

## Curriculum Vitae of Dr. Hirok Chaudhuri

Dr. Hirok Chaudhuri  
Associate Professor, Department of Physics  
Adjunct Faculty: Center for Research on Environment and Water  
National Institute of Technology Durgapur (NITD),  
(An autonomous institute under the Ministry of Education, Govt. of India)  
Mahatma Gandhi Avenue, Durgapur - 713 209, West Bengal, India



- Member of the International Thematic Group of BRICS Network University Programme (Water Resources and Pollution Treatment)
- SPoC BRICS Network University Programme of MoE, Govt. of India (Water Resources and Pollution Treatment)
- Coordinator:
  - (1) Rashtriya Avishkar Abhiyan Programme of MHRD, Govt. of India at NITD (Nodal Officer for the state of WB)
  - (2) Science Museum at NITD
  - (3) Center for Digital Learning - NITD Pathshala at NITD
  - (4) Coordinator: Helium Project, Geothermal Project and Earthquake Precursory Project at NITD
- Joint Coordinator:  
Center for Research on Environment and Water (CREW) at NITD [under HEFA scheme, MoE, Govt, of India]
- Former Joint Coordinator:  
Unnat Bharat Abhiyan (Rural Technology) Programme of MoE at NITD

Journal Publication (SCI/SCOPUS)	:	31	Book Chapter Publications	:	16
Research Project completed	:	15	On-going research projects	:	10
Ph D Thesis guiding	:	6	Ph D Thesis Guided	:	2
M. Sc. Thesis guided	:	19	M. Sc. Thesis guiding	:	2
M. Tech Thesis guided	:	10	M. Tech Thesis guiding	:	1
Intern students guided	:	13	Intern student guiding	:	2
Invited Talk delivered	:	83			
Conference/Seminars	:	86	Paper presented in		
short Term Courses organized	:	19	International Conferences	:	49
h-index	:	13	i10-index	:	15

### Personal Profile:

NAME	:	Hirok Chaudhuri
FATHER'S NAME	:	Mr. Samir Kumar Chaudhuri
MOTHER'S NAME	:	Mrs. Chandralekha Chaudhuri
DATE OF BIRTH	:	21 <sup>ST</sup> DECEMBER, 1979
PLACE OF BIRTH	:	Suri, Birbhum, West Bengal, India
GENDER	:	Male
CITEZENSHIP / NATIONALITY	:	Indian
CATEGORY GEN/SC/ST/OBC	:	GEN
WHETHER DIFFERENTLY ABLED (YES/NO):	:	Yes
MARITAL STATUS	:	Married
PRESENT ADDRESS /	:	Dr. Hirok Chaudhuri B-10, Michael Faraday Street, Noncompany City Center, Durgapur - 713216 West Bengal, India
MAILING ADDRESS	:	Dr. Hirok Chaudhuri Department of Physics, NIT Durgapur, Mahatma Gandhi Avenue, Durgapur – 713 209, West Bengal, India
CELL PHONE	:	+91- (0) 94347 89019
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PASSPORT NO.	:	P4258221 (Country Code – IND)
E-MAIL	:	<a href="mailto:hchaudhuri.phy@nitdgp.ac.in">hchaudhuri.phy@nitdgp.ac.in</a> <a href="mailto:imhirok@gmail.com">imhirok@gmail.com</a>
<b>WEB</b>		
HOME PAGE	:	<a href="https://www.nitdgp.ac.in/department/physics/faculty-14/hirok-chaudhuri">https://www.nitdgp.ac.in/department/physics/faculty-14/hirok-chaudhuri</a>
RESEARCHGATE ID	:	<a href="https://www.researchgate.net/profile/Hirok_Chaudhuri/publications/">https://www.researchgate.net/profile/Hirok_Chaudhuri/publications/</a>
GOOGLE SCHOLAR ID	:	<a href="http://scholar.google.co.in/citations?user=_X2gpvoAAAAJ&amp;hl=en">http://scholar.google.co.in/citations?user=_X2gpvoAAAAJ&amp;hl=en</a>
ORCID ID	:	0000-0002-3925-4257
WEB OF SCIENCE RESEARCHER ID	:	CAE-9636-2022

SCOPUS AUTHOR ID	:	26029319900
LANGUAGES KNOWN	:	English, Bengali and Hindi
EXTRA CURRICULAR ACTIVITIES	:	Photography, Instrumental Music, Reading of books and articles on popular science and literature, popularization of science

