdgp.ac.in
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DEPARTMENT OF MECHANICAL ENGINEERING

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Name	Designation	Areas of Research Interest	Email id (Institute & other id)
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Pramanik Susanta, Ph.D	Associate Professor	Iron Making & Steel Making	susanta.pramanik@mme.nitdgp.ac.in sus_met@yahoo.com
Show Bijay Kumar, Ph.D	Associate Professor	Microstructure-property correlation and wear behaviour of different materials.	bijay.show@mme.nitdgp.ac.in bijayshow@gmail.com
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11.5(C) NEW APPOINTMENT OF FACULTY DURING THE YEAR 2019-20

Sl.No	Name	Department	Designation	Date of Joining
1.	Lahiri Kr. Sandip.	Chemical Engg.	Associate Professor	08.04.2019
2.	Barik Amita	Biotech	Asstt. Prof. Gr-II	11.04.2019

ANNEXURE – 11.5(D) RETIREMENT, RESIGNATION AND VOLUNTARY RETIREMENT OF FACULTY DURING THE YEAR

Sl. No.	Name	Department	Designation	Date of retirement/ Resignation
1	Gangopadhyay A	Earth & Env't. Studies	Professor	30.04.2019
2	Sanyal Goutam	Comp. Sc. & Engg.	Professor	31.08.2019
3	Mukhopadhyay B.P	Chemistry	Professor	31.12.2019

ANNEXURE-11.6(A) LIST OF OFFICERS

Registrar	Sen Sharma Soumya
Deputy Registrar	Chattopadhyay Alope Kr. Kumar Asit Mukherjee Uday Chandra Ray Dhruvajyoti
Assistant. Registrar	Bhattacharya Sayan Das Ashutosh Mondal Debasish Sardar Amiya Kumar
Executive Engineer	Halder Tanmay
Physical Training Instructor	Mukherjee Hillol
LIBRARY	
Librarian	Vacant
Deputy Librarian	Vacant
Assistant Librarian	Kumar Jitendra
WORKSHOP	
Superintendent	Vacant
REGISTRAR'S SECRETARIAT	
Technical Officer	Saha Santosh Kr.
MEDICAL UNIT-CUM-HOSPITAL	
Senior Medical Officer	Sarkar Banhi Kumar (Dr.)
Medical Officer(s)	Patra Sucharita (Dr.) Prabhavati G (Dr.)
ESTATE SECTION	
Security Officer	Bhagat Ajit Kumar

ANNEXURE-11.6(B) IN POSITION POSTS OF OFFICERS AND NUMBER IN POSITION

	Sanctioned	In position
Registrar	1	1
Joint Registrar	-	04
Dy. Registrar	4	-
Asstt. Registrar	7	4
Dy. Librarian	1	vacant
Assistant Librarian	1	1
Principal SAS Officer	0	vacant
Sr. SAS Officer	1	vacant
SAS Officer	1	vacant
Principal Scientific/Technical Officer	2	vacant
Sr. Scientific/Technical Officer	1	vacant
Scientific/Technical Officer	3	1
Superintendent Engineer	1	vacant
Executive Engineer(Elect/Civil)	2	1
Senior Medical Officer	1	1
Medical Officer	2	2
Security Officer	1	1
Physical Training Inst.	-	1
	29	17

ANNEXURE-11.6(C) NUMBER OF TECHNICAL & ADMINISTRATIVE STAFF MEMBERS

1.	Tech. Asstt.	00
2.	Sr. Tech. Asstt.	17
3.	Tech. Asstt. (SG-II)	17
4.	Tech. Asstt. (SG-I)	07
5.	Sr. Library Infor. Asstt.	01
6.	Sr. Technician	02
7.	Technician(SG-I)	03
8.	Laboratory Asstt.	01
9.	Pharmacist SG-I	01
10.	Superintendent	03
11.	Sr. Superintendent	04
12.	Superintendent(SG-II)	05
13.	Superintendent(SG-I)	01
14.	Staff Nurse	01
15.	Junior Assistant	02
16.	Sr. Assistant	07
17.	Assistant (SG-II)	10
18.	Assistant (SG-I)	05
19.	Attendant	03
20.	Sr. Attendant	13
21.	Attendant (SG-II)	09
22.	Attendant (SG-I)	06

ANNEXURE-11.6(D) NEW RECRUITMENT OF STAFF

Sl. No	Name	Department	Designation	Date of Joining
01	NIL			

ANNEXURE-11.6(E) RETIREMENT, RESIGNATION, DEATH AND VOLUNTARY RETIREMENT OF STAFF DURING THE YEAR.

Sl. No	Name	Department/ Section	Designation	Date of Retirement
1	Harizon Enait	Maint. Section	Sweeper	30.04.2018
2	Biswas Uttam	Estate Section	Driver	30.04.2018
3	Chaudhury Sudin	Reg. Secretariat	Attendant(SG-I)	31.12.2018
4	Das Suchitra	Dir. Secretariat	Attendant	18.09.2018(Expired)
5	Sing Surendra	ECE	Attendant(SG-I)	21.12.2018(Expired)

ANNEXURE – 11.7(A) FACULTY DEPUTED ON QIP (DOCTORAL PROGRAMME) DURING THIS PERIOD

NIL

ANNEXURE–11.7(B) SEMINARS, SUMMER/WINTER SCHOOLS, SHORT TERM COURSES ATTENDED BY FACULTY MEMBERS DURING 2019-20**DEPARTMENT OF BIOTECHNOLOGY**

Sl. No	Name	Name of the Programme	Organized by	Date of the programme
1.	Barik, A.	Young Scientists conference- India International Science Festival, Kolkata	Ministries and Departments of the Government of India and Vijnana Bharati (Vibha)	November 5-8, 2019
2.	Barik, A.	12th Young Investigators Meeting (YIM), Mahabalipuram,2020	India Bioscience	February 14-18, 2020
3.	Bhattacharjee,A.	Local meeting of Society of Biological Chemistry, Puri	Society of Biological Chemists	April 18-21, 2019
4	Bhattacharjee,A.	10th RLS conclave organized by NBRC Manesar, Hariyana	Dept. of Biotechnology Govt. of India	April 28 to May 1, 2019

Sl. No	Name	Name of the Programme	Organized by	Date of the programme
5	Dey, A.	International Conference on Water, Energy and Environmental Sustainability 2020	TEQIP-III	January 13-15, 2020
6	Mondal, S.	Young Scientists conference-India International Science Festival, Kolkata	Ministries and Departments of the Government of India and Vijnana Bharati (Vibha)	November 5-8, 2019

DEPARTMENT OF CHEMICAL ENGINEERING

Sl. No	Name	Name of the Programme	Organized by	Date of the programme
1	Halder G.N	Role of microbes on Health, Agriculture and Environment	NIT Durgapur	June 19-21, 2019

DEPARTMENT OF CIVIL ENGINEERING

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1	Roy Pronab	CEP, NIT Durgapur Sponsored Two days workshop on of SAR for NBA	NIT Durgapur	June 7-8, 2019
2.	Roy Pronab	TEQIP-III Sponsored One-week workshop on Recent Trends in Machine Learning and IoT	CSE Department, NIT Durgapur	June 17-21, 2019
3	Samanta Amiya Kumar	Advanced Course on "Wind Loads and Effects on Structures (WiLES 2019)"	CSIR-SERC, Chennai	18-20 December 2019
4	Samanta Amiya Kumar	Professional Development Training PDT /Faculty Dev Program	IIM Indore	17-21 June 2019
5	Samanta Amiya Kumar	Training programme on "GFR, E-Procurement & GEM"	NIT Durgapur	Dec 9-10, 2019

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1	Tandra Pal	6th Professional Development Training Program under TEQIP-III	IIM, Kashipur	June 24-28, 2019
2		Das Deepanwita	Advances in Robotics 2019	Indian Institute of Technology Madras

DEPARTMENT OF ELECTRICAL ENGINEERING

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1.	Banerjee Subrata (as Invited Speaker)	TEQIP III sponsored 'Application of Power Electronics and Control Systems in Power Systems'	NIT Manipur	May 20-24, 2019
2.	Banerjee Subrata (as Invited Speaker)	National Workshop, 'Advances in Energy Storage Technologies, Systems and Materials (AESTSM-2020)	CSIR-CMERI	January 23-24, 2020.
3.	Biman Kumar Saha Roy	Machine Learning for Biomedical Image Analysis	NIT Durgapur	November 12-16, 2019

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
4.	Tushar kanti Bera (as Speaker)	TEQIP III sponsored Five days' workshop on Intelligent Systems: Challenges, Techniques, and Applications (ISCTA 2019)	NIT Durgapur	Oct. 15-19, 2019
5.	Tushar kanti Bera	IoT applications in advanced manufacturing	SCIR-CMERI Durgapur	February 3-4, 2020
6.	Tushar kanti Bera	Internet of Things (IoT) and AI for Precision Agriculture: Technologies and Applications	SCIR-CMERI Durgapur	February 6-7, 2020

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1.	Mondal, Hemanta Kumar	FDP on "Antenna Trends",	Electronics and ICT Academies through National Knowledge Network at NIT Durgapur as Remote Centre with NIT Patna under the "Scheme of financial assistance for setting up of Electronics and ICT Academies" by the Ministry of Electronics and Information Technology (MeitY), Government of India	01.07.2019 to 05.07.2019
2.	Mondal, Hemanta Kumar	IEP on "Testing and Design-for-Testability for Digital Integrated Circuits" under "Special Manpower Development Programme for chips to system design (SMDP-C2SD) project.	IEST, Shibpur, India	26.08.2019 to 30.08.2019
3.	Mandal, Sujit Kumar	The Faculty Development Programme on "VLSI Chip Design Hands on using open source EDA"	Jointly organized by Electronics and ICT Academies, NIT Patna and IIT Guwahati under the Scheme of financial assistance MeitY, Government through National Knowledge Network remotely at NIT Durgapur.	08.07.2019 to 12.07.2019
4.	Mandal, Sujit Kumar	The Faculty Development Programme on "Robotics & AI"	Jointly organized by Electronics and ICT Academies, NIT Patna and IIT Guwahati under the Scheme of financial assistance MeitY, Government through National Knowledge Network remotely at NIT Durgapur.	24.06.2019 to 28.06.2019
5.	Chattaraj, N.	FDP on "Antenna Trends",	Electronics and ICT Academies through National Knowledge Network at NIT Durgapur as Remote Centre with NIT Patna under the "Scheme of financial assistance for setting up of Electronics and ICT Academies" by the Ministry of Electronics and Information Technology (MeitY), Government of India	01.07.2019 to 05.07.2019
6.	Chattaraj, N.	The Faculty Development Programme on "VLSI Chip Design Hands on using open source EDA"	Jointly organized by Electronics and ICT Academies, NIT Patna and IIT Guwahati under the Scheme of financial assistance MeitY, Government through National Knowledge Network remotely at NIT Durgapur.	08.07.2019 to 12.07.2019

DEPARTMENT OF MANAGEMENT STUDIES

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1	De Anupam	Preparation of SAR for NBA	NIT Durgapur	7-8 June, 2019
2	Paul, U	Faculty Development Programme	IIM Ahmedabad	May 15-June 30, 2019

DEPARTMENT OF MATHEMATICS

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1	Dey, L.K.	85th Annual Conference of Indian Mathematical Society – An International Meet	Department of Mathematics, IIT Kharagpur	Nov 22 – 25, 2019
2	Dey, L.K.	Collaborative research visit	Department of Mathematics, North Bengal University	Nov 11 – 15, 2019
3	Gopmandal, P. P.	Mathematical Tools for Boundary Value Problems and applications	IIT Kharagpur	March 9-13, 2020
4	Pal, P.	6th International Conference on Complex Dynamical Systems and Applications 2020	Central University of Rajasthan	February 21-23, 2020
5	Pal, P.	12th Conference on Nonlinear Systems and Dynamics	IIT Kanpur	December 12-15, 2019
6	Pal, P.	National Conference on Nonlinear Dynamics and Applications	Jadavpur University	March 13, 2020
7	Pal, P.	9th International Scientific Conference on Physics and Control	Innopolis University, Russia	September 8-11, 2019
8	Pal, A.	All India NIT Students' Conference	NIT Surat	September 15-16, 2019
9	Pal, A.	International Conference on Frontiers of Operations Research & Business Studies (FORBS 2019)	Calcutta Business School	December 27-28, 2019
10	Pal, A.	International Conference on Computer Applications in Industry and Engineering (CAINE 2019)	ISCA, USA	Sep 30- Oct 02, 2019
11	Sarkar (Mondal), S.	2nd Conference of the Arabian Journal of Geosciences (CAJG 2019)	Tunisia, North Africa.	Nov. 25-28, 2019

DEPARTMENT OF MECHANICAL ENGINEERING

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1	Jana, K.	11th International Exergy, Energy and Environment Symposium	SRM IST, UOIT	July 14-18, 2019
2	Karmakar Sujit	TEQIP-III sponsored short-term course on "Clean Energy Technologies"	IIT Guwahati	June 10-14, 2019
3	Mondal, S.	International Workshop on Energy, Environment and Multiphase flows (IWEEM-2020)	IIT Kanpur	February 24 - 26, 2020

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1.	Bera S.	ADMAT 2019	DMRL, Hyderabad	Sep 2019
2.	Bera S.	APMC 2020	Hyderabad	Feb 2020
3.	Mandal, A.K.	33rd National Convention of Metallurgical and Materials Engineers and National Conference on 'Climate Responsive Technologies vis-a-vis Iron and Steel Production Scenario'	IEI, Durgapur Local Chapter	17.01.2020-18.01.2020

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
4.	Mandal, A.K.	International Conference on Management and Recycling of Metallurgical Wastes MetWaste-2020 ,	Department of Metallurgical Engineering, IIT(BHU), Varanasi, India & University of Edinburgh, Scotland, UK	22.02.2020-23.02.2020
5.	Show B.K.	12th Asia Pacific Microscopy Conference (APMC-2020)	Electron Microscope Society of India (EMSI)	3-7 Feb 2020
6.	M. Mallik	ISMANAM-2019, 26th International Symposium on Metastable, Amorphous and Nanostructured Materials	IIT Madras, Chennai, India	July 8-12, 2019
7.	M. Mallik	ADMAT 2019	DMRL, Hayderabad, India	September 23-25, 2019

DEPARTMENT OF PHYSICS

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1	Chaudhuri H.	Sustainable Water Resources Management under Changed Climate"	Jadavpur University, NIT Durgapur and Calcutta Women College	March 13-15, 2020
2	Chaudhuri H.	4th International Geothermal Conference 2020	Pandit Deendayal Petroleum University, Gandhinagar, India	January 21, 2020
3	Chaudhuri H.	International Conference on green technologies, circular economy and restoration of cultural heritage	RBS College Agra, India	November 28-29, 2019
4	Chaudhuri H.	6th International Symposium on Soil and Groundwater (SG-2019) at Shenzhen, China	Chinese Society of Environmental Sciences, India	October 26-28, 2019
5	Chaudhuri H.	International Conference ICCAES 2019	IEM, Kolkata, India	September 21, 2019
6	Chaudhuri H.	National Workshop on Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity and Food Safety	Haldia Institute of Technology, India	August 30-31, 2019
7	Chaudhuri H.	One day workshop on Intellectual Property Rights (IPR 2019)	NIT Durgapur, India	May 14, 2019
8	Chaudhuri H.	One day workshop on "History of Science: Paradigms and Dimensions"	NIT Durgapur & IEST Shibpur, India	April 16, 2019
9	Chaudhuri H.	SERB School on "Smart Energy Materials & Device"	IIT-ISM Dhanbad, India	April 29, 2019 - May 3, 2019
10.	Kumbhakar P.	TEQIP Sponsored Short term Course on Recent Advances in Theoretical and Computational Physics with Hands on Training in Computer Programming (Invited talk)	NIT Durgapur, India	June 10-14, 2019
11.	Kumbhakar P.	Refresher Course in Application of Nano Sciences in modern day research and technology (Invited talk)	UGC-Human Resource Development Centre, The University of Burdwan, Burdwan, India	June 28, 2019

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
12.	Kumbhakar P.	National Seminar on Condensed Matter Physics including Laser Applications, 2020 (NSCMPLA) (Invited talk)	Department of Physics, University of Burdwan, Burdwan, India.	February 13-14, 2020
13.	Meikap A.K.	6th International Conference on Advanced Nanomaterials & Nanotechnology (ICANN-2019)	Indian Institute of Technology Guwahati, Guwahati – 781039, India	December 18-21, 2019
14	Ghosh A.	International Conference on Optics & Electro-Optics	IRDE Dehradun, India	19-22 October, 2019
15	Ghosh S.	11th International Conference on Computing, Communication and Networking Technologies	IIT Kharagpur, India	July 1-3, 2020
16	Ghosh S.	Recent Developments on the Understanding of Epidemic Dynamics and Studying the Evolution of Our Universe by Probing the Neutral Hydrogen Distribution Over the Cosmological Time Scales (Invited lecture)	Department of Physics, B.B. College, Asansol, India.	June 20, 2020
17	Ghosh S.	Women Empowerment in India: Challenging Obstacles and Creating Opportunities (Invited lecture)	NIT Durgapur, India	January 6-10, 2020

ANNEXURE – 11.7(C) TRAINING OF STAFF MEMBERS DURING 2019-20

DEPARTMENT OF MECHANICAL ENGINEERING

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1.	Aikat, K.	Workshop on "Intellectual Property Rights (IPR 2019)"	NIT Durgapur	May 14, 2019
2.	Aikat, K.	Workshop on Preparation of SAR for NBA	NIT Durgapur	June 07-08, 2019
3.	Mahata, N.	Workshop on "Intellectual Property Rights (IPR 2019)"	NIT Durgapur	May 14, 2019
4.	Mahata, N.	Life Skills Management and Women Empowerment	NIT Durgapur	August 6-7, 2019
5.	Mukherjee, O.	Workshop on "Intellectual Property Rights (IPR 2019)"	NIT Durgapur	May 14, 2019
6.	Saha, S.	Continuing Education Programme Workshop on Preparation of SAR for NBA	NIT Durgapur	June 07-08, 2019

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

SL. NO	Name	Name of the Programme	Organized by	Date of the programme
1.	Banerjee, S.	Social Media Management and Practices	MHRD	27.12.2019

11.7(D) INTERDISCIPLINARY CENTERS

Centre of Biomedical Engineering & Assistive Technology (BEAT)

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

WORKSHOPS/SEMINARS ORGANISED (2019-20)

SL. NO	Name	Organized by	Date of the programme
1.	Dr. S.N. Jajodia@SAHAS, Prof. Mallika Banerjee@CU, Dr. D. Chandrasekhar@ Dyslexia Association et al.	Education of Children With Special Need (ECN2019)	July 12-13, 2019
1	Prof. Suresh Devasahayam CMC Vellore	Recent Trends in Biomedical Engineering : RTBE 2020	Jan 3-7, 2020
2	Prof. Santanu Dhara, IIT KGP		
3	Prof. Bikramjit Basu, IISc Bangalore		
4	Dr. Subhadip Bodhak, CSIR-CGCRI		
5	Dr. Ananya Barui, IEST-Shibpur.		
6	Dr. Debrupa Lahiri IIT ROORKEE		
7	Dr. Piyali Basak, JU		
8	Dr. Shikha, CMERI		
9	Dr. KOUSHIK CHATERJEE IISC		
10	Dr. SUMAN CHAKRABORTY IITKGP		
11	Dr. Monidipa Ghosh BT NITDGP		
12	Dr. Tushar K Bera EE NITDGP		

OTHER INFORMATION:

Centre of BEAT has got approval of floating open Elective at B.Tech Level 7th Semester, XE0742 : Medical Instrumentation & Assistive Technology.

• CENTER FOR ADVANCED RESEARCH ON ENERGY (CARE)

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-elctro-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.

CARE ACTIVITIES 2019-20

1. International Conference on Clean And Renewable Energy (ICCARE 2019) From 10th to 12th July, 2019 at NIT Durgapur.
2. PhD program
3. Interdisciplinary research activities in the area of energy

JOURNAL PAPERS

1. Sannigrahi, S., Ghatak, S. R., Acharjee, P., November, 2020. Multi-Scenario Based Bi-Level Coordinated Planning of Active Distribution System Under Uncertain Environment. *IEEE Transactions on Industry Applications*, 56(1), 850-863.
2. Ghatak, S. R., Sannigrahi, S., Acharjee, P., January 2020. Multiobjective Framework for Optimal Integration of Solar Energy Source in Three-Phase Unbalanced Distribution Network. *IEEE Transactions on Industry Applications*, 56(3), 3068-3078.
3. Maji, T. K., Acharjee, P., January 2020. Operational-based Techno-economic PMU Installation Approach Using Grey Wolf Optimisation Algorithm (GWOA). *IET Generation, Transmission, & Distribution*, 14(1), 70-78.
4. Sannigrahi, S., Ghatak, S. R., Acharjee, P., July 2019. Multi-objective optimisation-based active distribution system planning with reconfiguration, intermittent RES, and DSTATCOM. *IET Renewable Power Generation*, 13(13), 2418-2429.
5. Sannigrahi, S., Ghatak, S. R., Acharjee, P., June, 2019. Fuzzy logic-based rooted tree optimization algorithm for strategic incorporation of DG and DSTATCOM. *International Transaction on Electrical Energy System*, 29(8), 1-30.
6. Sannigrahi, S., Ghatak, S. R., Acharjee, P., May 2019. Strategically incorporation of RES and DSTATCOM for techno-economic-environmental benefits using search space reduction-based ICSSA. *IET Generation, Transmission & Distribution*, 13(8), 1369-1381.
7. Acharjee P., Sept. 2019. Improvement of the line losses, weaker buses and saddle-node-bifurcation points using reconfigurations of the identified suitable lines. *International Journal of Power and Energy Conversion (IJPEC)*,10(3),312-330.
8. Ghatak, S. R., Sannigrahi, S., Acharjee, P., September 2019. Multi-objective Approach for Strategic incorporation of Solar Energy Source, Battery Storage System, and DSTATCOM in a Smart Grid Environment. *IEEE Systems Journal*, 13(3), 3038-3049.
9. Dey, P., Mitra, S., Bhattacharya, A., Das, P., June 2019. Comparative study of the effects of SVC and TCSC on the small signal stability of a power system with renewables. *Journal of Renewable and Sustainable Energy (AIP)*, 11(3), 01-14.
10. Dey, P., Bhattacharya, A., Das P., April, 2019. Tuned Power System Stabilizer for Enhancing Small Signal Stability of Large Interconnected Power System. *Caribbean Journal of Science*; 53(1) 843-857.
11. Das, D., Bhattacharya, A., Ray, R.N., May 2019. Dragonfly Algorithm for Solving Probabilistic Economic Load Dispatch problems. *Neural Computing & Applications (Springer)*, 32, 3029-3045.
12. Saha, A., Bhattacharya, A., Das, P., Chakraborty, A.K., September 2019. HSOS: a novel hybrid algorithm for solving the transient-stability-constrained OPF problem. *Soft Computing (Springer)*, 24, 7481–7510.
13. Saha, A., Bhattacharya, A., Das, P., Chakraborty, AK., December 2019. A novel approach towards uncertainty modeling in multiobjective optimal power flow with renewable integration. *International Transaction on Electrical Energy Systems (Wiley online Library)*, 29 (12).
14. Mishra, R., Banerjee, U., Sekhar, T. N. S. C., Saha, T. K., June, 2019. Development and implementation of control of stand-alone PMSG-based distributed energy system with variation in input and output parameters. *IET Electric Power Applications*, 13(10), 1497-1506.
15. Banerjee, A., Saha, T. K., and Akhtar, M. July,2019. Development of a control scheme for grid connected solar inverter. *International Journal of Recent Technology and Engineering*, 8(2 Special Issue 7), 293-297.
16. Kumar, N., Saha, T. K. and Dey, J., March, 2020. Multilevel Inverter (MLI)-Based Stand-Alone Photovoltaic System: Modeling, Analysis, and Control. *IEEE Systems Journal*, 14(1), 909-915.
17. Jana, S., Kumar, N., Mishra, R., Sen, D., Saha, T. K., February, 2020. Development and implementation of modified MPPT algorithm for boost converter based PV system under input and load deviation. *International Transaction on Electrical Energy System*, 30(2), e12190.
18. Mishra, R., and Saha, T. K., February, 2020. Combined control of stand-alone energy conversion scheme for distributed sources: Development and performance analysis. *International Journal of Electrical Power & Energy Systems*, Elsevier, 115, 105480.
19. Sen, D., Saha, T. K. and Dey, J., April, 2020. Development, implementation and performance analysis of decoupler based control of dual source DC-DC converter. *AEU - International Journal of Electronics and Communications*, Elsevier, 117,153136.
20. Mishra, R., and Saha, T. K., April, 2020. Control of a stand-alone distributed generation system with unbalanced and nonlinear load." in *International Transactions on Electrical Energy Systems*, Wiley, e12286.
21. Mishra, R., and Saha, T. K., July, 2020. Modelling and analysis of distributed power generation schemes supplying unbalanced and non-linear load." in *International Journal of Electrical Power & Energy Systems*, Elsevier 119, 105878.
22. Mishra, R., and Saha, T. K., July, 2020. Virtual Power-Based Control for Operation and Grid Synchronization of Induction Generator. *IEEE Systems Journal*, doi: 10.1109/JSYST.2020.3005874. (Early Access).
23. Mishra, R., and Saha, T. K., May, 2020. Performance Analysis of Model Predictive Technique Based Combined Control for PMSG-Based Distributed Generation Unit. *IEEE Transactions on Industrial Electronics*, 67(10), 8991-9000.