## Awards / Prizes / Fellowship and Honours

- Member of the BRICS (Brazil-Russia-India-China-South Africa) Network University International Thematic Group (BRICS NU ITG) : Water Resources and Pollution Treatment since 2017
- Selected as “Fellow” of The Society of Earth Scientists (SES), India by The Society of Earth Scientists in the year 2015.
- Received the **Felicitation for outstanding achievement /contribution to the civil society of Birbhum District from Birbhum Zilla Parishad**. Award was received from **District Magistrate, Birbhum District**.
- Received the **International Travel Scheme Award** from Department of Science and Technology, Govt. of India for presenting an invited talk at the International Conference: 7<sup>th</sup> Dresden Symposium on Hazard Detection and Management held at Dresden, Germany during the period March 3-8, 2013.
- Post-Doctoral Fellowship** [MoES Research Associateship – Gr. III] from Govt. of India, Ministry of Earth Sciences (MoES) – R & D project (“Pre-seismic Geochemical Monitoring Project”) at Variable Energy Cyclotron Centre, Kolkata since August 9, 2010-June 20, 2014.
- Visiting Scientist Fellowship** from Govt. of India, Department of Atomic Energy [DAE], Variable Energy Cyclotron Centre, Kolkata – 700 064 during the period of September 15, 2009 – March 14, 2010.
- Received a **memento from Oil and Natural Gas Corporation Ltd. (ONGC)**, Kuthalam GCS, in 2009 for a major contribution in R & D Activity of Pressure Swing Adsorption (PSA) based Prototype Helium Purification Plant [A collaborative R & D Project of ONGC, DST and DAE].
- Research Scholar Fellowship** [DST Project Fellow] from Govt. of India, Department of Science & Technology [DST] R & D Project at Saha Institute of Nuclear Physics, during the period of April 1, 2005- March 1, 2009.
- Graduate Aptitude Test for Engineering** [GATE] qualified in year 2005 in Physics.
- National Scholarship** for the result of Madhyamik Pariksha (Secondary Examination), 1996 from the Government of West Bengal, Education Department, India in the year 1996.
- Silver Medal** from the President of India and former Central Minister, Govt. of India, Shri Pranab Mukherjee in the year 1996 for scoring excellent marks among the students of Birbhum District in Madhyamik Pariksha (Secondary Examination, W.B.), 1996.

## Educational Qualification:

Exam. Passed	Specialization	Board/University	Passing
POST DOCTORATE	<i>“Seismo-geochemical modeling by means of soil gas geochemistry” Host: Prof. Bikash Sinha</i>	Variable Energy Cyclotron Centre, Kolkata – 64	August 9, 2010 to June 20, 2014
Ph. D. (Science)	<i>Science (EXPERIMENTAL PHYSICS) Title of the Thesis: “Investigations on geochemical precursory signals emanating from hydrothermal systems pertaining to seismic events” Supervisor : Dr. N. K. Das</i>	Saha Institute of Nuclear Physics, Kolkata – 64, and Variable Energy Cyclotron Centre, Kolkata – 64 (Ph D registration at Jadavpur University, Kolkata – 32)	April 4, 2005 to August 1, 2009 Thesis submitted: May 14, 2009 Thesis defended: Dec. 14, 2009 Degree Awarded: Dec. 16, 2009 Convocation : Dec 24, 2010
POST GRADUATION (M. SC. Physics)	<i>M. Sc. courses in Physics (Specialization in : SOLID STATE PHYSICS)</i>	Physics Department, Burdwan University	2003
GRADUATION (B. SC. Physics (H))	<i>B. Sc. courses in Physics (Hons), Chemistry, Mathematics, Environmental Sciences, English, Bengali</i>	Suri Vidya Sagar College, Suri, Birbhum, WB Burdwan University	2001
HIGHER SECONDARY	<i>Science Subjects: Physics, Chemistry, Mathematics, Biology (Optional), English, Bengali.</i>	Birbhum Zilla School, Suri, Birbhum, WB WBCHSE	1998
SECONDARY	<i>Physical Science, Life Science, Mathematics, Geography, History, English, Bengali, Chemistry (Optional)</i>	Birbhum Zilla School, Suri, Birbhum, WB WBBSE	1996

## Details of employment:

### Teaching and Research:

Name and address of employer	Designation	From	To	Type of organization
Department of Physics	Associate Professor Grade Pay		Till Date	Institute of national importance (Autonomous Institute) under