CONFERENCE PAPERS

1. Sannigrahi, S., Ghatak, S. R., Acharjee, P.,2020. Point Estimate Method based Distribution System Planning using MOPSO Technique. *IEEE International Conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE)*.

2. Das, S., Bhattacharya, A., Acharjee, P., 2020. Charging Scheduling of Electric Vehicles (EV) in Probabilistic Scenario considering Grid-to-Vehicle (G2V) and Vehicle-to-Grid (V2G). IEEE Calcutta Conference (CALCON), Kolkata, India,.
3. Das, S., Acharjee, P., Bhattacharya, A., 2020. Charging Scheduling of Electric Vehicle incorporating Grid-to-Vehicle (G2V) and Vehicle-to-Grid (V2G) technology in Smart-Grid. IEEE International Conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE2020), Cochin, India.
4. Das, S., Bhattacharya, A., Acharjee, P., 2020. Intelligent Strategy for Finding Out Appropriate Charging Station. International conference on Water, Energy, and Environmental Sustainability, Durgapur, India.
5. Chandra, S., Pal, P., Sikder, P., Acharjee, P., 2019. Scenario of renewable energy resources and distributed generation in India. ICNNE, JIS college of Engineering.
6. Pal, A., Bhattacharya, A., Chakraborty, A. K., December, 2019. Allocation of EV Fast Charging Station with V2G Facility in Distribution Network. 8th International Conference on Power Systems (ICPS),1-6, Jaipur, India.
7. Das, S., Sarkar, S. 2019. Short-Circuit Based Optimal Location, Sizing and Power Factor Determination of Multi Distributed Generations in Radial Distribution Networks. IEEE Region 10 Symposium (TENSymp), Biswa Bangla Convention Centre, Kolkata, West Bengal, INDIA.
8. Das, S., Sarkar, S. 2019. Optimisation of Location, Size and Power Factor of DG Based on a New Voltage Stability Index. IEEE 16th India Council International Conference (INDICON), Marwadi University, Rajkot, Gujrat, INDIA.
9. Ghosh, S., Saha, T.K., 2020. PV-Battery based Hybrid Electric Vehicle Utilising CTLI. International Conference on "Water, Energy, and Environmental Sustainability 2020 (WEES 2020), NIT Durgapur, India.
10. Mishra, R., Saha, T.K., 2020. Utilisation of Induction Generator with SVPWM switching for stand-alone wind energy conversion system. International Conference on "Water, Energy, and Environmental Sustainability 2020 (WEES 2020), NIT Durgapur, India.
11. Sen, D., Saha, T. K. Dey, J., 2020. Study of DPC based AC-DC Conversion. International Conference on "Water, Energy, and Environmental Sustainability 2020 (WEES 2020), NIT Durgapur, India.

PROJECT

Sponsoring Agency	Title of the Project	Period	Amount	Status(Completed/ongoing)
NIWE under MNRE Govt. of India	Control of Multi-Input Converter for Hybrid Wind-Solar-Battery based System	Three Years 22nd March, 2017-2020	30,71,778.00	Completed, Utilisation certificate is prepared

• CENTRE FOR RESEARCH ON ENVIRONMENT AND WATER (CREW)

Ministry of Education, Gol 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.

ACTIVITIES:

WORKSHOPS/SEMINARS ORGANISED

Sl. N	Name of Key Speaker(s)	Name of the Programme	Date of the Programme
1	Prof. Yiping Li, Prof. Otto R, Prof. A. Taskin, Dr. Evgeniya Soldatova	International conference on "Sustainable Water Resources Management under Changed Climate" held at Jadavpur University, Kolkata (Name of Coordinator:Dr. Hirok Chaudhuri, Dr. Supriya Pal, Dr. Mrinal Mandal, (NITD) and Prof. Pankaj Roy, JU).	March 13-15, 2020

COLLABORATION WITH ACADEMIC AND RESEARCH INSTITUTIONS

Collaborating Institute / Organization	Areas of Collaboration	Faculty Members Involved	Collaboration Activities
Engineering School of Natural Resources, National Research Tomsk Polytechnic University	Environmental geochemistry and treatment of organic pollutants in aquatic systems	Chaudhuri H, Pal S, Mandal M. K	Joint Research and Joint Publication
East China University of Technology (ECUT), School of Water Resources and Environmental Engineering	Environmental geochemistry and treatment of organic pollutants in aquatic systems	Chaudhuri H, Pal S, Mandal M. K	Joint Research and Joint Publication

ONGOING SPONSORED PROJECTS

Name of the Department	Title of the Project	Investigator(s)	Sponsoring Organisation	Amount (in Rs)	Starting Year
CREW	Environmental geochemistry and treatment of organic pollutants in aquatic systems in the selected areas of China, India and Russia	Dr. Supriya Pal, Dr. Hirok Chaudhuri, Dr. M. K. Mandal, Dr. K. Dubey, Prof. Oleg Savichev, Prof. Zhanxue Sun	DST (BRICS)	44.08 lakh	2019-2022

ONGOING DOCTORAL PROGRAMME

Topic	Investigators	Supervisor(s)
Synthesis of nano material for degradation of antibiotics	Miss Suvashree Mukherjee	Dr. Hirok Chaudhuri, Dr. Mrinal Kanti Mandal

RESEARCH PAPERS PUBLISHED IN SCI / SCOPUS / WEB OF SCIENCE

1. A. Taskin, L. Alekseiko, H. Chauduri, S. Ivannikov, O. Danilov, O. Elkin, Granulometric and chemical studies of industrial ash and slag wastes of the russian far east (based on the example of chpp-2, Vladivostok, Waste Management : International Journal of Integrated Waste Management, Science and Technology, 2019

RESEARCH PAPERS ACCEPTED FOR PUBLICATION IN SCI / SCOPUS / WEB OF SCIENCE

1. O. G. Savichev, E. A. Soldatova, H. Chaudhuri, S. S. Ulaeva, Ecologo-geochemical conditions of water bodies in the Damodar River Basin (West Bengal, India), Geography and Natural Resources, 2020 (Accepted)

RESEARCH PAPERS PRESENTED IN CONFERENCES AND PUBLISHED IN PROCEEDINGS: 08 NOS.

Invited Speaker: Prof. Rajnarayan Saha was acted as an Invited Speaker in an International Conference on Sustainable Water Resources Management under Changed Climate held during 13th-15th March, 2020, Organised by School of Water Resources Engineering, Jadavpur University (Under RUSA-2.0; NRDMS, DST; TEQIP III Funded) In Joint Collaboration with Women's' College Calcutta (Department of Geography) and NIT Durgapur MG Avenue, Durgapur (under TEQIP III fund)

PROCUREMENT STATUS

Procurement of equipment under process for 1st year allocation

1. Environmental radiation monitoring- Radon Monitor and Environmental radiation monitoring- Gamma beta spectrometer
2. Geotechnical centrifuge

CONTACT DETAILS:

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email: rajnarayan.saha@ch.nitdgp.ac.in

- Centre of Excellence for 'Advanced Research on IoT and Intelligent Systems' (IOTIS)

A. The centre offered the elective course titled "Internet of Things" for M. Tech students and designed open elective courses "Computer Networks" and "Internet Things" for UG students.

B. Following papers were published in International Conferences and Journals from the Centre.

1. Pratik Kumar Sinha, Subhrabrata Choudhury, Animesh Dutta "On the Impact of Delays on Control Packets of Routing Algorithms and Mitigation Strategies for Wireless Ad-Hoc Networks" 657-668, AINA 2020, (Springer)
2. Kashi Nath Datta, Pradipta Das, Mousumi Saha, Sujoy Saha, "Designing Embedded Visible Light Communication System Adaptable to Fluctuations in Light Intensity", Proceedings of the 21st International Conference on Distributed Computing and Networking, 2020.
3. Tamal Mondal, Imran Ali, Praveen Kumar, Sujoy Saha, Indrajit Bhattacharya, "Designing an Information Bot for an Opportunistic Mobile Environment in Disaster Response Scenario", Proceedings of the 21st International Conference on Distributed Computing and Networking, 2020.
4. Praveen Kumar Sharma, Suraj Gupta, Argha Sen, Tanmay De, Sujoy Saha, "Exploring Collision Avoidance during Communication Over Sound for Healthy Environment", Proceedings of the 21st International Conference on Distributed Computing and Networking, 2020.

5. Ratna Mandal, Pallav Sonowal, Manish Kumar, Sujoy Saha, Subrata Nandi, "RoadSpeedSense: Context-Aware Speed Profiling from Smart-phone Sensors", EAI Endorsed Transactions on Energy Web, 2020.
 6. Crowdsourcing from the True crowd: Device, vehicle, road-surface and driving independent road profiling from smartphone sensors, "Crowdsourcing from the True crowd: Device, vehicle, road-surface and driving independent road profiling from smartphone sensors", Crowdsourcing from the True crowd: Device, vehicle, road-surface and driving independent road profiling from smartphone sensors (elsevier), 2020.
 7. Santanu Mandal, Imran Ali, and Sujoy Saha, "IoT in Agriculture: Smart Farming using MQTT Protocol through Cost-effective Heterogeneous Sensors", International Conference on Frontiers in Computing and Systems (COMSYS-2020) (Springer)
- C. The centre purchased 'Eye Tracking Software' to carry out a collaborative project titled 'Neurocomputing and Cognitive Intelligence' with IIT Delhi, sponsored (49.48 lakha) by MeitY, Govt. of India. The software will be used for other projects on cognitive learning and healthcare IoT.

CENTRE OF EXCELLENCE IN ADVANCED MATERIALS

The Centre of Excellence in Advanced Materials is a relatively new entity at NIT Durgapur which although received its first grant in 2013 from the erstwhile MHRD (now Ministry of Education), Govt. of India under its Technical Education Quality Improvement program (TEQIP) Phase-II for setting up an interdisciplinary centre for research in advanced materials. The grant was received in response to a proposal prepared jointly by Prof. Amit K. Chakraborty of Department of Physics and Prof. D. K. Mondal (now ret'd.) of Department of MME with the help of several other faculty members as detailed below under the active guidance of the then Director, Prof. T. Kumar; Dean (R&C), Prof. P. P. Gupta; and TEQIP Coordinator, Prof. K. C. Ghanta.

Although it was not until September, 2017 that the centre found its current premise, its first major equipment, the Field Emission Scanning Electron Microscope was commissioned in February 2016 in the department of MME and was later brought to its current building. The centre received more grants from Ministry of Education under its TEQIP Phase-III once in 2018 and again an incentive in October, 2020 for its outstanding performance. These grants have not only helped the centre to procure high-end equipments for materials research but also have supported the fellowship of a number of institute research scholars and some Research Associates over the past couple of years in addition to providing enormous support in materials research to its members.

Currently, the centre has many sophisticated equipments (worth ~Rs. 5 Crores) to support not only the researchers of NIT Durgapur but also external users as the facilities of the centre are open for access by all against payment of a nominal fee. The centre also offers all year-round training programmes on various equipments against payment of a fee to cover its running expenses. More details can be obtained by contacting any of the following contact points.

PROFESSOR-IN-CHARGE:

Prof. Amit K. Chakraborty,
Professor, Department of Physics,
Email: coe.am@nitdgp.ac.in, amit.chakraborty@phy.nitdgp.ac.in
Phone (lab): 0343 275 9188

TECHNICAL ASSISTANTS:

1. Mr. Shambhu Sarkar, B. Tech., Ph. No. – 9123484743
2. Mr. Chandan Dey, B. Tech. Ph no- 8167826281

MEMBERS OF THE CENTRE

❖ PROF. A. K. MEIKAP, DEPARTMENT OF PHYSICS

Research interest: Transport properties of polymer nanocomposites
<https://nitdgp.ac.in/faculty/1b266bb0-f281-483c-bd5c-4913f114566d>

❖ PROF. K. S. GHOSH, DEPARTMENT OF MME

Research interest: Aluminum alloy-based Nanocomposites, Corrosion studies
<https://nitdgp.ac.in/faculty/ddb276d1-79c4-479c-91a6-0f2c415ecd62>

❖ PROF. P. KUMBHAKAR, DEPARTMENT OF PHYSICS

Research interest: Photonic materials, nanophotonics
<https://nitdgp.ac.in/faculty/a4ac0cab-48fd-4153-ab4c-b440ed3d0dc7>

❖ PROF. JOYDEEP MAITY, DEPARTMENT OF MME

Research interest: Diffusion, Phase Transformation, Heat treatment, Transient Liquid Phase (TLP) Diffusion Bonding and Metal Matrix Composites
<https://nitdgp.ac.in/department/metallurgical-materials-engineering/faculty-12/joydeep-maity>

❖ PROF. AMIT K. CHAKRABORTY, DEPARTMENT OF PHYSICS

Research interest: Carbon nanomaterials (graphene & CNT) and their novel nanocomposites for application in supercapacitors, batteries, dye-sensitized solar cells, photocatalysis, chemiresistive/electrochemical sensors.
<https://nitdgp.ac.in/faculty/6e8da785-ff5c-49e5-ab30-1ddce007da7c>

❖ PROF. R. MAHAPATRA, DEPARTMENT OF ECE

Research interest: High-k dielectrics, Flexible Resistive Memory devices, Gas sensors
<https://nitdgp.ac.in/faculty/931612ad-7f92-4a34-bd38-981578c5819b>

❖ DR. M.M. GHOSH, DEPARTMENT OF MME

Research interest: Molecular dynamics simulation of alloy-based composites.
<https://nitdgp.ac.in/faculty/dd91c499-b616-4d12-9a69-d23c0fd93da0>

❖ DR. SOUMEN BASU, DEPARTMENT OF PHYSICS

Research interest: Multiferroic materials, solid oxide fuel cells
<https://nitdgp.ac.in/faculty/2a69b6db-47ec-47e4-9954-4b6b69a52426>

❖ DR. SUPRIYA BERA, DEPARTMENT OF MME

Research interest: Aluminum alloy-based Nanocomposites
<https://nitdgp.ac.in/faculty/8b032963-1fb3-475c-9bab-0dc2fa63e519>

ANNEXURE– 11.8(A) LIST OF PROGRAMMES OFFERED**11.8. (A). 1. UNDER-GRADUATE PROGRAMMES:**

The Institute offers the following programmes leading to 4 Year (8 Semester) B.Tech. / Ten Semester (Five Year) B. Tech and M .Tech Dual Degree / / Ten Semester (Five Year) Integrated M.Sc Degree.

Name of the programme	Department
Bachelor of Technology in Biotechnology	Biotechnology
Bachelor of Technology in Chemical Engineering	Chemical Engineering
Bachelor of Technology in Computer Science & Engineering	Computer Science & Engineering
Bachelor of Technology in Civil Engineering	Civil Engineering
Bachelor of Technology in Electronics & Communication Engineering	Electronics & Communication Engineering
Bachelor of Technology in Electrical Engineering	Electrical Engineering
Bachelor of Technology in Metallurgical & Materials Engineering	Metallurgical & Materials Engineering
Bachelor of Technology in Mechanical Engineering	Mechanical Engineering
B.Tech & M.Tech Dual Degree in Biotechnology	Biotechnology
B.Tech & M.Tech Dual Degree in Chemical Engineering	Chemical Engineering
5 year Integrated M.Sc in Chemistry	Chemistry

11.8. (A). 2. POST – GRADUATE PROGRAMMES:**M. TECH. PROGRAMMES:**

Dept. / Specialisation	Year of Starting	Full / Part time	Duration
Biotechnology	2008	Full Time	2 years
Chemical Engineering	1968	Full Time	2 years
Civil Engineering (Structural Engineering)	1971	Full Time	2 years
Computer Science and Engineering			
Electrical Engineering (Electrical System)	1969	Full Time	2 years
Electronics & Communication Engg (Telecommunication Engg)	2005	Full Time	2 years
Electronics & Communication Engg (Microelectronics & VLSI)	2008	Full Time	2 years
Earth & Environmental Studies – co-ordinating dept. (Environmental Science & Technology)	2008	Full Time	2 years
Mathematics (Operations Research)	1990	Full Time	2 Years
Mechanical Engineering (Machine Design)	1966	Full Time	2 years
Metallurgical and Materials Engineering (Metallurgy and Materials Technology)	1966	Full Time	2 years
Entrepreneurship and Innovation	2015	Full Time	2years
Civil Engineering (Geotechnical Engineering)	2014	Full Time	2 years
Mechanical Engineering (Fluid Mechanics and Heat Transfer)	2014	Full Time	2 years

OTHER PROGRAMMES:

Dept. / Programme	Full / Part time	Year of Starting	Duration
Management Studies (MBA)	Full Time	2004	2 Years
Physics (M. Sc. in Physics)	Full Time	2009	2 Years
Chemistry (M. Sc. in Chemistry)	Full Time	2009	2 Years
Mathematics (M. Sc. in Mathematics))	Full Time	2010	2 Years

ANNEXURE-11.8(B) PROGRAMME-WISE ENROLMENT WITH GENDER AND CASTE BREAK-UP**11.8. (B).1.I ENROLMENT IN B.TECH PROGRAMMES, 2019-2020(GENDERWISE):**

Enrolment of Indian students in odd semesters of B. Tech. courses, 2019-2020 Genderwise:

Semester	BT		ChE		CE		CSE		ECE		EE		IT		ME		MME		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
B.Tech I	42	18	53	13	57	11	143	31	70	18	73	18	0	0	141	29	54	12	633	150
B.Tech III	41	15	44	13	52	9	126	24	63	16	68	16	0	0	127	19	48	13	569	125
B.Tech V	31	16	50	13	52	5	53	5	58	16	61	14	54	9	129	2	46	13	534	93
B.Tech VII	17	12	32	20	46	3	65	15	71	19	61	16	64	17	119	8	45	7	520	117
Total	131	61	179	59	207	28	387	75	262	69	263	64	118	26	516	58	193	45	2256	485

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

Semester	BT		ChE		CE		CSE		ECE		EE		IT		ME		MME		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
B.Tech II	42	18	53	12	54	11	138	31	68	18	72	18	0	0	134	29	53	12	614	149
B.Tech IV	41	15	44	13	52	9	121	24	63	16	68	16	0	0	126	19	49	13	564	125
B.Tech VI	30	16	49	13	51	5	53	5	57	15	61	14	53	9	129	2	44	13	527	92
B.Tech VIII	17	12	32	20	46	3	65	15	71	19	61	16	64	17	119	8	45	7	520	117
Total	130	61	178	58	203	28	377	75	259	68	262	64	117	26	508	58	191	45	2225	483

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

11.8 (B).1.II. ENROLMENT IN B. TECH & M. TECH DUAL DEGREE PROGRAMMES (ALL STUDENTS) DURING 2019-2020 (GENDERWISE):

Semester	BT		ChE		Total	
	M	F	M	F	M	F
Dual Degree I	4	1	4	1	8	2
Dual Degree III	4	1	2	1	6	2
Dual Degree V	4	1	2	1	6	2
Dual Degree VII	0	0	0	0	0	0
Dual Degree IX	0	0	0	0	0	0
Total	12	3	8	3	20	6

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

Semester	BT		ChE		Total	
	M	F	M	F	M	F
Dual Degree II	3	1	4	1	7	2
Dual Degree IV	4	1	2	1	6	2
Dual Degree VI	4	1	2	1	6	2
Dual Degree VIII	0	0	0	0	0	0
Dual Degree X	0	0	0	0	0	0
Total	12	3	8	3	19	6

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

11.8 (B).1.III. ENROLMENT IN INTEGRATED M.SC. PROGRAMMES DURING 2019- 2020 (GENDERWISE):

Semester	Chemistry		Total	
	M	F	M	F
INT M.Sc. I	4	4	4	4
INT M.Sc. III	7	6	7	6
INT M.Sc. V	9	0	9	0
INT M.Sc. VII	0	0	0	0
INT M.Sc. IX	0	0	0	0
Total	20	10	20	10

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

Semester	Chemistry		Total	
	M	F	M	F
INT M.Sc. II	3	4	3	4
INT M.Sc. IV	7	6	7	6
INT M.Sc. VI	9	0	9	0
INT M.Sc. VIII	0	0	0	0
INT M.Sc. X	0	0	0	0
Total	20	10	19	10

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

11.8 (B).2.I. ENROLMENT OF FOREIGN STUDENTS IN B.TECH. PROGRAM DURING 2019-2020 (GENDERWISE):

Semester	BT		ChE		CE		CSE		ECE		EE		IT		ME		MME		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	13	1	1	0	1	0	0	0	3	1	0	0	18	2
B.Tech III	0	1	1	0	0	0	8	4	2	1	0	1	0	0	4	2	0	0	15	9
B.Tech V	1	0	0	1	2	0	4	4	4	1	0	0	4	1	5	1	0	0	20	8
B.Tech VII	1	0	0	0	1	0	9	0	3	0	3	2	1	1	8	3	0	0	26	6
Total	2	1	1	1	3	0	34	9	10	2	4	3	5	2	20	7	0	0	79	25

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

Semester	BT		ChE		CE		CSE		ECE		EE		IT		ME		MME		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	13	1	1	0	1	0	0	0	3	1	0	0	18	2
B.Tech IV	0	1	1	0	0	0	8	4	2	1	0	1	0	0	4	2	0	0	15	9
B.Tech VI	1	0	0	1	2	0	3	4	4	1	0	0	4	1	5	1	0	0	19	8
B.Tech VIII	1	0	0	0	1	0	9	0	3	0	3	2	1	1	8	3	0	0	26	6
Total	2	1	1	1	3	0	34	9	10	2	4	3	5	2	20	7	0	0	79	25

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

11.8.(B).2.II. ENROLMENT IN B.TECH. PROGRAMMES DURING 2019-2020 (CASTEWISE)

Dept.	B.Tech					B.TECH					B.TECH					B.TECH					
	II Semester					IV Semester					VI Semester					VIII Semester					
	OP	EWS	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT
BT	25	0	9	5	21	60	22	9	4	21	56	16	7	3	20	46	10	6	4	9	29
ChE	29	3	9	5	19	65	28	9	3	17	57	30	8	5	19	62	24	7	5	16	52
CE	27	2	11	5	20	65	29	8	5	19	61	23	9	4	20	56	22	5	5	17	49
CSE	74	7	26	13	49	169	72	22	10	41	145	29	9	4	16	58	38	12	6	24	80
ECE	37	5	14	7	23	86	39	11	5	24	79	34	12	5	21	72	42	15	6	27	90
EE	39	5	15	6	25	90	41	13	6	24	84	36	11	6	22	75	37	10	5	25	77
IT	0	0	0	0	0	0	0	0	0	0	0	30	9	4	19	62	41	10	6	24	81
ME	67	7	27	16	46	163	67	22	11	45	145	66	19	10	36	131	59	21	9	38	127
MME	26	3	10	5	21	65	23	9	6	24	62	26	9	5	17	57	25	8	5	14	52
Total	324	32	121	62	224	763	321	103	50	215	689	290	93	46	190	619	298	94	51	194	637

11.8.(B).2. ENROLMENT IN B.TECH & M. TECH DUAL DEGREE PROGRAMMES DURING 2019-2020 (CASTEWISE)

Dept.	Dual Degree					Dual Degree					Dual Degree					Dual Degree					
	I Semester					III Semester					V Semester					VII Semester					
	OP	EWS	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT
BT	2	0	1	1	1	5	2	1	1	1	5	3	1	0	1	5	0	0	0	0	0
ChE	2	0	1	0	2	5	1	0	0	2	3	1	1	0	1	3	0	0	0	0	0
Total	4	0	2	1	3	10	3	1	1	3	8	4	2	0	2	8	0	0	0	0	0

11.8.(B).2.III. ENROLMENT IN 5 YEAR INTEGRATED M.SC. PROGRAMMES, DURING 2019-2020 (CASTEWISE)

Dept.	INT M.Sc.					INT M.Sc.					INT M.Sc.					INT M.Sc.					
	I Semester					III Semester					V Semester					VII Semester					
	OP	EWS	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT
Chem	3	1	2	0	2	8	6	1	1	5	13	4	2	1	2	9	0	0	0	0	0
Total	3	1	2	0	2	8	6	1	1	5	13	4	2	1	2	9	0	0	0	0	0

11.8.(B).2.IV ENROLMENT IN 5 YEAR INTEGRATED M.SC. PROGRAMMES, DURING 2019-2020 (CASTEWISE)

Dept.	INT M.Sc.					INT M.Sc.					INT M.Sc.					INT M.Sc.					
	I Semester					III Semester					V Semester					VII Semester					
	OP	EWS	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT	OP	SC	ST	OBC	TOT
Chem	3	1	1	0	2	7	6	1	1	5	13	4	2	1	2	9	0	0	0	0	0
Total	3	1	1	0	2	7	6	1	1	5	13	4	2	1	2	9	0	0	0	0	0

11.8.(B).3. ENROLMENT IN M.TECH. & M.SC PROGRAMMES DURING 2019-2020 (GENDERWISE)

SEMESTER	BT	CH	CE (SE)	CE (GE)	CS	EE (PS)	EE (PMD)	EC (TE)	EC (VL)	ES (EST)	OR (MA)
M.Tech I & II	11 (5)	4 (1)	18 (4)	15 (1)	65 (19)	17 (3)	14 (6)	14 (9)	17 (7)	11 (2)	12 (1)
M.Tech III & IV	9 (5)	9 (5)	16 (2)	12 (2)	47 (18)	16 (1)	11 (1)	10 (4)	16 (3)	14 (2)	11 (1)
M.Tech V & VI	---	---	1 (1)	1 (1)	---	---	---	---	---	---	---
M.Sc I & II	---	---	---	---	---	---	---	---	---	---	---
M.Sc III & IV	---	---	---	---	---	---	---	---	---	---	---

SEMESTER	ME (MD)	ME (FMHT)	ME (TE)	MM	AMS (PHY)	M. Sc (CY)	M. Sc (MA)	M. Sc (PH)	TOTAL
M.Tech I & II	15 (1)	12 (1)	15 (0)	4 (0)	5 (3)	---	---	---	249 (63)
M.Tech III & IV	11 (0)	16 (3)	15 (1)	11 (0)	13 (1)	---	---	---	237 (49)
M.Tech V & VI	---	---	---	---	---	---	---	---	2 (2)
M.Sc I & II	---	---	---	---	---	16 (3)	21 (5)	18 (4)	55 (12)
M.Sc III & IV	---	---	---	---	---	15 (8)	13 (3)	12 (6)	40 (17)

11.8.(B).4. ENROLMENT IN M.TECH & M. SC. PROGRAMMES DURING 2019-2020 (CASTEWISE)

Dept. / Year	I & II					III & IV					V & VI				
	OP	SC	ST	OBC	TOTAL	OP	SC	ST	OBC	TOTAL	OP	SC	ST	OBC	TOTAL
BT	7(3)	1(0)	0(0)	3(2)	11(5)	4(2)	1(1)	1(1)	3(1)	9(5)	-	-	-	-	-
CH	3(1)	1(0)	0(0)	0(0)	4(1)	6(4)	0(0)	0(0)	3(1)	9(5)	-	-	-	-	-
CE (SE)	7(1)	3(2)	1(0)	7(1)	18(4)	8(0)	3(1)	0(0)	5(1)	16(2)	1(1)	0(0)	0(0)	1(1)	2(2)
CE (GT)	8(0)	1(0)	1(1)	5(0)	15(1)	3(1)	3(0)	0(0)	6(1)	12(2)	-	-	-	-	-
CS	28(10)	11(3)	1(1)	25(6)	65(19)	20(6)	7(4)	3(1)	17(7)	47(18)	-	-	-	-	-
EE (PS)	9(1)	2(0)	1(1)	5(1)	17(3)	5(0)	2(0)	1(0)	8(1)	16(1)	-	-	-	-	-
EE(PMD)	8(3)	2(2)	0(0)	4(1)	14(6)	5(1)	0(0)	0(0)	6(0)	11(1)	-	-	-	-	-
EC (TE)	6(5)	1(1)	0(0)	7(3)	14(9)	6(2)	0(0)	0(0)	4(2)	10(4)	-	-	-	-	-
EC (VL)	6(3)	3(1)	1(1)	7(2)	17(7)	8(3)	3(0)	1(0)	4(0)	16(3)	-	-	-	-	-
ES	6(1)	2(0)	1(0)	2(1)	11(2)	6(2)	3(0)	1(0)	4(0)	14(2)	-	-	-	-	-
MA (OR)	7(0)	2(0)	0(0)	3(1)	12(1)	4(0)	3(1)	1(0)	3(0)	11(1)	-	-	-	-	-
ME (MD)	9(0)	2(1)	0(0)	4(0)	15(1)	6(0)	1(0)	0(0)	4(0)	11(0)	-	-	-	-	-
ME (FMHT)	10(1)	1(0)	0(0)	1(0)	12(1)	5(1)	2(0)	2(0)	7(2)	16(3)	-	-	-	-	-
ME (TE)	7(0)	2(0)	0(0)	6(0)	15(0)	7(1)	3(0)	1(0)	4(0)	15(1)	-	-	-	-	-
MM (MT)	2(0)	1(0)	0(0)	1(0)	4(0)	6(0)	0(0)	0(0)	5(0)	11(0)	-	-	-	-	-
PH (AMS)	4(3)	1(0)	0(0)	0(0)	5(3)	7(1)	0(0)	1(0)	5(0)	13(1)	-	-	-	-	-
M.Sc (CY)	9(3)	2(0)	0(0)	5(0)	16(3)	7(3)	3(2)	1(0)	4(3)	15(8)	-	-	-	-	-
M.Sc (MA)	10(4)	3(0)	0(0)	8(1)	21(5)	6(0)	3(2)	1(0)	3(1)	13(3)	-	-	-	-	-
M.Sc (PH)	9(3)	3(1)	0(0)	6(0)	18(4)	7(3)	3(1)	0(0)	2(2)	12(6)	-	-	-	-	-
Total	155(42)	44(11)	6(4)	99(19)	304(75)	126(30)	40(12)	14(2)	97(22)	277(66)	1(1)	0(0)	0(0)	1(1)	2(2)

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

11.8(B). 5. . ENROLMENT IN MCA PROGRAMME DURING 2019-2020 (GENDERWISE)

Master of Computer Applications (MCA)	III & IV Semester		V & VI Semester	
	OP	SC	OP	SC

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

11.8. (B). 6. ENROLMENT IN MCA PROGRAMME DURING 2019-2020 (CASTEWISE)

MCA	MCA III & IV					MCA V & VI				
	OP	SC	ST	OBC	TOTAL	OP	SC	ST	OBC	TOTAL
	14 (5)	5 (0)	2 (1)	6 (1)	27 (7)	16 (7)	5 (2)	2 (0)	7 (2)	30 (11)

11.8. (B) 7. ENROLMENT IN MBA PROGRAMMES DURING 2019-2020 (GENDER WISE)

Master of Business Administration (MBA)	I & II Semester		III & IV Semester	
	OP	SC	OP	SC

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

11.8. (B).8. ENROLMENT IN MBA PROGRAMME DURING 2019-2020 (CASTEWISE)

MBA	MBA I & II					MBA III & IV				
	OP	SC	ST	OBC	TOTAL	OP	SC	ST	OBC	TOTAL
	17 (9)	4 (1)	0 (0)	4 (2)	25 (12)	14 (8)	1 (1)	0 (0)	4 (2)	19 (11)

11.8.(B) 8.I. ENROLMENT IN MSW PROGRAMME DURING 2019 -2020 (GENDERWISE)

Master of Social Work (MSW)	III & IV Semester

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

11.8. (B).8.II. ENROLMENT IN MSW PROGRAMME DURING 2019-2020 (CASTEWISE)

MSW	MSW III & IV				
	OP	SC	ST	OBC	TOTAL
	6 (4)	0 (0)	0 (0)	1 (1)	7 (5)

11.8.(B). 9.I. ADMISSION OF RESEARCH SCHOLARS FOR FULL TIME PHD PROGRAMME DURING 2019-2020:

SL.NO.	Branch of Research Study	Gender		Caste				Total
		Male	Female	OP	SC	ST	OBC	
1	Biotechnology	7	6	12	1	0	0	13
2	Chemical Engineering	5	1	5	0	0	1	6
3	Chemistry	5	2	4	0	0	3	7
4	Civil Engineering	3	2	3	1	0	1	5
5	Computer Science & Engineering	8	4	9	0	1	2	12
6	Earth & Environmental Studies	0	1	0	0	0	1	1
7	Electrical Engineering	5	0	3	1	0	1	5
8	Electronics & Communications Engineering	2	1	2	1	0	0	3
9	Humanities & Social Sciences	1	2	2	0	0	1	3
10	Management Studies	0	1	1	0	0	0	1
11	Mathematics	3	3	4	0	0	2	6
12	Mechanical Engineering	7	0	6	0	0	1	7
13	Metallurgical & Materials Engineering	4	0	2	0	0	2	4
14	Physics	4	0	1	2	0	1	4
15	CENTRE FOR RESEARCH ON ENVIRONMENT & WATER	0	1	1	0	0	0	1
	Total	54	24	55	6	1	16	78

11.8.(B). 9.II. ADMISSION OF RESEARCH SCHOLARS FOR PART TIME PHD PROGRAMME DURING 2019-2020

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

SL.NO.	Branch of Research Study	Gender		Caste				Total
		Male	Female	OP	SC	ST	OBC	
11	Mathematics	1	0	1	0	0	0	1
12	Mechanical Engineering	5	0	5	0	0	0	5
13	Metallurgical & Materials Engineering	1	0	1	0	0	0	1
14	Physics	1	1	2	0	0	0	2
15	CENTRE FOR RESEARCH ON ENVIRONMENT & WATER	0	0	0	0	0	0	0
	Total	23	11	32	0	0	2	34

11.8.(B). 9.III. TOTAL STRENGTH OF RESEARCH SCHOLARS FOR FULL TIME PHD PROGRAMME IN 2019-2020:

SL.NO.	Branch of Research Study	Gender		Caste				Total
		Male	Female	OP	SC	ST	OBC	
1	Biotechnology	20	26	29	10	1	6	46
2	Chemical Engineering	13	12	18	4	1	2	25
3	Chemistry	10	11	13	4	0	4	21
4	Civil Engineering	10	4	8	3	0	3	14
5	Computer Science & Engineering	41	21	40	3	4	15	62
6	Earth & Environmental Studies	3	2	2	0	0	3	5
7	Electrical Engineering	23	2	16	3	1	5	25
8	Electronics & Communications Engineering	21	7	16	7	1	4	28
9	Humanities & Social Sciences	5	6	7	1	0	3	11
10	Management Studies	2	1	3	0	0	0	3
11	Mathematics	31	13	29	6	0	9	44
12	Mechanical Engineering	25	1	15	4	0	7	26
13	Metallurgical & Materials Engineering	16	0	8	2	0	6	16
14	Physics	15	9	13	5	0	6	24
15	CENTRE FOR RESEARCH ON ENVIRONMENT & WATER	0	1	1	0	0	0	1
	Total	235	116	218	52	8	73	351

11.8.(B).9.IV.TOTAL STRENGTH OF RESEARCH SCHOLARS FOR PART TIME PHD PROGRAMME IN 2019-2020:

SL.NO.	Branch of Research Study	Gender		Caste				Total
		Male	Female	OP	SC	ST	OBC	
1	Biotechnology	2	4	5	0	0	1	6
2	Chemical Engineering	16	11	23	3	0	1	27
3	Chemistry	8	4	10	1	0	1	12
4	Civil Engineering	24	4	21	5	0	2	28
5	Computer Science & Engineering	42	16	51	1	1	5	58
6	Earth & Environmental Studies	5	1	1	0	0	1	6
7	Electrical Engineering	15	5	17	2	0	1	20
8	Electronics & Communications Engineering	32	9	37	1	0	3	41
9	Humanities & Social Sciences	10	6	4	1	0	1	16
10	Management Studies	15	6	20	1	0	0	21
11	Mathematics	9	4	10	1	0	2	13
12	Mechanical Engineering	27	1	20	6	1	1	28
13	Metallurgical & Materials Engineering	2	1	2	1	0	0	3
14	Physics	8	4	7	4	0	1	12
15	CENTRE FOR RESEARCH ON ENVIRONMENT & WATER	0	0	0	0	0	0	0
	Total	215	76	242	27	2	20	291

ANNEXURE – 11.8 (C) ADMISSION STATISTICS – UG & PG**11.8 (C) 1. STUDENTS ADMITTED TO B. TECH. PROGRAMMES FROM RURAL AND URBAN AREA DURING 2019- 2020**

SL. NO.	STATE	RURAL						URBAN						Overall Total
		OP	EWS	OB	SC	ST	TOTAL	OP	EWS	OB	SC	ST	TOTAL	
1	Andhra Pradesh	37	7	36	13	3	96	17	1	13	0	1	32	128
2	Assam	1	0	0	0	0	1	1	0	0	0	0	1	2
3	Bihar	12	1	20	4	4	41	11	1	11	0	0	23	64
4	Chattisgarh	0	0	1	1	0	2	1	0	0	0	0	1	3
5	Gujarat	0	0	0	1	0	1	1	0	0	0	0	1	2
6	Haryana	0	0	1	0	0	1	0	0	0	1	0	1	2
7	Jharkhand	1	1	1	2	2	7	3	0	1	1	2	7	14
8	Karnataka	0	0	0	0	0	0	0	0	0	0	1	1	1
9	Madhya Pradesh	2	0	0	2	0	4	3	0	0	0	1	4	8
10	Maharashtra	4	0	2	4	0	10	1	0	0	2	0	3	13
11	Odisha	1	1	0	0	0	2	1	0	0	0	2	3	5
12	Rajasthan	2	1	4	4	3	14	3	0	1	0	0	4	18
13	Tamil Nadu	0	0	0	0	0	0	1	0	0	0	0	1	1
14	Telengana	10	1	10	5	15	41	6	0	3	5	1	15	56
15	Tripura	1	0	0	0	0	1	0	0	0	0	0	0	1
16	Uttar Pradesh	22	2	13	8	1	46	13	1	4	5	0	23	69
17	Uttarakhand	0	0	1	0	0	1	1	0	0	0	0	1	2
18	West Bengal	69	6	68	32	15	190	106	10	30	34	9	189	379
19	Andaman & Nicobar	0	0	2	2	2	6	5	0	4	0	0	9	15
	TOTAL	162	20	159	78	45	464	174	13	67	48	17	319	783

1.8.(C).2. STUDENTS ADMITTED TO B.TECH & M. TECH DUAL DEGREE PROGRAMME FROM RURAL AND URBAN AREA DURING 2019-2020 -1ST YEAR

SL. NO.	STATE	RURAL						URBAN						Overall Total
		OP	EWS	OB	SC	ST	TOTAL	OP	EWS	OB	SC	ST	TOTAL	
1	Bihar	1	0	1	0	0	2	0	0	0	0	1	1	3
2	Jammu & Kashmir	1	0	0	0	0	1	0	0	0	0	0	0	1
3	Kerala	0	0	0	0	0	0	0	0	1	0	0	1	1
4	West Bengal	2	0	1	2	0	5	0	0	0	0	0	0	5
	TOTAL	4	0	2	2	0	8	0	0	1	0	1	2	10

11.8.(C).2. STUDENTS ADMITTED TO INTEGRATED M.SC. PROGRAMME FROM RURAL AND URBAN AREA DURING 2019-2020 -1ST YEAR

SL. NO.	STATE	RURAL						URBAN						Overall Total
		OP	EWS	OB	SC	ST	TOTAL	OP	EWS	OB	SC	ST	TOTAL	
1	Bihar	0	0	1	0	0	1	0	0	0	0	0	0	1
2	Jharkhand	1	0	0	0	0	1	0	0	0	0	0	0	1
3	Uttar Pradesh	1	1	0	0	0	2	0	0	0	0	0	0	2
4	West Bengal	0	0	1	1	0	2	1	0	0	1	0	2	4
	TOTAL	2	1	2	1	0	6	1	0	0	1	0	2	8

11.8.(C).3. ALL INDIA RANK OBTAINED BY THE FIRST AND THE LAST CANDIDATES ADMITTED TO B.TECH PROGRAMME DURING 2019-2020 -1ST YEAR

SL. NO.	STATE	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	Andhra Pradesh	6370	69430	9577	38619	9902	85800	50085	171558	102271	160105
2	Assam	8699	16381	-	-	-	-	-	-	-	-
3	Bihar	7775	39781	41542	61018	12057	101896	40996	93891	61707	223020
4	Chattisgarh	8171	-	-	-	12519	-	78426	-	-	-
5	Gujarat	8781	-	-	-	-	-	67955	-	-	-
6	Haryana	-	-	-	-	50760	-	83087	-	-	-
7	Jharkhand	17356	54065	65853	-	12923	39649	81404	154525	79204	362051
8	Karnataka	-	-	-	-	-	-	-	-	243196	-
9	Madhya Pradesh	9307	56813	-	-	-	-	50844	169014	106823	-
10	Maharashtra	8394	30694	-	-	28195	74916	33919	175176	-	-
11	Odisha	24794	40936	-	-	160336	-	-	-	71964	74583
12	Rajasthan	7681	27428	21228	-	25748	66992	85581	116413	77503	168953
13	Tamil Nadu	55392	-	-	-	-	-	-	-	-	-
14	Telangana	8778	43931	13601	-	12430	50305	46959	196706	60625	253615
15	Tripura	24003	-	-	-	-	-	-	-	-	-
16	Uttar Pradesh	7202	38146	20853	29326	12635	84261	46774	169178	111757	-
17	Uttarakhand	7367	-	-	-	12459	-	-	-	-	-
18	West Bengal	8395	140715	9283	269021	11481	205352	42567	315973	65084	668775
19	Tripura	31694	295381	-	-	117636	804630	506879	881112	155357	469663

11.8.(C).3. ALL INDIA RANK OBTAINED BY THE FIRST AND THE LAST CANDIDATES ADMITTED TO B.TECH & M. TECH DUAL DEGREE PROGRAMME DURING 2019-2020 -1ST YEAR

SL. NO.	STATE	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	Bihar	51679	-	-	-	33636	-	-	-	258581	-
2	Jharkhand	29757	-	-	-	-	-	-	-	-	-
3	Kerala	-	-	-	-	68898	-	-	-	-	-
4	West Bengal	45054	57618	-	-	75031	-	114935	211394	-	-

11.8.(C).3 ALL INDIA RANK OBTAINED BY THE FIRST AND THE LAST CANDIDATES ADMITTED TO INTEGRATED M. SC. PROGRAMME DURING 2019-2020 -1ST YEAR

SL. NO.	STATE	OP		GEN-EWS		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	Bihar	87366	-	-	-	-	-	-	-	-	-
2	Jharkhand	55192	-	-	-	-	-	-	-	-	-
3	Uttar Pradesh	73902	-	47257	-	-	-	-	-	-	-
4	West Bengal	111276	-	-	-	174264	-	191824	314990	-	-

11.8.(C).3. ALL INDIA RANK OBTAINED BY THE FIRST AND THE LAST CANDIDATES ADMITTED TO B.TECH PROGRAMME DURING 2019-2020 -1ST YEAR

SL. NO.	BRANCH	OP		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	BT	36576	140715	49777	192468	85095	315973	187493	243196
2	CHE	18667	247945	34413	53362	93891	169014	146547	640602
3	CE	20721	117368	27528	205352	81404	253817	86675	365491
4	CSE	6370	24694	9902	120963	33919	155638	60625	204941
5	ECE	9358	30999	14790	97006	67934	114972	106570	460114
6	EE	13631	40734	22719	123865	40996	129373	108841	331007
7	ME	16454	46173	22013	165410	63788	191795	77503	385226
8	MME	30694	71580	43520	160336	133426	228791	168953	668775

11.8.(C).3. ALL INDIA RANK OBTAINED BY THE FIRST AND THE LAST CANDIDATES ADMITTED TO B.TECH & M. TECH DUAL DEGREE PROGRAMME DURING 2019-2020 -1ST YEAR

BRANCH	OP		OB		SC		ST	
	1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	BT	45054	51679	68898	-	211394	-	258581
2	CHE	29757	57618	33636	75031	114935	-	-

11.8.(C).3. ALL INDIA RANK OBTAINED BY THE FIRST AND THE LAST CANDIDATES ADMITTED TO INTEGRATED M. SC. PROGRAMME DURING 2019-2020 -1ST YEAR

SL. NO.	BRANCH	OP		OB		SC		ST	
		1ST	LAST	1ST	LAST	1ST	LAST	1ST	LAST
1	Chem	55192	111276	87366	174264	191824	314990	0	0

11.8.(C).4 STUDENTS ADMITTED TO B.TECH PROGRAMMES FROM VARIOUS ANNUAL INCOME GROUPS DURING 2019-2020 - 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	80	22	26	128
2	Assam	1	0	1	2
3	Bihar	31	22	11	64
4	Chattishgarh	1	1	1	3
5	Gujarat	2	0	0	2
6	Haryana	2	0	0	2
7	Jharkhand	1	5	8	14
8	Karnataka	0	0	1	1
9	Madhya Pradesh	1	3	4	8
10	Maharashtra	3	5	5	13
11	Odisha	0	0	5	5
12	Rajasthan	9	6	3	18
13	Tamil Nadu	0	1	0	1
14	Telengana	33	10	13	56
15	Tripura	0	0	1	1
16	Uttar Pradesh	34	19	16	69
17	Uttarakhand	1	0	1	2
18	West Bengal	110	103	166	379
19	Andaman & Nicobar	1	8	6	15
	TOTAL	310	205	268	783

11.8.(C).4. THE NUMBER OF CANDIDATES ADMITTED TO B.TECH & M.TECH DUAL DEGREE PROGRAMME FROM VARIOUS ANNUAL INCOME GROUPS DURING 2019-2020 - 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	1	1	3
2	Jharkhand	-	1	-	1
3	Kerala	-	-	1	1
4	West Bengal	-	1	4	5

11.8.(C).4. THE NUMBER OF CANDIDATES ADMITTED TO INTEGRATED M. SC. PROGRAMME FROM VARIOUS ANNUAL INCOME GROUPS DURING 2019-2020 - 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	-	-	1
2	Jharkhand	1	-	-	1
3	Uttar Pradesh	1	1	-	2
4	West Bengal	2	1	1	4

11.8.(C).5. THE DETAILS OF ADMISSION TO THE PG PROGRAMMES DURING 2019-2020 -1ST YEAR

Department	PG Program	OPEN	OBC	SC	ST	TOTAL
Physics	Advanced Material Science & Technology	4	0	1	0	5
Biotechnology	Biotechnology	7	3	1	0	11
Chemical Engineering	Chemical Engineering	3	0	1	0	4
Computer Science & Engineering	Computer Science & Engineering	28	25	11	1	65
Earth and Environmental Studies (Coordinating)	Environmental Science & Technology	6	2	2	1	11
Mechanical Engineering	Fluid Mechanics and Heat Transfer	10	1	1	0	12
Civil Engineering	Geotechnical Engineering	8	5	1	1	15
Mechanical Engineering	Machine Design	9	4	2	0	15
Metallurgical and Materials Engineering	Metallurgy and Materials Technology	2	1	1	0	4
Electronics and Communication Engineering	Microelectronics & VLSI	6	7	3	1	17
Mathematics	Operations Research	7	3	2	0	12
Electrical Engineering	Power Electronics & Machine Drives	8	4	2	0	14
Electrical Engineering	Power Systems	9	5	2	1	17
Civil Engineering	Structural Engineering	7	7	3	1	18
Electronics and Communication Engineering	Telecommunication Engineering	6	7	1	0	14
Mechanical Engineering	Thermal Engineering	7	6	2	0	15
Total M. Tech.						
Chemistry	MSc in Chemistry	9	5	2	0	16
Physics	MSc in Physics	9	6	3	0	18
Mathematics	MSc in Mathematics	10	8	3	0	21
Management Studies	MBA	17	4	4	0	25
Total Admission		172	103	48	6	329

11.8.(C).6. THE DETAILS OF ADMISSION OF STUDENTS UNDER EWS TO THE DIFFERENT PROGRAMMES DURING 2019-2020 -1ST YEAR

Department	PG Program / Specialization	EWS		TOTAL
		Male	Female	
Physics	Advanced Material Science & Technology	0	0	0
Biotechnology	Biotechnology	0	0	0
Chemical Engineering	Chemical Engineering	0	0	0
Computer Science & Engineering	Computer Science & Engineering	2	0	2
Earth and Environmental Studies (Coordinating)	Environmental Science & Technology	0	0	0
Mechanical Engineering	Fluid Mechanics and Heat Transfer	0	1	1
Civil Engineering	Geotechnical Engineering	2	0	2
Mechanical Engineering	Machine Design	0	0	0
Metallurgical and Materials Engineering	Metallurgy and Materials Technology	0	0	0
Electronics and Communication Engineering	Microelectronics & VLSI	1	0	1
Mathematics	Operations Research	1	0	1
Electrical Engineering	Power Electronics & Machine Drives	1	0	1
Electrical Engineering	Power Systems	2	0	2
Civil Engineering	Structural Engineering	1	0	1
Electronics and Communication Engineering	Telecommunication Engineering	0	0	0
Mechanical Engineering	Thermal Engineering	1	0	1
Total M. Tech.				
Chemistry	MSc in Chemistry	0	0	0
Physics	MSc in Physics	1	1	2
Mathematics	MSc in Mathematics	0	2	2
Management Studies	MBA	0	0	0
Total Admission		12	4	16

SL. NO.	Branch of Research Study	EWS		TOTAL
		Male	Female	
1	Biotechnology	1	0	1
2	Chemical Engineering	0	0	0
3	Chemistry	0	0	0
4	Civil Engineering	0	0	0
5	Computer Science & Engineering	1	0	1
6	Earth & Environmental Studies	0	0	0
7	Electrical Engineering	0	0	0
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	1	0	1
13	Metallurgical & Materials Engineering	0	0	0
14	Physics	0	0	0
	Total	3	0	3

Name of the programme	EWS		TOTAL
	Male	Female	
Bachelor of Technology in Biotechnology	0	0	0
Bachelor of Technology in Chemical Engineering	2	1	3
Bachelor of Technology in Computer Science & Engineering	6	1	7
Bachelor of Technology in Civil Engineering	1	1	2
Bachelor of Technology in Electronics & Communication Engineering	3	2	5
Bachelor of Technology in Electrical Engineering	3	2	5
Bachelor of Technology in Metallurgical & Materials Engineering	2	1	3
Bachelor of Technology in Mechanical Engineering	6	1	7
B.Tech & M.Tech Dual Degree in Biotechnology	0	0	0
B.Tech & M.Tech Dual Degree in Chemical Engineering	0	0	0
5 year integrated M.Sc in Chemistry	1	0	1
Total	24	9	33

11.9 (B) AWARDS DURING 2019-20

DEPARTMENT OF BIOTECHNOLOGY

- 1 Dey A. won the Oral Best Session Paper in International Conference of Excellence in Research and Innovation, at 14th PARIS International Conference on Agriculture, Biological and Environmental Sciences (PABE-19) Paris(France) Sept. 5-7, 2019

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- 1 Partha Sarathi Paul, Krishnandu Hazra, Sujoy Saha and Subrata Nandi, " Oh dear! It's just a Tool to Plan the Deployment of a Post-Disaster Network! ", International Conference on Frontiers in Computing and Systems (COMSYS-2020) (Springer) [Best Paper Award]
- 2 Saravanan Chandran received Best paper award for article entitled Classification of Buildings and Vehicles in Google Map Satellite Images using Random Forest Classifier, Springer International Conference on Electronic Systems and Intelligent Computing, March 02-04, 2020 at NIT Arunachal Pradesh, India. <https://esic2020.in/>

DEPARTMENT OF ELECTRICAL ENGINEERING

- 1 Prof. S. Banerjee became Associate Editor in IET Power Electronics, Associate Editor in IEEE Access & Fellow in IET (UK)

- 2 Prof. S. Banerjee & his team received (i) 'Outstanding Paper Award' in 27th West Bengal State Science & Technology Congress, 2020, (ii) 'Best Paper in Control System Track' in CALCON,2020 & (iii) 2020 Best Paper Award for the Journal 'International Journal of Modelling and Simulation', Taylor & Francis.

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

- 1 The paper entitled, 'Studies on reduction behavior of highly fluxed iron ore pellets for application in steelmaking' by Dishwar Raj Kumar, Mandal, Arup Kumar, Sinha O.P. was selected as Best paper award under Process Waste category in International Conference on Management and Recycling of Metallurgical Wastes MetWaste-2020, held from 22-23 February 2020, Varanasi, India
- 2 The paper entitled, New approaches for utilization of iron ore slime and bottom ash' by Kumar Ramesh, Mandal, A.K., Dishwar Raj K and Sinha O.P., was selected as Best paper award under Fly Ash category in International Conference on Management and Recycling of Metallurgical Wastes MetWaste-2020, held from 22-23 February 2020, Varanasi, India

ANNEXURE-11.10 (A) VOCATIONAL TRAINING

SL.NO	NAME OF THE COMPANY	SL.NO	NAME OF THE COMPANY
1	NUVOCO	31	DPL
2	GAIL	32	MTNL
3	DALMIA CEMENT	33	BHEL
4	M. N. DASTUR	34	BSNL
5	MICROSOFT	35	ITC
6	HCL	36	CERN
7	TCS	37	L & T
8	HDFC BANK	38	TATA MOTORS

SL.NO	NAME OF THE COMPANY	SL.NO	NAME OF THE COMPANY
9	NTU (Singapore)	39	CLW
10	SCHNEIDER ELECTRIC	40	WBSEDCL
11	BEL	41	MIDHANI
12	MAHINDRA & MAHINDRA	42	NTPC
13	IIT KHARAGPUR	43	MITACS (Canada)
14	MARUTI SUZUKI	44	ISRO,NRSC
15	JSW	45	VODAFONE INDIA Ltd.
16	TIL	46	COAL INDIA Ltd.
17	PEPSI CO.	47	ASHOK LEYLAND
18	ESSAR	48	CROMPTON GREAVES
19	CMERI DURGAPUR	49	TOYOTA
20	IOCL	50	MECON
21	BAARC	51	OYO ROOMS
22	DRDO	52	KHORANA PROGRAMES
23	HPCL	53	NIMS (Japan)
24	SAIL DSP	54	WIPRO
25	IISCO	55	DOUBTNUT
26	TATA METALICKS	56	MAQ SOFTWARE
27	CPWD	57	JSPL
28	SHAPOORJI PALLONJI	58	TATA METALIKS
29	SIMPLEX	59	RIL
30	VIZAG STEEL PLANT	60	EDVIZO

ANNEXURE-11.10(B) PLACEMENT STATISTICS DURING 2019 – 2020

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED (BRANCH WISE)									
			B.Tech									
			BT	CE	CHE	CSE	ECE	EE	IT	ME	MME	TOTAL
Sharing slot												
1	TCS	-	0	0	0	0	0	0	0	0	0	0
2	INFOSYS	24 & 25.09.2019	5	4	10	3	7	14	5	20	15	83
Branch wise Core Sector												
1	MICROSOFT(PPO)	10 & 15.07.2019	0	0	0	3	1	0	1	0	0	5
2	SAMSUNG R&D (1)	13 & 18.07.2019	-	-	-	0	0	-	1	-	-	1
3	CODENATION	15.07.2019	0	0	0	0	0	0	0	0	0	0
4	GOLDMAN SACHS (PPO)	15 & 18.07.2019	-	-	-	1	1	-	5	-	-	7
5	J.P. MORGAN (PPO)	19 & 23.07.2019	-	-	-	3	-	-	5	-	-	8
6	D.E. SHAW	PPO	-	-	-	1	0	0	0	-	-	1
7	CESC	PPO	-	-	-	0	-	4	-	2	-	6
8	THERMAX	PPO	-	-	-	-	-	-	-	1	-	1
9	MORGAN STANLEY	PPO	-	-	-	1	-	-	0	-	-	1
10	Expedia Group	PPO	-	-	-	-	-	-	1	-	-	1
11	SAINT GOBAIN	PPO	-	-	2	-	-	-	-	1	-	3
12	WELLS FARGO	20 & 22.07.2019	-	-	-	2	-	-	2	-	-	4
13	QUALCOMM	21 & 25.07.2019	-	-	-	3	9	1	1	-	-	14
14	MAQ SOFTWARE	23 & 29.07.2019	-	-	-	0	-	-	1	-	-	1
15	AMAZON	24.07 & 03.08.2019	0	0	0	2	1	0	5	0	1	9
16	HSBC	26.07 & 06.08.2019	0	0	0	1	1	1	1	2	0	6

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED (BRANCH WISE)									
			B.Tech									
			BT	CE	CHE	CSE	ECE	EE	IT	ME	MME	TOTAL
17	CAPGEMINI	29.07 & 01.08.2019	1	0	2	2	5	2	3	1	1	17
18	TERADATA	30.07.2019	-	-	-	2	-	-	0	-	-	2
19	GOOGLE INDIA	30.07.2019	-	-	-	0	0	0	0	-	-	0
20	UBER	02 & 07.08.2019	-	-	-	1	1	-	0	-	-	2
21	OYO	03 & 08.08.2019	-	-	-	2	2	0	5	-	-	9
22	ZS ASSOCIATES	05 & 22.08.2019	0	1	0	1	1	0	0	0	1	4
23	TREDENCE	07 & 13.08.2019	1	0	1	0	0	1	0	3	1	7
24	PUBLICIS SAPIENT	08 & 11.08.2019	0	0	0	2	0	0	2	0	0	4
25	ORACLE	09 & 14.08.2019	-	-	-	2	3	1	3	-	-	9
26	BLACKBUCK	16 & 17.08.2019	0	2	0	0	0	1	0	1	0	4
27	OFSS	17 & 21.08.2019	-	-	-	1	4	1	2	1	-	9
28	ASHOK LEYLAND	19.08 & 11.09.2019	-	-	-	-	-	-	-	0	-	0
29	AMDOCS	20 & 26.08.2019	-	-	-	0	4	3	-	-	-	7
30	ALSTOM	21 & 29.08.2019	-	-	-	-	0	4	-	2	-	6
31	VALUE LABS	23 & 27.08.2019	-	-	-	1	0	-	0	-	-	1
32	NOKIA	26 & 31.08.2019	-	-	-	0	1	0	1	-	-	2
33	ANALYTICS QUOTIENT	28.08.2019	0	0	0	1	0	0	1	3	0	5
34	FACTSET	29 & 30.08.2019	-	-	-	1	0	-	1	-	-	2
35	HERO MOTOCORP	31.08 & 04.09.2019	-	-	-	-	-	-	-	6	-	6
36	GREY B	02 & 03.09.2019	1	-	0	0	1	0	0	0	1	3
37	WIPRO	03.09.2019	0	1	0	1	3	0	2	0	-	7
38	IBM	05 & 06.09.2019	-	-	-	4	3	0	3	-	-	10
39	L&T	05 & 06.09.2019	-	-	-	-	0	2	-	10	-	12
40	TATA PROJECTS	06 & 09.09.2019	-	0	-	-	-	0	-	3	-	3
41	L&T INFOTECH	07.09.2019	0	0	0	7	5	0	1	0	1	14
42	NRI FINTECH	09.09.2019	-	-	-	0	0	-	0	-	-	0
43	MIHUP	09.09.2019	-	-	-	2	-	-	2	-	-	4
44	L&T CONSTRUCTION	10.09 & 24.10.2019	-	6	-	-	0	3	-	5	-	14
45	VIRTUSA	11.09.2019	-	-	-	0	0	0	-	-	-	0
46	NOVARTIS	13 & 21.09.2019	0	0	2	2	0	1	1	0	0	6
47	OBOPAY	13 & 14.09.2019	0	1	0	0	2	0	0	0	1	4
48	INFOSYS(PP)	14.09.2019	-	-	-	1	0	-	0	-	-	1
49	PWC	16 & 17.09.2019	-	-	-	4	2	4	2	1	2	15
50	PCBL	17.09.2019	-	-	-	-	-	3	-	1	-	4
51	SOKRATI	18.09.2019	-	-	-	-	-	-	-	-	-	0
52	HUL	20.09.2019	-	-	1	-	-	1	-	0	-	2
53	RELIANCE JIO	21.09.2019	-	-	-	1	8	-	-	-	-	9
54	ERICSSON	21.09.2019	-	-	-	0	0	-	2	-	-	2
55	ACCENTURE	23.09.2019	0	0	0	3	1	1	3	0	0	8
56	TATA METALIKS(PPO)	25 & 26.09.2019	-	-	-	0	-	1	-	-	0	1
57	DEQODE	10 & 18.10.2019	0	-	0	1	0	0	0	-	0	1
58	OPTUM	30.09 & 14.10.2019	-	-	-	1	-	-	5	-	-	6
59	HUAWEI TECHNOLOGIES	14 & 23.10.2019	-	-	-	3	0	-	0	-	-	3
60	EAGLEVIEW	15 & 18.10.2019	-	-	-	1	0	-	0	-	-	1
61	RIL	17.10 & 09.11.2019	-	-	6	-	-	-	1	1	1	9

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED (BRANCH WISE)										
			B.Tech										
			BT	CE	CHE	CSE	ECE	EE	IT	ME	MME	TOTAL	
62	SCHNEIDER ELECTRIC	18.10.2019	-	-	-	-	0	0	-	0	-	0	
63	SAMSUNG R&D (2)	21.10.2019	-	-	-	0	0	-	0	-	-	0	
64	GE HEALTHCARE	22.10.2019	-	-	-	-	0	0	-	-	-	0	
65	ABZOOBA	25.10.2019	-	-	-	0	0	-	0	-	-	0	
66	GENPACT	31.10 & 01.11.2019	0	0	1	2	0	1	2	0	2	8	
67	JSL	01, 15 & 16.11.2019	-	-	-	0	-	2	-	2	2	6	
68	BRAHMOS	06.11.2019	-	-	-	-	1	0	-	2	-	3	
69	INFO OBJECTS	08.11.2019	-	-	-	0	-	-	1	-	-	1	
70	ADDVERB TECHNOLOGIES	12 & 13.11.2019	-	-	-	-	-	0	-	1	-	1	
71	EWAC	14 & 15.11.2019	-	-	-	-	-	-	-	1	3	4	
72	TCS	17.11.2019	0	0	0	0	1	0	0	0	0	1	
73	HELIUM CONSULTING	20 & 22.11.2019	-	-	1	0	-	-	-	-	-	1	
74	ANGLO EASTERN	21.11.2019	-	-	-	-	-	-	-	0	-	0	
75	TCE	22 & 23.11.2019	-	6	2	-	-	2	-	5	-	15	
76	ADITYA BIRLA	30.11 & 04.12.2019	-	-	6	-	-	5	-	6	-	17	
77	Haldia Petrochemicals	06 & 07.12.2019	-	0	1	-	-	0	-	1	-	2	
78	Vedanta	07.12.2019	-	-	-	-	-	1	-	-	-	1	
79	Linde	11.12.2019	-	-	3	-	-	0	-	2	-	5	
80	Elegantship	13.12.2019	-	-	-	-	-	-	-	3	-	3	
81	IRIS	13.12.2019	-	-	-	0	0	-	-	-	-	0	
82	COGNIZANT	15 & 20.12.2019	-	-	-	0	0	0	0	2	-	2	
83	Aakash Institute	16.12.2019	1	0	0	0	0	0	0	0	0	1	
84	Nucleus Software	17.12.2019	-	-	-	0	0	0	1	0	-	1	
85	Jamipol	23.12.2019	-	-	-	-	-	-	-	-	0	0	
86	Pradan	23 & 24.12.2019	3	0	1	0	0	0	0	0	1	5	
87	JCB	04.01 & 05.02.2020	-	-	-	-	0	1	-	1	0	2	
88	GREEN AGREVOLUTION	06.01.2020	-	-	-	0	-	-	1	-	-	1	
89	SCHINDLER	07.01.2020	-	-	-	-	-	0	-	1	-	1	
90	PI INDUSTRIES	08.01.2020	-	-	2	-	-	-	-	1	-	3	
91	GRSE	09 & 10.01.2020	-	-	-	-	2	1	-	1	-	4	
92	TATA IQ	09.01.2020	0	0	0	0	0	0	0	0	0	0	
93	CGI	15 & 18.01.2020	0	0	0	0	0	0	0	0	0	0	
94	RELIANCE JIO (2)	16.01.2020	-	-	-	0	0	-	0	-	-	0	
95	NIHILENT	17.01.2020	-	-	-	0	0	0	0	-	-	0	
96	WEATHERFORD	20 & 21.01.2020	-	-	-	-	-	0	-	0	-	0	
97	4IITEENS	25.01.2020	1	0	0	0	0	0	0	0	1	2	
98	S.K. SMANTA	27.01.2020	-	0	-	0	-	0	-	1	-	1	
99	AZIM PREMJI	28.01.2020	0	0	0	0	0	0	0	0	0	0	
100	ITD CEMENTATION	28.01.2020	-	0	-	-	-	-	-	0	-	0	
101	TATA STEEL	28 & 30.01.2020	-	-	-	2	-	2	2	2	-	8	
102	IEM	05 & 06.02.2020	-	-	-	0	-	-	0	-	-	0	
103	BERGER PAINTS	05.02.2020	-	0	-	-	-	-	-	-	-	0	
104	AARTI INDUSTRIES	06.02.2020	-	-	3	-	-	-	-	-	-	3	
105	DXC TECHNOLOGY	07.02.2020	-	-	-	0	0	-	0	-	-	0	
106	VIKRAM SOLAR	13.02.2020	-	-	-	-	0	0	-	0	0	0	

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED (BRANCH WISE)												
			B.Tech												
			BT	CE	CHE	CSE	ECE	EE	IT	ME	MME	TOTAL			
107	TEACH FOR INDIA	25.02.2020	-	-	-	-	-	-	-	-	-	-	-	-	0
108	CLOUDERA	27.02.2020	-	-	-	0	0	0	0	0	0	-	-	-	0
109	RODIC CONSULTANTS	28.02.2020	-	2	-	-	-	-	-	-	-	-	-	-	2
110	HPCL	03 & 04.03.2020	-	0	-	-	-	-	1	-	6	-	-	-	7
111	PIRAMAL FOUNDATION	05, 06 & 07.02.2020	0	0	0	0	0	0	0	0	0	0	0	0	0
112	VALUED EPISTEMICS	07.02.2020	0	0	0	0	0	0	0	0	0	0	0	0	0
113	JSW	15.03.2020	-	-	2	-	-	-	0	-	0	1	-	-	3
114	KREDEENT INFOEDGE	22.06.2020	-	-	-	1	-	-	0	-	-	-	-	-	1
115	WHITEHAT JR	05.07.2020	0	0	0	0	0	0	0	0	0	1	0	0	1
Eligible Students			28	47	50	84	88	77	81	129	50	634			
Total Placed			12	19	41	70	68	52	72	91	28	453			
Percentage Placed			42.86	40.43	82.00	83.33	77.27	67.53	88.89	70.54	56.00	71.45			
Total Job Offered			13	23	46	72	70	62	79	104	34	503			
Double Jobs			1	4	5	2	2	10	7	13	6	50			

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED (BRANCH WISE)																														
			M.Tech Specialization																														
			BT	CE	CHE	CSE	ECE	EE	ME	MME	HSS	PHY	MATH	EES	BT	GE	SE	CHE	CSE	TELE	VLSI	PE	PS	MD	FM	TE	MMT	MSW	AMST	OR	EST		
Sharing slot																																	
1	TCS		0	0	0	0	2	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	2
2	INFOSYS	24 & 25.09.2019	0	0	0	0	5	2	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Branch wise Core Sector																																	
1	CODENATION	15.07.2019	-	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
2	QUALCOMM	21 & 25.07.2019	-	-	-	-	2	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
3	MAQ SOFTWARE	23 & 29.07.2019	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
4	AMAZON	24.07 & 03.08.2019	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	0	0	
5	HSBC	26.07 & 06.08.2019	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	0	0	
6	CAPGEMINI	29.07 & 01.08.2019	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7	TERADATA	30.07.2019	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
8	UBER	02 & 07.08.2019	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
9	ORACLE	09 & 14.08.2019	-	-	-	-	1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
10	OFSS	17 & 21.08.2019	-	-	-	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
11	AMDOCS	20 & 26.08.2019	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
12	NOKIA	26 & 31.08.2019	-	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
13	FACTSET	29 & 30.08.2019	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
14	IBM	05 & 06.09.2019	-	-	-	-	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
15	L&T CONSTRUCTION	10.09 & 24.10.2019	-	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	
16	NOVARTIS	13 & 21.09.2019	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	0	0	
17	INFOSYS(PP)	14.09.2019	-	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
18	PWC	16 & 17.09.2019	-	-	-	-	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED (BRANCH WISE)																	
			M.Tech Specialization															EES	EST	
			BT	CE		CHE	CSE	ECE		EE		ME			MME	HSS	PHY			MATH
BT	GE	SE	CHE	CSE	TELE	VLSI	PE	PS	MD	FM	TE	MMT	MSW	AMST	OR	EST				
19	HUAWEI TECHNOLOGIES	14 & 23.10.2019	-	-	-	-	2	0	0	-	-	-	-	-	-	-	-	-	-	2
20	SAMSUNG R&D	21.10.2019	-	-	-	-	0	0	0	-	-	-	-	-	-	-	-	-	-	0
21	Info Objects	08.11 & 17.12.2019	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	0
22	TCS	17.11 & 12.12.2019	0	0	0	0	1	0	0	0	0	0	0	0	0	-	0	0	0	1
23	TCE	22 & 23.11.2019	-	0	1	3	1	-	-	1	2	0	0	0	-	-	-	-	-	8
24	PARUL UNIVERSITY	09.12.2019	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3
25	IRIS	13.12.2019	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3
26	COGNIZANT	15 & 20.12.2019	-	-	-	-	0	0	0	0	0	0	0	-	-	-	-	-	-	0
27	AAKASH INSTITUTE	16.11.2019	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
28	TATA IQ	09.01.2020	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
29	4IITEENS	25.01.2020	0	-	-	0	0	0	0	1	0	0	0	-	-	-	0	-	-	1
30	AZIM PREMJI	28 & 29.01.2020	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
31	IEM	05 & 06.02.2020	-	-	-	-	0	0	1	0	0	0	1	1	-	-	-	0	-	3
32	S. R. PATEL	06 & 29.02.2020	-	0	0	-	0	-	-	-	-	0	0	0	-	-	-	-	-	0
33	MCKINLEY	07.02.2020	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	0
34	AIZANT	15 & 20.02.2020	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-	-	0
35	TEACH FOR INDIA	25.02.2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	CLOUDERA	27.02.2020	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	0
37	RODIC CONSULTANTS	28.02.2020	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
	Strength		9	12	16	9	47	10	16	11	16	11	16	15	11	8	13	11	14	245
	Total Placed		0	0	1	3	24	2	2	2	2	1	2	1	0	0	0	0	0	40
	Total Job Offered		0	0	1	3	28	2	3	2	2	1	3	1	0	0	0	0	0	46

MCA: 2019-20**[0- CONSIDERED BUT NOT SELECTED]**

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED
1	CODENATION	15.07.2019	0
2	MAQ SOFTWARE	23 & 29.07.2019	0
3	AMAZON	24.07 & 03.08.2019	0
4	UBER	02 & 07.08.2019	0
5	ANALYTICS QUOTIENT	28.08.2019	1
6	FACTSET	29 & 30.08.2019	1
7	VIRTUSA	11.09.2019	3
8	OFSS	17 & 21.08.2019	2
9	AMDOCS	20 & 26.08.2019	4
10	NOKIA	26 & 31.08.2019	2
11	HERO MOTOCORP	31.08 & 04.09.2019	0
12	NRI FINTECH	09 & 17.09.2019	0

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED
13	ABZOOBA	25.10.2019	1
14	INFO OBJECTS	08.11 & 17.12.2019	0
15	IRIS	13.12.2019	0
16	IEM	05 & 06.02.2020	0
17	CLOUDERA	27.02.2020	0
	Eligible Students		23
	Total Placed		14
	Total Job Offered		14

MBA: 2019-20**[0- CONSIDERED BUT NOT SELECTED]**

Sl. No.	COMPANY	DATE OF SELECTION	NUMBER OF STUDENTS PLACED
1	BANDHAN BANK	15.11.2019	1
2	KOTAK MAHINDRA	09.01.2020	0
3	HDFC	11.01.2020	3
4	PIRAMAL FOUNDATION	05 & 06.03.2020	0
5	FEDERAL BANK	12.03.2020	4
6	WHITEHAT JR	05.07.2020	0
	Eligible Students		18
	Total Placed		07
	Total Job Offered		08

ANNEXURE 11.11(A) NON-PLAN GRANT

Non-Plan Grant received in 2019-2020- Rs. 13943.05 Lakhs

ANNEXURE 11.11(B) PLAN GRANT

Plan (General) Grant received in 2019-2020- Rs. 3286.52.00 Lakhs

ANNEXURE – 11.11(C) SOURCES OF GRANTS**Till Financial year 2002-03**

Share of Recurring Expenditure were borne by Government of India and Government of West Bengal in 50:50 basis.

From financial year 2003-04 onward

Entire Recurring and Non-Recurring Grants are borne by Govt. of India.

ANNEXURE – 11.11(D) EXPENDITURE POSITION FOR LAST FEW YEARS

(Rupees in Lakhs)

Plan head Expenditure		Non-Plan head Expenditure	
2012-13	4050.00	2012-13	6101.14
2013-14	5058.03	2013-14	7296.61
2014-15	2495.36	2014-15	7573.72
2015-16	4750.82	2015-16	8092.35
2016-17	2570.46	2016-17	11188.98
2017-18	1425.36	2017-18	12423.47
2018-19	1409.89	2018-19	14814.37
2019-20	3286.52	2019-20	13943.05

ANNEXURE 11.12(A) CONSTRUCTION WORK COMPLETED/ IN PROGRESS DURING THE YEAR 2019-20 (PLAN GRANT PROJECT)

- 1 1250 Seated Boy's Hostel : All works completed. Handing over of the building is in progress.
- 2 1500 Seated Auditorium : Work is in progress.
- 3 Raising of Boundary wall of campus : Work is in progress.
- 4 Relaying and Renovation of Sewer Line : Work is in progress.
- 5(a) Construction of concrete pavement road : Work is completed;
- (b) Renovation of flexible pavement of campus road : Work is completed.
- 6 Construction of conference room & Faculty Room on existing 2nd floor of Mechanical Engineering Department : Work is in progress.
- 7 Renovation of Central Library : Work is in progress.
- 8 Augmentation of Civil & Electrical facilities of Lecture Halls and Lectures Galleries (LH & LG) : Work is in progress.
- 9 Ramp & toilets for physically impaired students : Work is in progress.
10. Internal renovation of 55 no. LM type staff quarters : Work is in progress.
11. Augmentation of CSE Dept. by Construction of shed over the roof of Chemistry Dept. : Work is in progress.
12. Construction of EE measurement lab through vertical extension of Electrical Engineering Lab. : Work is in progress.

11.12(B) CONSTRUCTION WORK COMPLETED/ IN PROGRESS DURING THE YEAR 2019-20 (HEFA LOAN PROJECT)

1. Central Research Lab (G+10) (Utkarsh Bhavan) : Work is in progress.

ANNEXURE – 11.13 LIST OF LABORATORIES

Department	Laboratories
Biotechnology	Biochemistry, Microbiology, Bioinformatics, Molecular Biology & rDNA Technology, Immunology, Fermentation Technology, Bioseparation Technology, Bioprocess Engineering, Plant Biotechnology, Food Biotechnology
Chemical Engineering	Heat Transfer Lab, Mass Transfer Lab, Fluid Flow Lab, Mechanical Operations Lab, Environmental and Membrane Technology Lab, Computing Lab, Energy Lab, Adsorption Lab, Chemical & Bio-Chemical Reaction. Engg. Lab, Process Control Lab, Combustion Engineering Lab, Multi-phase Flow Lab, Process Modelling & Simulation Lab, Central Research Laboratory, Process Equipment Design Lab, Thermo-fluid laboratory.
Chemistry	Electrochemical Laboratory, PG (M.Sc.) Laboratory, UG (B.Tech.) Laboratory, Synthesis & Analytical Laboratory, Inorganic Synthesis and Environmental Laboratory, Natural Product & Biological Chemistry Laboratory, Bio-molecular Modelling Laboratory, Instrumentation Laboratory -1, Instrumentation Laboratory -2, Computer Laboratory cum Library Development of new 'Cell culture and Molecular Biology' Laboratory by Prof. S. C. Moi during 2018-2019 sponsored by DST-SERB, Government of India; DSTBT Govt of WB and CSIR (HRDG), Government of India.
Civil Engineering	PG Structural Engineering Laboratory, Concrete and Structure Laboratory, Highway Engineering Laboratory, Surveying Laboratory, Environmental Engineering Laboratory, Water Resources Engineering Laboratory, Exciter and FFT analyser for Earthquake Laboratory, SHM Laboratory, Soil Mechanics and Foundation Engineering Laboratory, Geo-environmental Laboratory
Computer Science & Engineering	Advanced Software Engineering, Compiler, Operating System and Computer networking Laboratory, Data Structure and Database Laboratory, Microprocessor laboratory
Earth and Environmental Studies	Environmental Laboratory-I, Environmental Laboratory-2, Research Laboratory, Computer Laboratory, Geology Laboratory, Instrument Laboratory, Contaminant Transport Laboratory
Electrical Engineering	Electrical Technology Lab, Network Laboratory, Electrical & Electronics Measurement Lab, Electrical Machines Lab, Power Electronics Lab, Power Systems Lab, High Voltage Engg Lab, Control Systems Lab, Advanced Power Electronics Lab, Advanced Power Systems Lab, Advanced Control Systems Lab, Process Instrumentation Lab, Digital Signal Processing Lab, Embedded Systems Lab, Computation Lab, Machine Drives Laboratory.

Department	Laboratories
Electronics & Communication Engineering	Electronics Circuit Lab, Network Lab, VLSI Lab, Digital Electronics Lab, Communication Lab, Industrial Electronics Lab, Instrumentation Lab, Microprocessor Lab, Computer architecture Lab, Microwave Lab, PCB Lab, Microwave and Antenna Research Laboratory, Microwave Component Design Laboratory, Advanced Communication Lab (for PG), Nano Device Lab
Mathematics	Computer Laboratory
Mechanical Engineering	Automobile Engineering Laboratory, CAD /CAM Laboratory, Fluid Mechanics & Hydraulic Machines Laboratory, Heat Power Laboratory, Machine Dynamics Laboratory, Metrology Laboratory, Production Eng. Lab., Metrology Laboratory, Robotics & AI Laboratory, Thermal Energy Laboratory.
Metallurgical & Materials Engineering	Computer Application in Metallurgical Process Laboratory for UG, Computer Application in Metallurgical Process Laboratory for PG, Chemical Analysis Laboratory, Foundry Laboratory, Heat Treatment Laboratory, Mechanical Testing Laboratory, Metallography and Phase Transformation Laboratory, Thermodynamics of Materials Laboratory, Process Metallurgy Laboratory, Electrometallurgy and Corrosion Laboratory, X-ray Diffraction and Thin Film Laboratory, Nanomaterials and Composites Laboratory
Central Instrumentation Facility	Scanning Electron Microscope with EDS, X-Ray Diffractometer, Nd:YAG Laser Unit, Spectrum Analyzer
Physics	Nanoscience Laboratory, Materials Science Laboratory, X-ray Diffraction Laboratory, Low Temperature Characterization Laboratory, Laser Laboratory, Electronics Laboratory, Carbon Nanotechnology Laboratory, Optical sensor laboratory
Management Studies	Systems Lab

ANNEXURE-11.14 TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP)

NIT Durgapur got selected as one of the Mentor Institute under TEQIP III in 2017-18 for mentoring two Institutes: i) Dumka Engg. College, Dumka, Jharkhand and ii) NIT Nagaland and was allocated total project life allocation of Rs. 7 crores under TEQIP III plus 3 crores additional for Centre of Excellence (COE) in Advanced Materials for improvement in quality of technical education through activities such as students' learning, assistantship, faculty & staff development, Research and development, Administrative Reforms, Industry-Institute-Interaction, Mentoring of the mentee institutes, etc.

At NIT Durgapur, most of these activities got momentum since financial year 2018-19 and peaked in 2019-2020 when we were able to spend about Rs. 636 lakhs. Of these, about Rs. 381.3 lakhs were spent towards procurement of centralized items, about Rs. 28 lakhs to organize and participate in faculty & staff development programmes, Rs. 130 lakhs towards student assistantship in the form of scholarship, internship and attendance to conference, workshop, short term course, etc. while Rs. 50 lakhs was spent for research and development. Due

to unfavorable circumstances, however, only limited expenditures could be achieved under the heads of twinning, industry-institute-interaction, management capacity development and staff development. The twinning activities with Dumka Engg. College has been moderately successful but that with NIT Nagaland has not been satisfactory except for a very limited number of interactions through the Centre of Excellence. Nevertheless, in spite of these constraints, we are confident that we shall be able to achieve the overall targeted expenditure set by the NPIU within the project timeframe.

ANNEXURE-11.15 ALUMNI

Centre for Alumni Affairs & International Relations (CAAIR)

- 1 Centre for Alumni Affairs & International Relations (CAAIR) is set up as the nodal center or office of Dean (Alumni Affairs) in NIT Durgapur for direct connection with REC/NIT Durgapur alumni spread all over the globe
- 2 Conducting number of Eminent Alumni Lecture Series Programmes. Some important programs which has been conducted in the year 2019-2020.

Date	Detail
February 04, 2020	Eminent Alumni Lecture by Mr. J P Bhattacharya (1982, EE), Founder & MD, Deem Rolls Tech. Ltd.
February 10, 2020	Eminent Alumni Lecture, by Mr. Subir Chowdhury (1981, ME), CEO, JCB India Ltd.
February 12, 2020	Eminent Alumni Lecture by Prof. S.K. Saha (1983, ME), IIT Delhi

3. Conducting number of Industry-Institute-Interaction Programmes.

Date	Detail
February 03, 2020	Diamond Jubilee Seminar on Industry 4.0 by Dr. Nagahanumaiah, Director, CMTI, Bengaluru
February 10, 2020	Industry-Institute Interaction with JCB India Ltd.

4. Providing Alumni Card to Institute Alumnus.
5. Providing Distinguished Alumnus Award-2019. In the convocation 2019 two eminent personalities has received Distinguished Alumnus Award (DAA).
 - i) PROF. KAMANIO CHATTOPADHYAY (1971, Department of Metallurgical and Materials Engineering).
 - Honorary Professor, Department of Materials Engineering, Indian Institute of Science, Bangalore.
 - Former Chair, Mechanical Sciences Division Convener, Interdisciplinary Center for Energy Research, Indian Institute of Science, Bangalore
 - Former Chair, Mechanical Sciences Division Convener, Interdisciplinary Center for Energy Research, Indian Institute of Science, Bangalore
 - Director (India), Solar Energy Research Institute for India and United States (SERIUS)
 - Co-ordinator, National Microgravity Programme, Indian Space Research Organization (ISRO).
 - Recipient of "Shanti Swarup Bhatnagar Award "
 - ii) MR. BHARGAVAN SUMANT (Batch of 1985, B.E., Department of Mechanical Engineering)
 - Whole time Director on the Board of ITC Limited.
 - Prior to his appointment as a Director on the Board of ITC, he was President, FMCG Businesses since April 2016.
- He also held additional responsibility of Trade Marketing & Distribution Vertical as its Chief Executive for a period of one year from October 2016.
- He spent his first 19 years with ITC in manufacturing operations of the Tobacco Division and has worked in four production units as well as at the Head Office.
- In October 2004, he moved to the Foods Business and set up the Snack Food category under the brand name 'Bingo!'. He has led ITC Infotech India Limited, a wholly owned subsidiary of ITC, as its Managing Director from September 2009 to October 2014.
- He has also been on the Boards of ITC Infotech's wholly owned subsidiaries in the UK and the USA.
- He was the Divisional Chief Executive of the Tobacco Division before his elevation as President - FMCG Businesses.
- He has been a Director on the Board of The Tobacco Institute of India. Presently, Sumant serves as a Council Member of the CII Eastern Region.
6. Inauguration of Centre for Alumni Affairs and International Relations (CAAIR) website <http://alumnitdgp.in>
7. Published Alumni Annual Report "The NITDIAN CHRONICLE 2019".
8. Organized Global Annual Alumni Meet 2020 etc.

ANNEXURE-11.16 OTHER RELEVANT INFORMATION

ANNEXURE 11.16 (A): BOOKS AUTHORED DURING 2019-20

DEPARTMENT OF BIOTECHNOLOGY

Author	Title of the book	Publisher	Date of Publication
Barik, A., Kurgan, L.	Protein Interactions: Computational Methods, Analysis and Applications- Editor: M Michael Gromiha	World Scientific Pub Co.	March 27, 2020 ISBN-13: 978-9811211867.
Pathak,U., Dasgupta Mandal, D., Jewrajka,S., Das,K., Saha,P, Kumar,T., Mandal,T. *	A Consolidated Stratagem Towards Defenestration of Coke Oven Wastewater Using Various Advanced Techniques—An Analogous Study in RECENT trends in Waste water Treatment and Water resource management	Springer	JULY 2019 SBN 978-981-15-0705-2 ISBN 978-981-15-0706-9 (eBook) https://doi.org/10.1007/978-981-15-0706-9
Sar,P, Dutta, A., Bose,H., Mandal,S., and Kazy, S.K.	Deep Biosphere: Microbiome of the Deep Terrestrial Subsurface, In: Microbial Diversity in Ecosystem Sustainability and Biotechnological Applications Volume 1: Microbial diversity in normal and extreme environments, T. Satyanarayana, B N Johro, S K Das (Eds.)	Springer Nature Singapore Pte Ltd.	July, 2019 ISBN 978-981-13- 8314-4, https://doi.org/10.1007/978-981-13-8315-1
Sarkar,J., Roy,A., Sar, P., Kazy, S.K.	Accelerated bioremediation of petroleum refinery sludge through biostimulation and bioaugmentation of native microbiome, In Emerging Technologies in Environmental Bioremediation	Elsevier	January, 2020 DOI: 10.1016/B978-0-12-819860-5.00002-X

DEPARTMENT OF CHEMICAL ENGINEERING

Author	Title of the book	Publisher	Date of Publication
Mondal, M. and Halder G. N.	New and Future Developments in Microbial Biotechnology and Bioengineering	Elsevier	2019
Lahiri SK	Profit maximization techniques for operating chemical plants	Wiley	2020
Singh, R. K., Ruj, B., Sadhukhan, A. K. and Gupta, P.	Energy Recovery from Tyre Waste Pyrolysis: Product Yield Analysis and Characterization, in Energy Recovery Processes from Wastes	Springer Nature Singapore Pvt. Ltd.	2020
Singh, R. K., Ruj, B., Sadhukhan, A. K. and Gupta, P.	Catalytic and Non-catalytic Thermolysis of Waste Polystyrene for Recovery of Fuel Grade Products and Their Characterization	Springer Nature Singapore Pvt. Ltd.	2020
Mukherjee, A., Gupta, P. and Sadhukhan, A. K.	A Study on Pyrolysis of Plastic Wastes for Product Recovery and Analysis	Springer Nature Singapore Pvt. Ltd.	2020
Ghosh, A., Sarkar, J.P. and Das, B	A Critical Analysis on Anaerobic Digestion of OFMSW in India, Waste Valorisation and Recycling (pp. 237-245).	Springer Nature Singapore Pvt. Ltd.	2019
Ghosh, A., Sarkar, J.P. and Das, B	Effect of Physical Presence of Waste Plastics in the Degradation of Municipal Solid, Waste in Landfill Waste Valorisation and Recycling(pp. 93-103)	Springer Nature Singapore Pvt. Ltd.	2019
Ghosh, A., Sarkar, J.P. and Das, B	Purification Technologies of Bioreactor landfill Gas and its sustainable usage: Current Status and Perspectives, Urban Mining and Sustainable Waste Management, 2019	Springer Nature Singapore Pvt. Ltd.	2019
Ghosh, A., Debnath D., Sarkar, J.P. and Das	Optimization of Water Content Fluctuation During Biomethanation of OFMSW in Presence of Waste Plastics, Sustainable Waste Management: Policies and Case Studies	Springer Nature Singapore Pvt. Ltd.	2020

DEPARTMENT OF CIVIL ENGINEERING

Author	Title of the book	Publisher	Date of Publication
Das, D. (Indian adaptation author/ sole contributor for Indian adaptation)	'Concrete Technology', 2e in SI Units by A. M. Neville and J. J. Brooks (ISBN – 978-93-534-3655-1)	Pearson India Education Services Pvt. Ltd	July 2019
Khushboo, A., Yadav, K., Mandal, M.K., Pal, S., Chaudhuri, H., Dubey, K.K.	Current Developments in Biotechnology and Bioengineering. Resource Recovery from Wastes.	Elsevier	2020

DEPARTMENT OF MECHANICAL ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Bikramjit Podder, Ramesh Kumar Katta, Nirmal Baran Hui	Manufacturing Analytics for Cold Flow Forming of H30 Aluminium Tubes	LAP Lambert Academic Publishing	2019-06-03
Goswami A	Surface Micromachining—Advances and Advanced Characterization Techniques (chapter)	Springer	2020-02-21
Pruthvi Deep A., Jena A., Karmakar S.	Advances in Fluid and Thermal Engineering (Book Chapter)	Springer Nature	2019

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
R. Mitra, M. Mallik, and Sunil Kashyap	Book Chapter Title: High-Temperature Environmental Degradation Behavior of Ultrahigh-Temperature Ceramic Composites, in Handbook of Advanced Ceramics and Composites (Defense, Security, Aerospace and Energy Applications), Y. Mahajan, J. Roy (Eds.)	Springer, ISBN: 978-3-030-16346-4	2020

DEPARTMENT OF PHYSICS

Author	Title of the book	Publisher	Date of Publication
Choudhuri, B., Mondal, A.	Emerging Trends in Terahertz Solid-State Physics and Devices Chapter: Group III–Nitrides and Other Semiconductors for Terahertz Detector DOI: https://doi.org/10.1007/978-981-15-3235-1_12 .	Springer	March 21, 2020
Gangopadhyay, T. K., Kumbhakar, P., Mandal, M. K.	Photonics and Fiber Optics: Foundations and Applications	CRC Press	Sept. 23, 2019

ANNEXURE 11.16 (B).I: REVIEWS OF MANUSCRIPTS FOR PUBLICATION IN JOURNALS (SORT ALPHABETICALLY BY COLUMN 1, SURNAME)**DEPARTMENT OF BIOTECHNOLOGY**

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Aikat, K.	Renewable Energy	Elsevier	April 18, 2019
Aikat, K.	Industrial Crops and Products	Elsevier	April 23, 2019
Aikat, K.	Bioenergy Research	Springer Nature	September 21, 2019
Aikat, K.	Fuel	Elsevier	October 01, 2019
Aikat, K.	Biodiversitas Journal of Biological Diversity (SCOPUS journal)	Society for Indonesian Biodiversity CO-PUBLISHER: Department of Biology, FMNS, Sebelas Maret University Surakarta	October 16, 2019
Aikat, K.	Science of the Total Environment	Elsevier	November 18, 2019
Aikat, K.	Fuel	Elsevier	December 7, 2019
Aikat, K.	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	Taylor and Francis	February 02, 2020
Bhattacharjee, A.	Frontiers in Molecular Biosciences	Frontiers	August, 2019.
Bhattacharjee, A.	Nature Communication	Springer Nature	September, 2019
Dasgupta Mandal, D.	Journal of hazardous material	Elsevier	May 5, 2019
Dasgupta Mandal, D.	Journal of hazardous material	Elsevier	June 26, 2019
Dey, A	Journal of Cleaner Production	Elsevier	November, 2019
Dey, A	Journal of Cleaner Production	Elsevier	December, 2019
Dutta, D.	CyTA - Journal of Food.	Taylor & Francis	May, 2019
Dutta, D.	Journal of Functional Foods	Elsevier	December, 2019
Dutta, D.	LWT-Food Science and Technology	Elsevier	June, 2019
Dutta, D.	LWT-Food Science and Technology	Elsevier	August, 2019
Dutta, D.	LWT-Food Science and Technology	Elsevier	November, 2019
Dutta, D.	Journal of Food Science and Technology	Springer	January, 2020
Kazy, S.K.	BMC Biotechnology	Springer Nature	October, 2019
Mukherjee, O.	Gut Pathogens	Biomed Central Ltd	June, 2019
Mukherjee, O.	Gut Pathogens	Biomed Central Ltd	September, 2019
Mukherjee, O.	Gut Pathogens	Biomed Central Ltd	December, 2019
Saha, S.	Pharmacognosy Research	Wolters Kluwer Medknow Publications	September, 2019

DEPARTMENT OF CHEMISTRY

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Gupta P.	Biomass & Bioenergy	Elsevier	21/08/2019
Gupta P.	Energy & Fuels	ACS	15/05/2019
Gupta P.	Fuel	Elsevier	10/05/2019
Pal P	Desalination	Elsevier	8/5/19
Pal P	Biochemical Engineering	Elsevier	12/6/19
Pal P	Separation & Purification Technology	Elsevier	22/6/19
Pal P	Journal of Cleaner Production	Elsevier	24/6/19
Pal P	Int. J. of Env. Sc.& Tech	Springer	17/10/19
Pal P	Separation & Purification Technology	Elsevier	2/11/19
Pal P	Journal of Membrane Science	Elsevier	2/11/19
Pal P	Water Sc.& Technology	IWA	3/11/19
Pal P	Int.J.Wat.Processing & Engg.	Elsevier	3/11/19
Pal P	Biochemical Engineering Journal	Elsevier	10/11/19
Pal P	Separation & Purification Review	Taylor & Francis	5/1/20
Pal P	Biochemical Engineering Journal	Elsevier	10/11/19
Pal P	Scientific Report	Elsevier	11/2/20
Pal P	Biochemical Engg. Journal	Elsevier	14/2/20
Pal P	Journal of Env. Management	Elsevier	7/3/20
Pal P	Chemical Engineering Science	Elsevier	7/3/20
Pal P	Biochemical Engineering Journal	Elsevier	7/3/20
Pal P	Journal of Cleaner Production	Elsevier	7/3/20
Pal P	Science of Total Environment	Elsevier	8/3/20
Pal P	Int. J.Env.Sc. Tech	Springer	19/3/20
Pal P	Journal of Membrane Science	Elsevier	19/3/20
Pal P	Journal of Water Process Engineering	Elsevier	31/3/20
Paruya, S.	Annals of Nuclear Energy	Elsevier	24/02/ 2020
Paruya, S.	Chemical Engineering Science	Elsevier	30/06/2019
Paruya, S.	International Journal of Thermal Sciences	Elsevier	26/05/2019
Sadhukhan A.	Chemical Engineering Journal	Elsevier	20/02/2020

DEPARTMENT OF CHEMISTRY

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Adhikari Utpal	Material Chemistry and Physics	Elsevier	08.10.2019
Banerjee D. R.	Journal of Heterocyclic Chemistry	Wiley	28. 03. 2020
Chakrabarty J.	Asian Journal of Advances in Agricultural Research	Science Domain International	28.01.2020
Moi S. C.	J. of physical chemistry B	ACS	19.2.2020
Mukhopadhyay B.P.	Journal of Biomolecular Structure & Dynamics	Taylor and Francis	20.02.2020
Mukhopadhyay B.P.	Journal of Biomolecular Structure & Dynamics	Taylor and Francis	20.01.2020
Mukhopadhyay B.P.	Journal of Biomolecular Structure & Dynamics	Taylor and Francis	31.12.2019
Mukhopadhyay B.P.	Journal of Biomolecular Structure & Dynamics	Taylor and Francis	18.07.2019
Mukhopadhyay B.P.	Journal of Biomolecular Structure & Dynamics	Taylor and Francis	28.05.2019
Patra A. K.	J. Am. Chem. Soc.	American Chemical Society	12.11.2019
Patra A. K.	Chemistry Select	Wiley-VCH	15.01.2020
Sukul D.	J. Molecular Liquids	Elsevier	05.04.2019

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Sukul D.	Colloid Surf A	Elsevier	25.11.2019
Sukul D.	J. Adhesion Sci Tech.	Taylor & Francis	10.09.2019
Sukul D.	Int. J. Indus. Chem.	Springer	10.11.2019

DEPARTMENT OF CIVIL ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Banik, A K.	Engineering Structure	Elsevier	Dec 17, 2019
Das, D.	Asian Journal of Civil Engineering	Springer	May 2019
Das, D.	Current Science	Indian Academy of Sciences	July 2019
Das, D.	Ocean Engineering	Elsevier	August 2019
Das, D.	The Indian Concrete Journal	The Indian Concrete Journal	October 2019
Das, D.	Journal of Vibration and Control.	SAGE Publishing	October 2019
Das, D.	Current Science	Indian Academy of Sciences	January 2020
Das, D.	Journal of Sound and Vibration	Elsevier	February 2020
Samanta, A. K.	Natural Hazards (NHAZ)	Springer Nature	July 2019
Samanta, A. K.	Case Studies in Construction Materials	Springer	Aug 2019
Samanta, A. K.	STRUCTURES	Elsevier	March 2020
Samanta, A. K.	Latin Americal Journal of Solids and Structures.	University of Sao Paulo, Brazil	July 2019

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Dalui, M.	Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD-2019-0373.R1)	IEEE	Jan. 23, 2020
Saravanan Chandran	CAAI Transactions on Intelligence Technology	IET	Oct 15, 2019
Saravanan Chandran	IEEE Access	IEEE	Nov 11, 2019
Saravanan Chandran	IEEE Access	IEEE	Nov 19, 2019
Saravanan Chandran	IEEE Transactions on Circuits and Systems for Video Technology	IEEE	Dec 5, 2019
Saravanan Chandran	CAAI Transactions on Intelligence Technology	IET	Dec 17, 2019
Saravanan Chandran	IEEE Access	IEEE	Dec 17, 2019
Saravanan Chandran	Journal on Computing and Cultural Heritage	ACM	Dec. 23, 2019

DEPARTMENT OF ELECTRICAL ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Acharjee P.	IET Generation, Transmission & Distribution	IET	Dec, 2019
Acharjee P.	IEEE Systems Journal	IEEE	March,, 2020
Acharjee P.	IEEE Transactions on Smart Grid	IEEE	Jan,, 2020
Ahmed I.	IET Power Electronics	IET	March, 2020
Bhattacharya A.	IEEE Transaction on Power System	IEEE	August 2019, November 2019, March 2020
Bhattacharya A.	International Transaction on Electrical Energy Systems	Willy	December 2019
Bhattacharya A.	Applied Energy	Elsevier	March 2020
Bhattacharya A.	International Journal of Electrical Power and Energy Systems	Elsevier	March 2020
Banerjee S.	IEEE Transactions on Industrial Electronics	IEEE	April, 2019
Banerjee S.	IET Power Electronics	IET	June,, 2019

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Banerjee S.	IET Power Electronics	IET	April, 2019
Banerjee S.	Journal of Emerging and Selected Topics in Power Electronics	IEEE	August, 2019
Banerjee S.	IEEE Transactions on Industrial Electronics	IEEE	August, 2019
Banerjee S.	Journal of Emerging and Selected Topics in Power Electronics	IEEE	Nov, 2019
Banerjee S.	IEEE Transactions on Industrial Electronics	IEEE	Nov, 2019
Banerjee S.	Journal of Emerging and Selected Topics in Power Electronics	IEEE	Dec, 2019
Banerjee S.	IEEE Transactions on Power Electronics	IEEE	Dec, 2019
Banerjee S.	IEEE Transactions on Power Electronics	IEEE	Jan, 2020
Banerjee S.	IEEE Transactions on Industrial Electronics	IEEE	Feb, 2020
Bohre A.K.	IET Generation, Transmission & Distribution	IET	Nov 2019
Bohre A.K.	Renewables: Wind, Water, and Solar	Springer	Oct 2019
Dhara A.K.	Information Sciences	Elsevier	Dec, 2019
Dey A.	IET Signal Processing	IET	February, 2020
Dey A.	IFAC Journal of System and Control	Elsevier	Januray, 2020
Saha Roy B. K.	International Journal of Electrical Power and Energy Systems	Elsevier	September, 2019

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Mondal Sandip	Environmental Engineering Research	KSEE	Jan 05, 2020; Nov 02, 2019
Mondal Sandip	Environmental Science and Pollution Research	Springer	20 Dec 2019; 06 Aug 2019
Mondal Sandip	Applied Water Science	Springer	18 Mar 2020

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Chandra, A.	IEEE Transactions on Vehicular Technology	IEEE	09.03.2020
Chandra, A.	IEEE Transactions on Vehicular Technology	IEEE	19.02.2020
Chandra, A.	IEEE Transactions on Vehicular Technology	IEEE	11.10.2019
Chandra, A.	IEEE Communications Letters	IEEE	27.09.2019
Chandra, A.	IEEE Systems Journal	IEEE	20.08.2019
Chandra, A.	IEEE Access	IEEE	30.08.2019
Chandra, A.	IEEE Access	IEEE	21.01.2020
Chandra, A.	IEEE Wireless Communications Letters	IEEE	03.06.2019
Chandra, A.	IEEE Wireless Communications Letters	IEEE	15.03.2020
Dhar Roy, S.	Physical Communication	Elsevier	01.05.2019
Dhar Roy, S.	International Journal of Systems, Control and Communications (IJSCC)	Inderscience	16.05.2019
Dhar Roy, S.	Journal of King Saud University - Computer and Information Sciences	Elsevier	21.05.2019
Dhar Roy, S.	International Journal of Communication Systems	Wiley	21.05.2019
Dhar Roy, S.	IET Information Security	IET/ IEEE	14.06.2019
Dhar Roy, S.	ICT Express	Elsevier	02.07.2019
Dhar Roy, S.	International Journal of Communication Systems	Wiley	29.07.2019
Dhar Roy, S.	International Journal of Communication Systems	Wiley	06.08.2019

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Dhar Roy, S.	International Journal of Communication Systems	Wiley	11.08.2019
Dhar Roy, S.	IEEE Communications Letters	IEEE	19.08.2019
Dhar Roy, S.	International Journal of Distributed Sensor Networks	SAGE	22.08.2019
Dhar Roy, S.	IEEE Access	IEEE	23.08.2019
Dhar Roy, S.	Electronics Letters	IET/ IEEE	29.08.2019
Dhar Roy, S.	IEEE Access	IEEE	01.09.2019
Dhar Roy, S.	IEEE Access	IEEE	11.09.2019
Dhar Roy, S.	ETRI Journal	Wiley	19.09.2019
Dhar Roy, S.	International Journal of Communication Systems	Wiley	19.09.2019
Dhar Roy, S.	IEEE Access	IEEE	22.10.2019
Dhar Roy, S.	IEEE Access	IEEE	22.10.2019
Dhar Roy, S.	IEEE Access	IEEE	31.10.2019
Dhar Roy, S.	IEEE Access	IEEE	11.11.2019
Dhar Roy, S.	International Journal of Communication Systems	Wiley	16.11.2019
Dhar Roy, S.	Simulation Modelling Practice and Theory	Elsevier	27.11.2019
Dhar Roy, S.	China Communications.	China Institute of Communication	02.12.2019
Dhar Roy, S.	IEEE Access	IEEE	09.12.2019
Dhar Roy, S.	IEEE Access	IEEE	07.01.2020
Dhar Roy, S.	IEEE Access	IEEE	15.01.2020
Dhar Roy, S.	IEEE Signal Processing Letters	IEEE	20.01.2020
Dhar Roy, S.	International Journal of Communication Systems	Wiley	20.01.2020
Dhar Roy, S.	Electronics Letters	IET/IEEE	31.01.2020
Dhar Roy, S.	Digital Communications and Networks	Elsevier	31.01.2020
Dhar Roy, S.	International Journal of Distributed Sensor Networks	SAGE	14.02.2020
Dhar Roy, S.	IEEE Transactions on Vehicular Technology	IEEE	04.03.2020
Dhar Roy, S.	IEEE Open Journal of the Communications Society	IEEE	16.03.2020
Kundu S	IEEE Access (11 nos)	IEEE	19.12.2019 03.10.2019 19.09.2019 26.08.2019 30.07.2019 19.07.2019 07.09.2019 03.07.2019 28.05.2019 17.04.2019 15.03.2020
Kundu S	Adhoc Networks	Elsevier	15.07.19
Kundu S	Physical Communication	Elsevier	
Kundu S	International Journal of Electronics and Communications	Elsevier	27.02.2020
Kundu S	Adhoc Networks	Elsevier	15.04.19
Kundu S	Future Generation Computer Systems	Elsevier	16.05.2019
Kundu S	Computer Communications	Elsevier	15.05.2019
Kundu S	IETE Journal of Research	IETE	06.02.2019
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	21.04.2019
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	30.05.2020
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	26-08-2020

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	27-08-2020
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	03-10-2020
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	01-01-2020
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	30-01-2020
Chattaraj N	IEEE/ASME Transactions on Mechatronics	IEEE	25-03-2020
Ghatak R	IEEE Transaction on Antenna and Propagation, IEEE Transaction on Microwave Theory and Techniques, IEEE Transactions on Vehicular Technology, IEEE Microwave and Wireless Propagation Letters, IET Microwave Antennas and Propagation, PIER , AEUE International journal of Electronics and Communication, RFMICAE, MOTL, JEMWA	IEEE, IET, Springer, Elsevier, Taylor Francis, John Wiley	2019-20

DEPARTMENT OF MANAGEMENT STUDIES

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
De, Anupam	Vision: The Journal of Business Perspective (Scopus)	SAGE Journals	August, 2019
Ghosh, A	International journal of productivity and performance Management	Emerald	December 2019
Ghosh, A	Journal of Institutional economics	Cambridge University Press	November 2019
Roy M	Resource , Conservation, Recycling	Elsevier Science	March 2020
Roy M	Clean Technology and Environmental Policy	Springer	February 2020
Roy M	Water Resource Management	Elsevier	March 2020

DEPARTMENT OF MATHEMATICS

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Ali, M. F.	Turkish Journal of Mathematics	Scientific and Technological Research Council of Turkey	March, 2020
Ali, M. F.	Abstract and Applied Analysis	Hindawi	April, 2020
Bagchi, S.	Computer and security	Elsevier	October, 2019
Dey, L.K.	Mathematics	AIMS	May, 2019
Dey, L.K.	Asian-European Journal of Mathematics	World Scientific	June, 2019
Gopmandal P. P	Electrophoresis	Wiley	August, September, October and December 2019
Kar, S.	Applied Soft Computing	Elsevier	February, 2020
Kar, S.	Soft Computing	Springer	February, 2020
Maitra S	Physica A	Elsevier	October 30,2019
Maitra S	Optimal control, applications and methods	Wiley	December 13,2019
Pal, A.	Complex & Intelligent Systems	Springer	Sep 2019
Pal, A.	Complex & Intelligent Systems	Springer	Nov 2019
Pal, A.	Computational & Applied Mathematics	Springer	April 2019
Pal, A.	Iranian Journal of Mathematical Sciences & Informatics	ACECR, Iran	June 2019
Pal, P.	Chaos	American Institute of Physics	April, 2019

DEPARTMENT OF MECHANICAL ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Banerjee Nilotpal	Iranian Journal of Science and Technology, Transactions of Mechanical Engineering	Springer	July 25 2019
Datta A	Journal of thermal science and engineering application	ASME	August 09 2019
Hui N. B.	IEEE Tans. On Mechatronics	IEEE	July, Sept., Dec., 2019, Feb. 2020
Hui N. B.	Applied Soft Computing	Elsevier	Sept. 2019
Hui N. B.	Robotics and Autonomous Systems	Elsevier	Jan. 2020
Karmakar Sujit	Journal of Cleaner Production	Elsevier	Aug 8, 2019
Karmakar Sujit	Journal of Building Engineering	Elsevier	Nov 10, 2019
Layek A.	Energy	Elsevier - EGY-D-19-01062	27.04.19
Layek A.	Energy	Elsevier - EGY-D-19-00910R1	20.05.19
Layek A.	International Journal of Ambient Energy	Taylor Francis, TAEN-2019-0197	27.05.19
Layek A.	Renewables: Wind, Water, and Solar	Springer, RWWS-D-19-00012	05.11.19
Mishra C.	SN Applied Sciences (SNAS)	Springer	8th September 2019
Mishra C.	IEEE Transactions on Instrumentation & Measurement	IEEE	25th December 2019
Mitra R. K.	M. Tech. Thesis evaluation	IEST Shibpur	May 2019
Mondal S.	Journal of Computational and Nonlinear Dynamics	ASME	July, 2019
Puri, A. B.	Int. Journal of Advanced Manufacturing Technology	Springer	03-April-2019
Puri, A. B.	Materials and Manufacturing Processes	Taylor & Francis	26-Sep-2019
Puri, A. B.	Int. Journal of Advanced Manufacturing Technology	Springer	30 Nov 2019
Puri, A. B.	Int. Journal of Advanced Manufacturing Technology	Springer	16-Jan-2020
Puri, A. B.	Int. Journal of Advanced Manufacturing Technology	Springer	22 Mar 2020

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Bera S	Materials Science and Technology	Taylor & Francis	2019
Maity, Joydeep	Materials Letters	Elsevier	July 15, 2019
Maity, Joydeep	Chemical Data Collections	Elsevier	May 28, 2020
Mallik, M.	Surface Topography: Metrology and Properties	IOP Publishing	March, 2020
Mallik, M.	Silicon	Springer	December, 2019
Mallik, M.	Sadhana	Springer	December, 2019
Mallik, M.	Materials Research Express	IOP Publishing	November, 2019
Mallik, M.	Metallurgical and Materials Transactions A	Springer	July, 2019
Mallik, M.	Silicon	Springer	June, 2019
Mallik, M.	Journal of Alloys and Compounds	Elsevier	June, 2019
Mallik, M.	Silicon	Springer	May, 2019
Mandal. D	Journal of composite Materials	SAGA publishing	Dec 2019
Mandal D	International Journal of Metalcasting	Springer	Jan 2020

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Mandal, A.K.	Journal of Cleaner Production (05 Nos.)	Elsevier, USA	08.04.2019 29.05.2019 04.08.2019 22.10.2019 28.03.2020
Mandal, A.K.	Journal of Solid waste technology and Management (02 Nos.)	Widener University, Pennsylvania, USA	01.10.2019 22.01.2020
Mandal, A.K.	IEE Transactions of Plasma Science (01 No.)	Institute of Electrical and Electronics Engineers, USA	29.09.2019
Mandal, A.K.	Journal of Mining and Metallurgy, Section B: Metallurgy (01 No.)	University of Belgrade, Bor, Serbia	04.04.2019
Mandal, A.K.	Materials Today Proceedings (02 Nos.)	Elsevier, USA	08.01.2020 11.01.2020
Mondal, Manas Kumar	Materials Research Express	IOP Publishing	

DEPARTMENT OF PHYSICS

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Chakraborty, A.K.	ACS Applied Materials & Interface	American Chemical Society	28.03.2020
Chakraborty, A.K.	Journal of Materials Science: Materials in Electronics	Springer	11.02.2020
Chakraborty, A.K.	Ceramic International	Elsevier	30.03.2020
Chakraborty, A.K.	International Journal of Energy Research	Wiley	04.11.2019
Chakraborty, A.K.	Sensors and Actuators B: Chemical	Elsevier	19.02.2020
Chakraborty, A.K.	Journal of Nanoparticle Research	Springer	23.04.2019
Ghosh, S.	Physical Biology	Elsevier	July 30, 2020
Kumbhakar, P.	Advanced Optical Materials	Wiley	Aug., 2019
Kumbhakar, P.	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	Elsevier	Sept. 2019
Kumbhakar, P.	Journal of Electronic Materials	Springer	Oct., 2019
Kumbhakar, P.	Nanoscale Advances	RSC	Nov., 2019
Kumbhakar, P.	Dalton Transaction	RSC	Nov., 2019
Kumbhakar, P.	JOM	Elsevier	Dec., 2019
Kumbhakar, P.	Small	Wiley	Dec, 2019
Kumbhakar, P.	Cellulose	Elsevier	Jan., 2020
Kumbhakar, P.	Journal of Materials Chemistry C	RSC	Jan., 2020
Kumbhakar, P.	Optic Express	OSA	Feb. 4, 2020
Meikap, A. K.	Physica E	Elsevier	May 2019
Meikap, A. K.	Thin Solid Films	Elsevier	July 2019
Meikap, A. K.	Physica E	Elsevier	August 2019
Meikap, A. K.	Journal of Thermoplastic Composite Materials	SAGE	August 2019
Meikap, A. K.	Journal of Physics: Condensed Matter	IOP	September 2019
Meikap, A. K.	Journal of Nanoscience and Nanotechnology	ASP	September 2019
Meikap, A. K.	Materials Research Express	IOP	September 2019
Meikap, A. K.	Polymer Engineering & Science	Wiley	October 2019
Meikap, A. K.	Polymer Composites	Wiley	October 2019
Meikap, A. K.	Physica E	Elsevier	November 2019
Meikap, A. K.	Journal of Physics D: Applied Physics	IOP	November 2019

Reviewer	Name of the Journal	Publisher	Date (of Final Review)
Mondal, A.	Journal of Electronic Materials	Springer	Oct., 4, 2019 Sept. 11, 2019 July, 22, 2019
Mondal, A.	Plasmonics	Elsevier	May 19, 2020 Sept. 30, 2019
Mondal, A.	Materials Research Bulletin	Elsevier	Jan 31, 2020
Mondal, A.	J. Alloys and Compounds	Elsevier	Jan. 21, 2020
Mondal, A.	Nanomaterials and Nanotechnology	SAGE Journals	Jan. 25, 2020
Mondal, A.	Micro and nanoletters	IET	Jan. 21, 2020
Mondal, A.	Applied Surface Science	Elsevier	Jan. 6, 2020
Mondal, A.	Crystal Growth & Design	ACS	Dec. 4, 2019
Mondal, A.	Scientific Report	Springer	Nov. 11, 2019
Mondal, A.	Journal of the Electron Devices Society	IEEE	Oct., 6, 2019 Set., 18, 2019
Mondal, A.	Transactions on Nanotechnology	IEEE	Oct. 1, 2019 Aug. 30, 2019
Mondal, A.	Journal of Materials Science and Metallurgy (JMSSM)	Springer	Aug., 1, 2019
Sahoo, S.	External examiner for Physics Practical/Viva Voce	MAKAUT at DIATM, Durgapur	17th May 2019
Sahoo, S.	Quantum Mechanics – II, 2nd Sem., M. Sc. Physics, Question paper setter	GIET University, Gunupur, Odisha	February-March, 2020

ANNEXURE 11.16 (B).II: REVIEWS OF BOOKS DURING 2019-20**DEPARTMENT OF CHEMICAL ENGINEERING**

Reviewer	Name and author of the book	Publisher	Date
Pal, P.	Next Generation Biomanufacturing Technologies: P.Samantaray et al.	ACS	June 2019

DEPARTMENT OF MECHANICAL ENGINEERING

Reviewer	Name and author of the book	Publisher	Date
Rana S. C.	International Journal of Hydrogen Energy	Elsevier	Mar, 2020

DEPARTMENT OF PHYSICS

Reviewer	Title of the book	Publisher	Date of Review
Kumbhakar, P.	Introduction to Nanotechnology by Charles Poole Frank Owens	Wiley	November 29, 2019

ANNEXURE 11.16 (C). PARTICIPATION IN NATIONAL COMMITTEES/ VISITS DURING 2019-20**DEPARTMENT OF BIOTECHNOLOGY**

Name of the faculty	Name of the committee	Place of visit	Date
Barik, A.	(PC) of PReMI 2019 (8th International Conference on Pattern Recognition and Machine Intelligence)-Tezpur University	n/a	December 18-20, 2019
Bhattacharjee, A.& Saha, S.	Industry visit programme for the M.Tech students of our department under TEQIP I-II scheme	Biobharati Pvt. Ltd. Kolkata	September 12 2019

DEPARTMENT OF CHEMICAL ENGINEERING

Name of the faculty	Name of the committee	Place of visit	Date
Paruya, S.		IIT Madras, Chennai	June 6-11, 2019

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Name of the faculty	Name of the committee	Place of visit	Date
Saravanan Chandran	Technical Committee, 2019 International Conference on Software Engineering and Computational Intelligence (CSECI 2019)	NA	July 29-31, 2019
Saravanan Chandran	Member, 2nd International Conference on Big Data Analytics And Computational Intelligence	NA	24 - 26 October 2019

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the faculty	Name of the committee	Place of visit	Date
Rowdra Ghatak	ICT Development Committee	University of Burdwan	27th December 2019

DEPARTMENT OF MECHANICAL ENGINEERING

Name of the faculty	Name of the committee	Place of visit	Date
Banerjee Nilotpal	Evaluator for assessing proposals Collaborative Research schemes (TEQIP-III) to promote Quality in Technical Education through Research in several fields.	AICTE office New Delhi	May 17 to May19 2019
Banerjee Nilotpal	Technical Committee member of syllabus review of Mechanical Engineering for NIT Nagaland	NIT Nagaland	July 1 to July 6 2019
Banerjee Nilotpal	Acted as National level Judge for Industrial case study presentation during NCQC 2019 (National Convention on Quality concepts 2019)	IIT-BHU, Varanasi	December 26 to December 30 2019
Hui N. B.	Executive Committee Member of Institute of Engineers, Durgapur Local Centre	IEI, Durgapur Local Centre	2018-2020

ANNEXURE 11.16(D): INVITED EXAMINERS/PAPER-SETTERS/BOARD OF STUDIES (SORT ALPHABETICALLY BY COLUMN 1, SURNAME)**DEPARTMENT OF BIOTECHNOLOGY**

Name of the faculty	Name of the examination	University/Institute	Date
Barik, A.	B.Tech degree Examination; April-May 2020 (Fourth Semester)	GIET University	March 15, 2020
Bhattacharjee, A.	Ph.D. Thesis	Integral University, Lucknow	May, 2019
Bhattacharjee, A.	Viva voce exam of Ph.D. thesis of Calcutta University	Calcutta University	July 29, 2019
Dasgupta Mandal, D.	External examiner for MSc Biotechnology Practical	University of Burdwan	July 17, 2019
Dasgupta Mandal, D.	Paper setter Central Entrance test for PG in BIOTECHNOLOGY OF ANDHRA UNIVERSITY	Common Entrance test Andhra Pradesh	February 24, 2020
Dutta, D.	M.Tech - Theory	Integral University	March, 2020

DEPARTMENT OF CHEMICAL ENGINEERING

Name of the faculty	Name of the examination	University/Institute	Date
Das, B.	Heat Transfer Lab Exam.	University of Calcutta	August 1-2 2019
Dutta, S.	M. E. Bio-process Engineering – second year- second semester	Jadavpur University	June 14, 2019

Name of the faculty	Name of the examination	University/Institute	Date
Gupta, P.	M. Tech. Project Viva voce	IIT Kharagpur	May 02, 2019
Halder G. N	Post graduate Exam in Environmental Science	University of Burdwan	July 18, 2019
Halder G. N	Project, M.Tech in Chemical Engg	Indian Institute of Technology Kharagpur	May 2-3, 2019
Halder G. N.	PhD Thesis evaluation, Mechanical Engg Deptt	Jadavpur University	October 18, 2019
Mandal T.	PhD Thesis Evaluation	NIT Raipur	July 2019
Mandal T.	PhD Thesis Evaluation	Punjab University, Chandigarh	January 2020
Mandal T.	PhD Thesis Evaluation	Mahatma Gandhi University, Kottayam, Kerala	June-2019
Mandal T.	Paper Setter for Heat Transfer and Fluid Mechanics	Gitam University, Vizag	2019-20
Pal, P.	PhD thesis	Bhabha Atomic Research Centre, GOI	March 2020

DEPARTMENT OF CHEMISTRY

Name of the faculty	Name of the examination	University/Institute	Date
Adhikari Utpal	M.Sc. Chemistry	Kazi Nazrul University, Asansol	14.02.2020
Adhikari Utpal	M.Sc. Chemistry	Kazi Nazrul University, Asansol	27.08.2019
Adhikari Utpal	M.Sc. Chemistry	Kazi Nazrul University, Asansol	05.07.2019
Adhikari Utpal	Board of Study	Sidho-Kanho-Birsha University Purulia	18.09.2019
Adhikari Utpal	Board of Study	Sidho-Kanho-Birsha University Purulia	09.09.2019
Mukhopadhyay, B.P.	Ph.D. Thesis Examination	Burdwan University	06.06.2019
Mukhopadhyay B.P	Member of the Board of Post-graduate Studies in Biotechnology	Burdwan University	21.10.2019
Mukhopadhyay B.P.	Moderation of 2nd and 4th Semester Examination in M.Sc. Biotechnology	Burdwan University	12/2019
Saha R N	External Examiner for M. Sc. Paper MENVS-0205 Practical Examination	Burdwan University	29.08.19

DEPARTMENT OF CIVIL ENGINEERING

Name of the faculty	Name of the examination	University/Institute	Date
Banik, A. K.	External examiner for M. Tech. (Structural Engineering) Theses Examination (Dept. of Civil Engineering)	NIT Jamshedpur	June 2019
Datta, A.K.	PhD Thesis Examiner (Department of Civil Engineering)	Karyna University of Science and Technology (Deemed University), TN	Dec 2019
Datta, A.K.	Paper setting and examining	Indian Institute of Welding Summer and Winter 2019.	2019
Pal, S	External expert for M Tech Thesis Examination (School of Water Resources Engg.)	Jadavpur University	November, 2019
Roy, P.	PhD Preregistration Presentation (Department of Civil Engineering)	IEST Shibpur	Sept. 09, 2019
Samanta, A. K.	PhD Thesis Examination, Viva voce	Jadavpur University	April 5, 2019
Samanta, A. K.	BTech Project viva	NIT Sikkim	May 27-28, 2019
Samanta, A. K.	Member, BOS	HIT Haldia	Nov. 30, 2019
Samanta, A. K.	Paper setter /Examiner for Assessor	DMC	Feb. 2020

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Name of the faculty	Name of the examination	University/Institute	Date
Saravanan Chandran	Ph.D Thesis	Anna University, Chennai	May, 2019
Saravanan Chandran	Ph.D Thesis	S Abdur Rahman Crescent Institute of Science and Technology, Chennai	Sep 2019
Saravanan Chandran	Ph.D Thesis	Jawaharlal Nehru Technological University, Hyderabad	Dec 2019

DEPARTMENT OF ELECTRICAL ENGINEERING

Name of the faculty	Name of the examination	University/Institute	Date
Banerjee S	Doctoral committee meeting	IEST Shibpur	12.07.2019
Banerjee S	1st evaluation meeting of R&D project, DST,W.B.	DST, WB	25.07.2019
Banerjee S	M. Tech Thesis Defense	NITTR Kolkata	07.06.2019
Banerjee S	Selection committee meeting	CSIR-CMERI	20.06.2019

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the faculty	Name of the examination	University/Institute	Date
Sanjay Dhar Roy	PhD Viva	Anna University	30.12.2019
Rowdra Ghatak	Phd Viva	University of Burdwan	04.09.2019
Rowdra Ghatak	Phd Viva	Jadavpur University	28.02.2020

DEPARTMENT OF MATHEMATICS

Name of the faculty	Name of the examination	University/Institute	Date
Dey, L.K.	M.Sc. in Mathematics	Netaji Subhas Open University	December, 2019
Pal, P.	PG Board of Studies	Kazi Nazrul University	June, 2019
Kar, S	Member of the Board of Studies, Mathematics	Haldia Institute of Technology	July 2019 – Till date

DEPARTMENT OF MECHANICAL ENGINEERING

Name of the faculty	Name of the examination	University/Institute	Date
Hui N. B.	Question Paper on Robotics	VFSTR UNIVERSITY, VADLAMUDI,	April 2019
Hui N. B.	PhD thesis	B.S.Abdur Rahman Crescent Institute of Science and Technology, Chennai	March 08, 2020
Mondal S.	M.E. Thesis evaluation	Jadavpur University	June, 2019
Puri A. B.	Ph. D Thesis Evaluation & conducting Viva-Voce Examination	Jadavpur University	December, 2019
Puri A. B.	Ph. D Thesis Evaluation & conducting Viva-Voce Examination	Jadavpur University	March, 2020

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Name of the faculty	Name of the examination	University/Institute	Date
Bera S.	PhD DSC committee	IEST Shibpur	Dec 2019
Mallik Manab	External examiner of sessional examination and viva voce	Asansol Polytechnic	8th January 2020
Mandal A. K.	External examiner of sessional examination and viva voce	Asansol Polytechnic	08/01/2020
Mondal, Manas Kumar	External examiner of sessional examination and viva voce	Asansol Polytechnic	2nd July 2019

DEPARTMENT OF MANAGEMENT STUDIES

Name of the faculty	Name of the examination	University/Institute	Date
Pal, Durba. (as an External Moderator)	Written test for admission to the Ph.D Programme 2019/M.Phil. Programme 2019-21 in Business Administration.	University of Burdwan, Rajbati, Burdwan-713104	22ndAugust2019.

DEPARTMENT OF PHYSICS

Name of the faculty	Name of the examination	University/Institute	Date
Chakraborty A.K.	Member of the Board of Studies for UG course in Materials Science	Maulana Abul Kalam Azad University of Technology, Kalyani	November 20, 2019
Chakraborty A.K.	Member of the Board of Studies for PG course of Physics	Netaji Subhash Open University, Kolkata	2019 onwards
Kumbhakar P.	PhD. Thesis Examiner	JU, Kolkata, WB, India	May 1, 2019
Kumbhakar P.	PhD. Thesis Examiner	JU, Kolkata, WB, India	June 14, 2019
Kumbhakar P.	Board of Moderators	Burdwan University, WB, India	May 15, 2019
Kumbhakar P.	PG Board of Studies in Physics	Kazi Nazrul University, Asansol	June 12, 2019
Kumbhakar P.	External Member of the Doctoral Committee of the Dept. of Physics	B.U., Burdwan	July 8, 2019
Kumbhakar P.	External Examiners for examination of Term paper and Social Outreach programme for M.Sc. (Phy), Sem-IV	B.U., Burdwan	July 23, 2019
Kumbhakar P.	PhD Thesis Examiner	Univ. of Kerala, India	Aug. 13, 2019
Kumbhakar P.	Doctoral Committee of the Dept. of Physics, B.U	B.U., Burdwan	Nov. 13, 2019
Kumbhakar P.	PhD Thesis Examiner	Bharathidasan University, Tiruchirappalli, Tamil Nadu, India	Nov. 26, 2019
Kumbhakar P.	PhD Thesis Examiner	Anna University, Chennai, Tamil Nadu 600025	Dec. 9, 2019
Meikap A. K.	External Expert for Board of Research Studies in Physics	Kazi Nazrul University, Asansol	Apr 9, 2019
Meikap A. K.	PG old semester Seminar Examination	Kazi Nazrul University, Asansol	April 10, 2019
Meikap A. K.	Examiner for PhD Open Viva-voc Examination	Kalyani University, Kalyani	June 13, 2019
Meikap A. K.	Paper setter & Examiner	Kazi Nazrul University, Asansol	July 7, 2019
Meikap A. K.	Examiner for PhD Open Viva-voc Examination	Burdwan University, Burdwan	August 9, 2019
Meikap A. K.	External Expert for Board of Research Studies in Physics	Kazi Nazrul University, Asansol	November 13, 2019
Meikap A. K.	External Expert for Board of Research Studies in Physics	Kazi Nazrul University, Asansol	December 4, 2019
Meikap A. K.	Paper Setter	Burdwan University, Burdwan	2019-2020
Mondal A.	PhD Thesis Examiner	Anna University, Chennai, India	2019-2020
Mondal A.	PhD Thesis Examiner	University of Petroleum and Energy Studies, Dehradun, India	2019-2020

**ANNEXURE 11.16 (E): INVITED EXPERTS IN SELECTION COMMITTEE
(SORT ALPHABETICALLY BY COLUMN 1, SURNAME)**
DEPARTMENT OF BIOTECHNOLOGY

Name of the faculty	Discipline	University/Institute	Date
Bhattacharjee, A.	CSIR SRF selection of Bose Institute	Bose Institute Kolkata	September 11, 2019
Bhattacharjee, A.	Panel member of Judges for KVS regional level (KOL) selection for 27th National Children Science Congress, 2019-20	Kendriya Vidyalaya Ballygunge, Kolkata	September 30, 2019 and October 1, 2019.
Bhattacharjee, A.	External expert of a technical committee regarding procurement of class 100K clean room facilities for unified campus.	Bose Institute Kolkata	December 9th, 2019
Dasgupta Mandal, D.	Selection committee expert PGT; Eastern Zone.	DAV school Durgapur	February 10,2020
Kazy, S.K.	Member of selection committee for the selection of Project JRF/staff	CSIR-CMERI, Durgapur	June, 2019

DEPARTMENT OF CHEMICAL ENGINEERING

Name of the faculty	Discipline	University/Institute	Date
Mandal T.	Chemical Engineering	Faculty selection: Jadavpur University, Kolkata	May-2019
Mandal T.	Water Resource Engineering	Faculty selection: Jadavpur University, Kolkata	May-2019

DEPARTMENT OF CHEMISTRY

Name of the faculty	Discipline	University/Institute	Date
Moi S. C	Chemistry JRF/SRF selection	CMERI-Durgapur	02/2020

DEPARTMENT OF CIVIL ENGINEERING

Name of the faculty	Discipline	University/Institute	Date
Banik, A. K.	Civil Engineering	Manipur University	March 10, 2020
Roy, P.	Civil Engineering	Bankura Unnayani Institute of Engineering, Bankura	Jan. 27, 2020
Samanta, A. K.	Civil Engineering	NIT Sikkim	Dec. 24, 2019

DEPARTMENT OF ELECTRICAL ENGINEERING

Name of the faculty	Discipline	University/Institute	Date
Banerjee S	Electrical	CSIR-CMERI, Durgapur	20.06.2019

DEPARTMENT OF MANAGEMENT STUDIES

Name of the faculty	Discipline	University/Institute	Date
De Anupam	Commerce	DAV Model School	15th March, 2020
Dr. Gautam Bandyopadhyay	Management	NSHM School of Business & Management	12th July 2019.

DEPARTMENT OF CIVIL ENGINEERING

Name of the faculty	Discipline	University/Institute	Date
Bagchi, S.	JRF to SRF Selection	Visva-Bharati University	February, 2020
Basu, K.	Expert in PhD defence	University of Hyderabad	June, 2019
Dey, L.K.	Mathematics	DAV Model School	March 15, 2020
Sarkar (Mondal), S.	Faculty Recruitment in Mathematics	IIT Indore	July 31, 2019

DEPARTMENT OF PHYSICS

Name of the faculty	Discipline	University/Institute	Date
Kumbhakar, P.	Dept. of Basic and Applied Science	NIT Arunachal Pradesh	June 1, 2019
Kumbhakar, P.	Department of Physics	NIT Nagaland	July 3, 2019
Kumbhakar, P.	Department of Physics	Burdwan University	July 8, 2019
Kumbhakar, P.	Science	Goenka International School	June 22, 2019
Meikap, A. K.	Member of Selection Committee for recruitment of Professor, Associate Professor and Assistant Professor of the Department of Physics	BIT Mesra Ranchi	February 2, 2020
Chakraborty, A. K.	Member of the selection committee for selection of the senior scholars (1st year UG level students of Science/ Engg./ Medicine)	Jagadish Bose National Science Talent Search, Kolkata	September 19-20, 2019

ANNEXURE 11.16 (F): INVITED LECTURES**DEPARTMENT OF BIOTECHNOLOGY**

Name of the faculty	Title of the lecture	Programme	Place	Date
Dey, A.	The scope and challenges of Anammox in treatment of starch industry wastewater	International Conference on Chemical, Bio & Environmental Engineering (CHEMBIOEN-2020)	NIT Jalandhar	February 13-14, 2020
Dasgupta Mandal, D.	Patent Day Celebration Workshop at WBDST KOLKATA	Invited speaker for Idea sharing topic : Bacterial assisted Bio- conversion of LIGNIN into Value added products : A green , eco-benign approach	Bigyan bhawan Bidhannagar; kolkata	April 26, 2019
Dasgupta Mandal, D.	Bacterial delignification as pretreatment strategy for biofuel production from lignocellulosic biomass	'Challenges in Sustainable Bioenergy Synthesis over Conventional Petro-fuel' during May 13-17, 2019.	Deptt. of Chemical Engineering NIT DURGAPUR	May 16, 2019
Dasgupta Mandal, D.	Women's Empowerment is Necessary for Nation Progress.	Women Empowerment in India: Challenging Obstacles and Creating Opportunities	NIT Durgapur	January 6-10,2020

DEPARTMENT OF CHEMICAL ENGINEERING

Name of the faculty	Title of the lecture	Programme	Place	Date
Dutta S.	Role of algae in pollution treatment and production of biofuel from algal biomass	International conference on Sustainable Technologies for the Industrial Hazardous waste management and Bioenergy-SIWMB-2019	SRM Institute of Science and Technology, India	Aug 08, 2019
Halder G N	A Sustainable Approach of Biomass Valorisation towards Greener Fuel Production	Refresher Course in Environment and Sustainability	Burdwan University, Environmental Science Deptt	January 2, 2020
Halder G N	Catalytic Heterogeneous Transesterification of natural feedstock for biofuel synthesis	Waste to Wealth- The Current Scenario and Sustainable Technology" -WTW-2020	MME Department, NIT Durgapur	January,23, 2020
Hens, A	Case Studies on Molecular Dynamics Simulations	MHRD (TEQIP-III) Sponsored Short Term Course on "Computational Materials Modelling & Simulation (CMMS 2020)	Department of Metallurgical and Materials Engg. N.I.T, Durgapur	February, 17-21,2020

DEPARTMENT OF CHEMISTRY

Name of the faculty	Title of the lecture	Programme	Place	Date
Banerjee D. R.	Women (missing) in Nobel Prizes	Invited Lecture on National Science Day	NIT Durgapur	27.02.2020
Moi S. C.	Better normal cell viability of newly Pt(II) complexes with N, N carrier ligands than cisplatin: Synthesis, DNA binding, anticancer property, cell death mechanism and molecular docking	Invited Lecture	Paris (France) and Brussels (Belgium)	06.06.2019-08.06.2019
Saha R N	Green Chemistry approaches for the Minimization of pollution	International Seminar,.	B.C. College, Asansol	05.02.2020
Saha R N	Significance of using advanced oxidation processes For wastewater treatment	Sustainable Water Resources Management under Changed Climate	Jadavpur University	15.03.2020

DEPARTMENT OF CIVIL ENGINEERING

Name of the faculty	Title of the lecture	Programme	Place	Date
Banik A. K.	Nonlinear Static Analysis of Progressive Collapse of Tall Buildings & Nonlinear Dynamic Analysis of Progressive Collapse of Tall Buildings.	6-Day TEQIP-III sponsored National Workshop on "Revised NBC-2016, Earthquake Indian Standards & Tall Buildings" (REIST-2019)	NIT Jamshedpur	June 24- 25, 2019
Banik A. K.	Water conservation	Seminar	IIMM , Durgapur	Nov. 9, 2019
Nanda, R. P.	Role of Civil Engineering for Earthquake Disaster Mitigation	TEQIP-III sponsored seminar	Chaibasa Engg. College, Jharkhand	Sept. 26, 2019
Nanda, R. P.	Advances in Civil Engineering Construction	Workshop	Gandhi Institute for Education & Technology, Bhubaneswar	Jan. 21- 22, 2020.
Pal, S.	Design of Foundations of Different Structures in Thermal Power Plant	Training Programme for junior Engineers from BRBCL, Subsidiary of NTPC	NPTI, Durgapur	May 23, 2019
Pal, S.	Environmental Geotechnics	Seminar under TEQIP III jointly organised by NIT Durgapur and Dumka Eng. College	Dumka Eng. College, Jharkhand	February 28, 2020
Samanta, A.K.	'Ash Utilisation-Challenges & Way Ahead'	Seminar by NSPCL Durgapur	Hotel Citi Residenci, Durgapur	Aug. 28, 2019

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Name of the faculty	Title of the lecture	Programme	Place	Date
Dalui, M.	Lecture on Data Structure and Computer Networks for the Trainees of PDC(PPE) Batch	Invited Lecture	NPTI Durgapur	16-17th July, 2019
Suchismita Roy	Machine Learning.	ATAL Academy sponsored programme on "Artificial Intelligence"	NPTI, Durgapur	November 19, 2019
Suchismita Roy	Machine Learning	Intelligent Systems : Challenges, Techniques and Applications	NIT Durgapur	October 15-19, 2019.
Saravanan Chandran	Guest Lecture on Information Security	Information Security Awareness	Air Force Station Arjan Singh, Panagarh, West Benga	22-11-2019.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the faculty	Title of the lecture	Programme	Place	Date
Chandra, A.	Standardization: We're in!	One Day Seminar on Bridging the Standardization Gap	Institute of Engineers - India, Durgapur, WB	17.05.2019
Chandra, A.	Signal processing: Case studies	One Day Seminar on Digitally Mixed and Biomedical Signal Processing	NSHM Knowledge Campus, Durgapur, WB	09.04.2019
Rowdra Ghatak	Enabling ICT Based Education and Harnessing it's Efficacy	Workshop on MOOCS, e-content development and open educational resources to be held at the HRDC of the University of Burdwan	University of Burdwan	20th July 2019
Rowdra Ghatak	Microwave Metamaterial	Meeting at TCS Research and Innovation Lab	TCS Innovation Lab, Kolkata	13th February 2020
Mahapatra R	Advanced MOS Devices	Workshop on Nano Devices	Dumka engineering CollegE	28th Feb 2020
Chattaraj, N.	Mechatronics: The way of Giving Life to Robotics	Robotics lecture series	Department of Mechanical Engineering, Asansol Engineering College, Asansol	19th to Feb-23th Feb, 2020
Chattaraj, N	Industrial IoT and cyber manufacturing systems	IoT Applications in Advanced Manufacturing Workshop	CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur	3th to 4Th Feb, 2020
Chattaraj, N	Integration Methods of Sensors and Actuators with Mechanisms	AICTE Training And Learning (ATAL) Academy Programme on Robotics	National Institute of Technology, Durgapur,	9th to 13Th Dec, 2019

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

Name of the faculty	Title of the lecture	Programme	Place	Date
Rai, SK	"The Speech of Subalterns in South Asian Literature: A Critical Overview"	The International Conference on "South Asian Literatures and Cultures"	Bidhan Chandra College, Asansol	5 Jan 2020
Rai, SK	Techniques of Effective Pedagogy	Faculty Development Programme	ISPGC, University of Allahabad	27 Jan 2020
Banerjee, S.	Communication and Interpersonal Relationship along with Activities and Case Studies	3-Days Short Term Training of Programme on Behavioural Science	National Power Training Institute	21 Feb 2020

DEPARTMENT OF MANAGEMENT STUDIES

Name of the faculty	Title of the lecture	Programme	Place	Date
Bandyopadhyay Gautam	lecture on Structural Equation Modeling & Path Analysis	Advanced Research Analytics	ISB&M Kolkata	22nd and 23rd June, 2019
Bandyopadhyay Gautam	lecture on R-Studio	Workshop on R-Studio Application to handle Big Data	S.K.B University	13th and 14th July, 2019
Bandyopadhyay Gautam	Lecture on SPSS & its Application in Research	Understanding SPSS & its Application in Research	A.K.Dasgupta Centre Visva-Bharati	17th July, 2019
Bandyopadhyay Gautam	Lecture on DATA Science	ATAL "DATA Science"	National Power Training Institute (Ministry of Power, Govt. of India)	14th Oct, 19 to 18th Oct ,19
Bandyopadhyay Gautam	Lecture on Introduction of SPSS & R Studio	Introduction of SPSS & R Studio	Sikkim University	9th- 11th November,2019
Bandyopadhyay Gautam	Lecture on Artificial Intelligence.	ATAL Academy Sponsored Programme on "Artificial Intelligence"	National Power Training Institute (Ministry of Power, Govt. of India)	18th November -2019 to 22nd November -2019

Name of the faculty	Title of the lecture	Programme	Place	Date
Bandyopadhyay Gautam	lecture on Research Methodology	Faculty Development Program on Research Methodology	Aliah University	19th January,2020.
Bandyopadhyay Gautam	SPSS in Research in Commerce and Management	for the M.Phil and Ph.D scholars	Kazi Nazrul University	7th February,2020
Bandyopadhyay Gautam	Introduction to Structural Equation Model with Amos	Commerce Workshop	University of North Bengal	21st-22nd February, 2020.
De Anupam	Making Power Point Presentation & Requisite for Effective Presentations, Case Based Presentations Related to Industries With Key Messages for Effective Decision Making	Orientation Course for CA students	Durgapur Branch of the Institute of Chartered Accountants of India (ICAI)	16th & 17th July, 2019
De Anupam	Making Power Point Presentation & Requisite for Effective Presentation, Case Based Presentations Related to Industries with Key Messages for Effective Decision Making	Orientation Course for CA students	Durgapur Branch of the Institute of Chartered Accountants of India (ICAI)	19th & 20th December, 2019
De Anupam	BCG Matrix & Product Life Cycle	Management seminar	Management Institute Durgapur, Rajbandh	29th February, 2020.
Dutta Avijan	"Strengthening Post Graduate (PG) Education: Lab, Field & Self Employment –Integration and Strategy",	Workshop of ICAR-World Bank funded NAHEP (IG) Project	Faculty of Dairy Technology, WBUAFS, Mohanpur Campus, Nadia West Bengal	Dec 24 th , 2019
Ghosh Amlan	Econometrics with –E-views 11	Workshop on Econometrics	Reserve Bank of India, Mumbai	June 26-26, 2019
Ghosh Amlan	Investor Behaviour	Industry-Institute Convergence Programme	University of North Bengal, raja rammohunpur, Siliguri.	March05-06, 2020
Pal, Durba.	'Women in the Workplace.'	TEQIP-III Sponsored Workshop on Media, Gender and Globalization: Emerging Issues; Trends and Challenges.	Deptt. of Humanities & Social Sciences, NIT DURGAPUR.	7th June, 2019.
Pal, Durba.	'Women and the Workplace: A Contemporary Perspective.'	TEQIP-III Sponsored One-Week Workshop entitled 'Women Empowerment in India: Challenging Obstacles and Creating Opportunities.'	NIT DURGAPUR.	10th January, 2020.

DEPARTMENT OF MATHEMATICS

Name of the faculty	Title of the lecture	Programme	Place	Date
Prof. Kajla Basu	Multi-criteria decision making on assignment & transportation problem	Special Lecture	IDRBT Hyderabad	15th June 2019
Prof. Kajla Basu	Statistical analysis of gender discrimination in India	Workshop on 'Media, gender and globalization: Emerging issues, trends and challenges'	Department of HSS, NIT Durgapur	3rd -9th June 2019
Dr. Sarit Maitra	Exact solutions and symmetry analysis of a new equation invariant under scaling of dependent variable	International Conference on Applied Mathematics in Science and Engineering (AMSE-2019)	Centre for Applied Mathematics and Computing, Siksha 'O' Anusandhan University, Bhubaneswar	October 24-26, 2019

Name of the faculty	Title of the lecture	Programme	Place	Date
Dr. Anita Pal	Social development for underprivileged children and women	Workshop on Women Empowerment in India: Challenging Obstacles and Creating Opportunities WEICOCO 2020	NIT Durgapur	06-10 Jan 2020
Dr. Anita Pal	Fuzzy minimum spanning tree to model the pipe network at the water supply company	International Conference on Applied Mathematics in Science and Engineering (AMSE-2019)	Centre for Applied Mathematics and Computing, Siksha 'O' Anusandhan University, Bhubaneswar	October 24-26, 2019
Dr. Pinaki Pal	Crisis Induced Flow Reversal in Magnetoconvection	6th International Conference on Complex Dynamical Systems and Applications	Central University of Rajasthan	February 21-23, 2020
Dr. Pinaki Pal	Subcritical and Supercritical Transitions in Rotating Magnetoconvection	12th Conference on Nonlinear Systems and Dynamics	Indian Institute of Technology Kanpur	December 12-15, 2019.
Dr. Pinaki Pal	Subcritical and Supercritical Transitions in Rotating Magnetoconvection	National Conference on Nonlinear Dynamics and Applications	Jadavpur University	March 13, 2020
Prof. Seema Sarkar (Mondal)	Women in higher education	Workshop on Women Empowerment in India: Challenging Obstacles and Creating Opportunities WEICOCO 2020	NIT Durgapur	06-10 Jan 2020

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Name of the faculty	Title of the lecture	Programme	Place	Date
Mandal, A.K.	Development of higher strength and weather-resistant metallic charge material for BF/EAF use	Invited lecture in Academic – Industry Interaction program of IIM	Indian Institute of Metals, Durgapur Local chapter, Durgapur	14.05.2019
Mandal, A.K.	Recent Advances in Iron and Steel Making	Chief guest lecture in Metal Society Annual Meet 2019-20	Asansol Polytechnic, Asansol	13.09.2019
Mandal, A.K.	Coke making and its quality control	Expert Lecture in "One week short term course on Indian Iron and Steel Technologies: Challenges and Remedies-IISTCR-2019)	Department of Metallurgical and Materials Engineering, NIT Durgapur	09.12.2019
Mandal, A.K.	Dry Methods of Mineral Beneficiation: Need and development	Expert Lecture in "One week short term course on Indian Iron and Steel Technologies: Challenges and Remedies-IISTCR-2019)	Department of Metallurgical and Materials Engineering, NIT Durgapur	10.12.2019
Mandal, A.K.	Characterization and Recycling of nonferrous industry Waste materials	Expert Lecture in One week "One week short term course on Waste to Wealth (W2W-2020)" in NIT Durgapur	Department of Metallurgical and Materials Engineering, NIT Durgapur	22.01.2020
Bera S.	Development of Al based alloys for high temperature applications	ADMAT 2019	Hyderabad	Sep 2019
Bera S.	Phase evolution of AlCuNi alloys	APMC 2020	Hyderabad	Feb 2020

DEPARTMENT OF MECHANICAL ENGINEERING

Name of the faculty	Title of the lecture	Programme	Place	Date
Goswami A.	Micro Nano Manufacturing Technologies	Interaction Programme with 4th Year Mechanical Engineering Students	Asansol Engineering College	May 04, 2020
Hui N. B.	Robotics and Its Challenges	Institute of Engineers Sponsored Production Engineering for Life Breakthrough Technologies and capacity Development	DIATM Durgapur	November 16, 2019
Hui N. B.	Robot Control, Modeling	AICTE sponsored ATAL program on Robotics	NIT Durgapur	December 09-13, 2019
Hui N. B.	Robotics and Assistive Devices	IEI sponsored program on World Engineering Day	IEI Durgapur Local Centre	March 04, 2020
Khan Kallol	Finite Element Methods	Computational Materials Modeling and Simulation	Metallurgical & Materials Engineering, NIT Durgapur	17-21 Feb 2020
Karmakar Sujit	Advanced Coal Technologies (ACT)	AICTE Training And Learning (ATAL) Academy Programme on "Recent Advances In Fluid And Thermal Engineering (RAFTE-2019)"	NIT Durgapur	Dec 19, 2019
Karmakar Sujit	CO2 Capture from Thermal Power Plant Emissions	AICTE Training And Learning (ATAL) Academy Programme on "Recent Advances In Fluid And Thermal Engineering (RAFTE-2019)"	NIT Durgapur	Dec 21, 2019
Layek A.	Solar Energy- its application	FDP programme on "Renewable Energy"	Bhagalpur College of Engineering	17-21May, 2019
Layek A.	Artificial roughness-a potential method to improve heat transfer	Advances in Mechanical Engineering Research	NIT Manipur	5- 9 Aug, 2019

DEPARTMENT OF PHYSICS

Name of the faculty	Title of the lecture	Programme	Place	Date
Chaudhuri H.	Water Resources and Pollution Treatment in BRICS Nations	One week Faculty Development Programme on Facts and Facets of Environment- A post COVID 19 Perspective,	JIS Engineering College, Kalyani,	May 18-22, 2020
Chaudhuri H.	Synthesis of novel materials for degradation of phenolic compounds and antibiotics in water	International Conference "Sustainable Water Resources Management under Changed Climate")	Jadavpur University, Kolkata, West Bengal (India)	March 13-15, 2020
Chaudhuri H.	Study on geothermal potential of Bakreswar hot spring through geochemical investigations	4th International Conference on Geothermal Energy : Harnessing & Hybridisation,	Pandit Deendayal Petroleum University, Gandhinagar	21st January, 2020
Chaudhuri H.	Environmental Radioactivity and its applications for benefit of mankind	Class for Undergraduate student	East China University of Technology, Nanchang, China,	November 02, 2019
Chaudhuri H.	Synthesis of Novel materials for degradation of phenolic compounds in industrial wastewater	International Symposium on soil and ground water, 2019,	,Shenzhen, China	October 26-28, 2019

Name of the faculty	Title of the lecture	Programme	Place	Date
Chaudhuri H.	Scenario on water crisis, water pollution and wastewater treatment in BRICS nations	International Conference on green technologies, circular economy and restoration of cultural heritage,	RBS College Agra	November 08-29, 2019,
Chaudhuri H.	Water Resources and Pollution Treatment in BRICS Nations	International Conference ICCAES 2019,	IEM, Kolkata,	September 21, 2019
Chaudhuri H.	Water Resources and Pollution Treatment in BRICS Nations	Book Fair,	Suri, Birbhum	December 7, 2020
Chaudhuri H.	Water Pollution Treatment Water crisis and sustainable development Geothermal power potential of Bakreswar hot spring, West Bengal Nonlinear analysis of radioactive data for earthquake precursor study	Short Term Training Programmes (STTP) on Environmental crisis and sustainable development	Department of Chemistry, JIS Engineering College	September 2-7, 2019
Chaudhuri H.	Radioisotopes and controlled radiation for sustainable agriculture, food security and safety	National Workshop on Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity and Food Safety	Haldia Institute of Technology, Haldia	August 30 -31, 2019,
Chaudhuri H.	Fundamentals of semiconductor Physics	One day seminar	Dumka Engineering College	August 7, 2019
Chaudhuri H.	Water Resources and Pollution Treatment	"Water Conservation and Water Harvesting"	Central Industrial Security Force, Burnpur	July 24, 2019
Chaudhuri H.	Smart materials for energy harvesting	SERB School on "Smart Energy Materials & Device"	Applied Physics Department, IIT ISM, Dhanbad	April 29-May 3, 2019
Chakraborty A. K.	Nanotechnology: the technology with small 'things' for large applications	Faculty Development Program, Durgapur Institute of Advanced Technology & Management	Durgapur	March 12, 2020
Chakraborty A. K.	Carbon nanotube and graphene based composites for energy applications	International Symposium on Carbon Nanostructures for Electronics (SCNE)	BITS, Pilani	November 8-9, 2019
Chakraborty A. K.	Cu/Cu ₂ O Core-Shell Nanowire-Based Pt/Ru free Photocathode for Efficient and Durable Photoelectrochemical Hydrogen Generation	International Conference on Materials for Advanced Technologies (ICMAT-2019)	SINGAPORE	June 23-28, 2019
Chakraborty A. K.	Physics, Nanomaterials and Sustainable Energy: From Teaching to Research	Short term course on Theoretical Physics & Computer Programming, Dept. of Physics,	NIT Durgapur	June 10-14, 2019
Kumbhakar P.	Fundamentals and Applications of Nanosciences in Optical Limiting and in Nanogenerators	SHORT TERM COURSE on Recent Advances in Theoretical and Computational Physics with Hands on Training in Computer Programming	NIT Durgapur	June 14, 2019

Name of the faculty	Title of the lecture	Programme	Place	Date
Kumbhakar P.	Application of nano sciences in modern day research and technology	Refresher Course in Application of Nano Sciences in modern day research and technology	UGC-Human Resource Development Centre, The University of Burdwan, Burdwan	28.06.2019
Kumbhakar P.	Nonlinear optical effects and development of random lasers by using semiconductor and metallic nanostructured materials	National Seminar on Condensed Matter Physics including Laser Applications, 2020 (NSCMPLA) (Invited talk)	Department of Physics, University of Burdwan, Burdwan, India.	February 13-14, 2020
Kumbhakar, P.	Syntheses of 2D Nanostructured Materials for Catalytic and Energy Harvesting Applications	"Frontiers of Material Science and Photonics: Issues and Developments (NCFMSP-2020)"	Sidho-Kanho-Birsha University	March 6, 2020
Kumbhakar P.	Fundamentals and applications of nanomaterials	Faculty Development Programme on 'Nanotechnology: Recent developments and future prospects'	DIATM Campus, Rajbandh, Durgapur	March 13, 2020
Mondal A.	Nanowire based antireflection coating and active region for the application of optical detector and solar cell	Invited	Mechanical System Area, U R Rao Satellite Centre-ISRO, INDIA	November 24, 2019
Mondal A.	Advantages of nanowires for the applications of optoelectronic devices	International Conference on Advances in Materials, Ceramics and Engineering Sciences (AMCES-2020)	AMCES-2020	January 17, 2020
Sahoo S.	Quantum Hall effect in graphene	Faculty Development Programme	CV Raman College of Engineering and Technology, Bhubaneswar, Odisha	2nd December, 2019
Hemachander Subramanian	DNA Structure and Function: Frozen Accident or Evolutionary Optimum?	Department of Physics, Department of Chemistry and Department of Biology	IISER Kolkata	1-2, August, 2019

**ANNEXURE 11.16 (G): SESSION CHAIR/CONVENOR
(SORT ALPHABETICALLY BY COLUMN 1, SURNAME)**

DEPARTMENT OF BIOTECHNOLOGY

Name of the faculty	Session Chair/convener	Programme	Place	Session	Date
Aikat, K.	Session Chair	International Conference on Water Energy and Environmental Sustainability 2020 (WEES 2020)	NIT Durgapur	Technical Session TS-3b	14-01-2020
Dasgupta Mandal, D.	Session Chair	Challenges in Sustainable Bioenergy Synthesis over Conventional Petro-fuel	Deptt. of Chemical Engineering NIT DURGAPUR	Second half of May 15, 2019	May13-17, 2019
Dasgupta Mandal, D.	Session Chair	Women Empowerment in India: Challenging Obstacles and Creating Opportunities	NIT Durgapur	Technical session 1-1st half of January 6, 2020	January 6-10, 2020
Dasgupta Mandal, D.	Session Chair	International Conference on Water Energy and Environmental Sustainability 2020 (WEES 2020)	NIT DGP	TS-3a	January 14, 2020
Ghosh, M.	Session Chair	Recent Trends in Biomedical Engg. 2020. NIT Durgapur	NIT DGP	POC Device development	January 7, 2020

DEPARTMENT OF CHEMICAL ENGINEERING

Name of the faculty	Session Chair/convener	Programme	Place	Session	Date
Das, B.	Session Chair	National Symposium on Waste Management and Resource Circulation	NIT Durgapur		August 9-10th, 2019
Halder, G. N.	Session Chair	International Conference on Water, Energy and Environmental Sustainability 2020 (WEES 2020)	NIT Durgapur		January 13-15, 2020.
Hens, A.	Session Coordinator	All India Workshop on Principles and Practices of Coalbed Methane and other Unconventional Gases (CMUG 2019)	NIT Durgapur		March 26, 2019
Lahiri SK	Session Chair	International Conference on Water, Energy and Environmental Sustainability 2020 (WEES 2020)	NIT Durgapur	-	January 13-15, 2020.

DEPARTMENT OF CHEMISTRY

Name of the faculty	Session Chair/convener	Programme	Place	Session	Date
Saha R. N	Session Chair	National Symposium on Waste Management and Resource Circulation (NSWMRC-2019)	NIT Durgapur	TS-2 (Solid Waste Management)	09.08.2019

DEPARTMENT OF CIVIL ENGINEERING

Name of the faculty	Session Chair/convener	Programme	Place	Session	Date
Pal, S	Session Chair	National Symposium on Waste Management and Resource Circulation (NSWMRC-2019)	NIT Durgapur	Hazardous Waste Management (Technical Session 7)	August 10, 2019
Pal, S	Session Chair	International Conference On Sustainable Water Resources Management under Changed Climate (ICSWRMCC-2020).	Jadavpur University	Surface and Ground Water Quality and Management (Technical Session IIB)	March 13, 2020
Topdar, P	Session Chair	Second ASCE India Conference on "Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies" (CRSIDE2020)	Novotel Hotels & Resorts, Kolkata	Aerodynamic effects on structure and Retrofitting of structures and advanced analysis (Technical Session VIIE)	March 4, 2020

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the faculty	Session Chair/convener	Programme	Place	Session	Date
Debashis Nandi	Session Chair	4th Regional Science & Technology Congress (Western Region), 2019	University of Burdwan	Paper Presentation (Oral)	09/12/2019 & 10/12/2019
Debashis Nandi	Session Chair	IEEE-NCTSTE 2020	B. C. Roy Engineering College	Paper Presentation (Oral)	07/02/2020
Sujoy Saha	Convener	International Workshop on Societal Computing for the Internet of Things & You (SoCleTY 2020), in conjunction with ICDCN 2020, Kolkata, India	Kolkata		January 2020
Sujoy Saha	Session Chair	International Workshop on Emergency Response Technologies and Services (EmeRTes 2019) in conjunction with ICDCN 2019, Indian Institute of Science, Bangalore, India	Kolkata		January 2020
Saravanan Chandran	Session Chair	11th International Conference on Neural Computation Theory and Applications (NCTA),	Vienna, Austria	NA	17-19, September 2019.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the faculty	Session Chair/convener	Programme	Place	Session	Date
Rowdra Ghatak	Session Chair	IEEE NCETSTER 2020	Dr, B C Roy Engineering College	Technical	7th February 2020

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Name of the Faculty	Session chair/convener/Coordinator	Programme	Place	Session	Date
Mondal Sandip	Coordinator	TEQIP sponsored three days International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	NIT Durgapur	TS2a	13/01/2020
Mondal Sandip	Coordinator	TEQIP sponsored three days International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	NIT Durgapur	TS4a	14/01/2020
Mondal Sandip	Coordinator	TEQIP sponsored three days International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	NIT Durgapur	TS6a	15/01/2020
Ozha Manoj K.	Coordinator	TEQIP sponsored three days International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	NIT Durgapur	TS3c	14/01/2020
Ozha Manoj K.	Coordinator	TEQIP sponsored three days International Conference on Water, Energy and Environmental Sustainability (WEES-2020) (January 2020).	NIT Durgapur	TS5b	15/01/2020

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

Name of the Faculty	Session chair/convener/Coordinator	Programme	Place	Session	Date
Kar, S.	Session Chair December 27-28, 2019	International Conference FORBS-2019	Calcutta Business School		
Pal, A.	Session Chair	International Conference on Applied Mathematics in Science and Engineering (AMSE-2019)	Centre for Applied Mathematics and Computing, Siksha 'O' Anusandhan University, Bhubaneswar		October 24-26, 2019
Pal, A.	Session Chair	All India NIT Students' Conference	NIT Surat		September 15-16, 2019
Pal, A.	Session Chair	International Conference FORBS-2019	Calcutta Business School		December 27-28, 2019
Pal, P.	Session Chair	National Conference on Nonlinear Dynamics and Applications	Jadavpur University		March 12, 2020
Pal, P.	Session Chair	12th Conference on Nonlinear Systems and Dynamics	IIT Kanpur		December 12-15, 2019
Pal, P.	Session Chair	6th International Conference on Complex Dynamical Systems and Applications	Central University of Rajasthan		February 21-23, 2020

DEPARTMENT OF MECHANICAL ENGINEERING

Name of the Faculty	Session chair/ convenor/Coordinator	Programme	Place	Session	Date
Layek A.	Session Chair	WEES 2020	NIT Durgapur	G6a	13-15 Jan, 2020
Layek A.	Session Chair	ICITFES-2020	NIT Rourkela	TSA6	13-15 Jan, 2020

DEPARTMENT OF MANAGEMENT STUDIES

Name of the Faculty	Session chair/ convenor/Coordinator	Programme	Place	Session	Date
Bandyopadhyay Gautam	Session Chair	2nd international conference on "emerging socio- economic trends & business strategy"	ISB&M Kolkata	1st	25th January, 2020

DEPARTMENT OF PHYSICS

Name of the Faculty	Session chair/ convenor/Coordinator	Programme	Place	Session	Date
Chaudhuri H.	Session Chair	International Conference "Sustainable Water Resources Management under Changed Climate"	Jadavpur University, Kolkata, West Bengal (India),	Session V	March 14, 2020

ANNEXURE 11.16(H) LIST MOUS SIGNED WITH FOREIGN GOVERNMENTS 2019-20**ANNEXURE 11.17 OTHER INFORMATION****DEPARTMENT OF BIOTECHNOLOGY**

- Bhattacharjee, A. became member of two societies
 - American Society for Biochemistry and Molecular Biology (Member ID: 61340, Validity up to August 05, 2021)
 - American Association of Immunologists (AAI) (Member ID: 00250981, Validity up to Dec 2020)

DEPARTMENT OF CHEMICAL ENGINEERING

- Mandal, T., has been selected to participate in LEAP programme. Organizer TISS Mumbai in collaboration with Pennsylvania State University, Philadelphia, USA

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- Mukhopadhyay, S. Served as track co-chairs in the Track: IoT, Crowdsourcing and Social Networking in The 13th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2019) held during July 3rd – July 5th, 2019, University of Technology Sydney (UTS), Sydney, Australia

DEPARTMENT OF CIVIL ENGINEERING

- Dr. A.K. Banik Associate Dean (P&D) & Convener Civil Works,
- Dr. A.K. Banik Chairman PMQCC, Office of Dean (P&D),
- Dr. A.K. Banik Chairman HEFA, NIT Durgapur
- Dr. A.K. Samanta Head /Coordinator /In-Charge of the Department of Civil Engineering
- Dr. A.K. Samanta Coordinator /In-Charge of the Centre of Interdisciplinary Research on Biomedical Engg & Assistive Technology (BEAT) of NIT Durgapur.

- Dr. A.K. Samanta Coordinator of Education of Children With Special Need (ECN2019) ON July 12-13, 2019 under Aegis of TLC programme of PMMMNMTT Scheme jointly organized by BEAT-NITD and Centre for Education technology, CET-IITKgp.
- Dr. A.K. Samanta Committee member for Settlement of Final Bills of M/s Rajlakshmi Construction for U/G Reservoir dt. 24-04-2019.
- Dr. A.K. Samanta Member of bill verification committee for all expenditures of RECTASY2019.
- Dr. A.K. Samanta Principal Coordinator /Chairman for workshop cum symposium on "Recent Trend in Biomedical Engineering, RTBE-2020" held on January 3-7, 2020 at NIT Durgapur
- Dr. A.K. Samanta Member of committee for RE cooperative society encroachment.
- Dr. S. Pal Co-ordinator for BRICS NUs Programme of MHRD at NIT Durgapur
- Dr. S. Pal Co-ordinator, STA, PMGSY, NRRDA, MoRD, Govt. of India
- Dr. S. Pal Environmental Coordinator, TEQIP-III, NIT Durgapur

DEPARTMENT OF EARTH AND ENVIRONMENTAL STUDIES

National Institute of Technology Durgapur organized an International Conference on "Water, Energy, and Environmental Sustainability 2020 (WEES 2020)" in association with RMIT University, Australia during January 13-15, 2020 at Durgapur. The MHRD (TEQIP-III) funded Centre of Excellence in Advanced Materials at NIT Durgapur was the main financial sponsor of the conference which addresses some of the most relevant issues that the world is concerned today, viz. clean energy, clean water and clean environment for sustainable development. The conference was attended by more than 200 delegates, Research scholars, and students from India and Abroad (viz., Australia,

United Kingdom, USA, Poland, and Bangladesh), in addition to school students from Hem Sheela Model School, Durgapur also participated in the Conference.. A total number of 170 abstracts were published in the conference preceding (Abstract Volume). The three day conference includes 3 plenary sessions, 6 invited lecture sessions, 18 technical sessions, one poster session. The Conference arranged 3 lunch, one cultural programme, and a Gala Dinner at Fortune (5 star Hotel, Durgapur).

Prof. Kalyan Adhikari was the Programme chair of WEES-2020.
Dr. Manoj Kumar Ozha was on the Editorial Board of WEES-2020.
Dr. Sandip Mondal was on a Member of WEES-2020.

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

1. Kankaria, L., Banerjee, S., 2019. Re-reading Larsson's The Girl with the Dragon Tattoo: Problematizing the Tropes of Violence and Liberation through Body Art, in Aparna Singh (Ed.) (Re)presentations: Problems, Politics and Praxis, pp. 222-230, Kolkata: Paschimbanga Anchalik Itihas O Loksanskriti Charcha Kendra, ISBN: 978-93-88207-14-0.

DEPARTMENT OF PHYSICS

1. Prof. P Kumbhakar delivered a speech as a Guest in the inauguration programme of 27th State Level NCSC 2019, conducted on 21.09.2019 at DAV Model School, Durgapur
2. Prof A K Meikap Ph.D. thesis examiner of University of Kalyani, Kalyani
3. Prof A K Meikap Ph.D. thesis examiner of Burdwan University, Burdwan
4. Dr. A. Ghosh acted as an evaluator for projects presented by Child Scientists in the 27th State Level National Children's Science Congress - 2019, held at DAV Model School, Durgapur on 21st and 22nd September, 2019.
5. Prof. A K Chakraborty acted as International Reviewer of Project Proposals for the National Science Centre, Poland and for King Fahd University of Petroleum Minerals, Saudi Arabia
6. Dr. S. Sahoo acted as a Jury member (Judge) for selection of the best presentations/ posters in the Young Scientists Conference (YSC) A part of India International Science Festival (IISF) 2019, held at Biswa Bangla Convention Centre (BBCC), Kolkata on 6th November 2019.
7. Dr. S. Sahoo acted as a Judge for students' poster and model competition in Science Exhibition during February 27-28, 2020 in connection with the celebration of National Science Day at NIT Durgapur.
8. Dr. S. Sahoo acted an observer for State Govt. Common Entrance Test conducted by Association of Minority Professional Academic Institutes (CEE-AMPAI-2019), West Bengal, India on 23/06/2019 (Sunday). Centre: Dr. B. C. Roy Engineering College, Durgapur - 713206.

DEPARTMENT OF MANAGEMENT STUDIES

1. Dr Amlan Ghosh evaluated two PhD thesis from Andhra University, Vizag, Andhra Pradesh, during academic year 2019-2020.
2. Dr Anupam De acted as a panellist for conducting Admission Process for the year 2020 of Birla Institute of Management & Technology (BIMTECH), held at Kolkata on 16th February, 2020.
3. Dr Gautam Bandyopadhyay delivered Key Note address at 2nd INTERNATIONAL CONFERENCE ON "EMERGING SOCIO- ECONOMIC TRENDS & BUSINESS STRATEGY" on 25th January, 2020.
4. Dr Gautam Bandyopadhyay acted as a panellist for conducting Admission Process for the year 2020 of Birla Institute of Management & Technology (BIMTECH), held at Kolkata on 16th February, 2020.

DEPARTMENT OF MECHANICAL ENGINEERING

1. Hui N. B., Organized Short Term course on "SAR Preparation for NBA" during June 07-08, 2019
2. Barman R N organized the 1st International Conference on Clean and Renewable Energy (ICCARE 2019), July 10-12, 2019, Sponsored by TEQIP III & CSIR.
3. Hui N. B., Organized AICTE sponsored ATAL Program on Robotics during December 09-13, 2019.
4. Barman R. N., Organized AICTE sponsored ATAL Program on RECENT ADVANCES IN FLUID AND THERMAL ENGINEERING (RAFTE-2019) during December 17-21, 2019

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

1. Acted as a Coordinator on TEQIP-III sponsored one day lecture by industry expert on Capturing values by innovations, held on 12.04.2019 under Industry Institute Interaction Scheme in the department of MME, NIT Durgapur
2. Acted as a Coordinator on TEQIP-III sponsored one day lecture by industry expert on TEQIP-III sponsored one day lecture by industry expert on 'Industrial processing of flat products – An overview' and 'Looking inside an Integrated Steel Plant with special focus on Blast Furnace', held on 14.09.2019 under Industry Institute Interaction Scheme in the department of MME, NIT Durgapur
3. Acted as a Coordinator on TEQIP-III sponsored one day lecture by industry expert on Advances in Non-Ferrous Metallurgical Processes, held on 25.09.2019 under Industry Institute Interaction Scheme in the department of MME, NIT Durgapur.



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