National Institute of Technology Durgapur (NIT Durgapur) Mahatma Gandhi Avenue, Durgapur, WB, India Adjunct Faculty : Center for Research on Environment and Water, NIT Durgapur	Rs. 9500/-	October 16, 2018		Govt. of India, Ministry of Education
Department of Physics National Institute of Technology Durgapur (NIT Durgapur) Mahatma Gandhi Avenue, Durgapur, WB, India	Assistant Professor Grade Pay Rs. 8000/-,	June 23, 2014	October 15, 2018	Institute of national importance (Autonomous Institute) under Govt. of India, Ministry of Education

#### Exclusively Research:

Name and address of employer	Designation	From	To	Type of organization
Variable Energy Cyclotron Centre, Kolkata – 700 064	Research Associate. III (Post-Doctoral Fellow)	Aug 9, 2010	June 20, 2014	A unit of Govt. of India under the Department of Atomic Energy (DAE)
Variable Energy Cyclotron Centre, Kolkata – 700 064	Visiting Scientist	Sep 15, 2009	March 14, 2010	A unit of Govt. of India under DAE
Saha Institute of Nuclear Physics, Kolkata – 700 064	Research Scholar	April 4, 2005	Aug 1, 2009	Autonomous Institute of Govt. of India under DAE

#### Research Interests and Summary of Current Research Activities:

- Study on water pollution (geochemical investigation, water chemistry, antibiotic pollution) in Damodar River Basin and Ganga River
- Development of novel material for wastewater treatment
- Development of novel material for Geo jute textile for its use in mining and rural roads
- Environmental Radioactivity monitoring (in water bodies, sub-soil gas) in Damodar River Basin
- Nonlinear Time Series Analysis (FFT, MFDFA, EMD, SOC) of climate data, geochemical data, medical data
- Development of a network of MPOs (Multi-parametric Geophysical Observatories): Geochemical precursors, Electromagnetic (EM) precursors, seismo-geochemical & seismo-geophysical modeling of earthquake precursors.
- Investigation on Geochemical and Geophysical Aspect for Geothermal Exploration.
- Large scale Extraction of helium from petroleum deposits and hydrothermal gas and its purification

#### Research Collaboration:

##### (A) Study on water pollution (geochemistry) in Damodar River Basin and Ganga River

###### Foreign Collaboration

- Dr. Evgeniya Soldatova, University of Tyumen, Russia through BRICS NU Project and BRICS STI Project (since 2019) [Collaborative Research and Joint Research Proposal and Joint Publication]
- Prof. Sun Zhanxue, East China University of Technology, Nanchang, China through BRICS STI Project (since 2019) [Collaborative Research and Joint Research Proposal and Joint Publication]
- Dr. Evgeniya Soldatova and Dr. Natalia Guseva, Tomsk Polytechnic University, Tomsk, Russia through BRICS NU Project and BRICS STI Project (since 2019) [Collaborative Research and Joint Research Proposal and Joint Publication]

###### Indian Collaboration

- Dr. Kashyap Dubey, Dept. of Biotechnology, Jawaharlal University, New Delhi, India, (since 2017) [Collaborative Research and Joint Research Proposal and Joint Publication]
- Dr. Trina Dutta, Department of Chemistry, JIS College of Engineering, Kalyani, West Bengal, India (since 2019) [Collaborative Research and Joint Research Proposal and Joint Publication]
- Dr. Supriya Pal, Dept. of Civil Engineering, NIT Durgapur, India (since 2016) [Collaborative Research and Joint Research Proposal and Joint Publication]
- Dr. Mrinal Kanti Mandal, Department of Chemical Engineering, NIT Durgapur, India (since 2016) [Collaborative Research and Joint Research Proposal and Joint Publication]

##### (B) Development of novel material for wastewater treatment:

###### Foreign Collaboration

- Dr. Natalia Guseva, Tomsk Polytechnic University, Tomsk, Russia through BRICS NU Project and BRICS STI Project (since 2019) [Collaborative Research and Joint Research Proposal]
- Prof. Sun Zhanxue, East China University of Technology, Nanchang, China through BRICS STI Project (since 2019) [Collaborative Research and Joint Research Proposal and Joint Publication]

###### Indian Collaboration

- Dr. Kashyap Dubey, Dept. of Biotechnology, Jawaharlal University, New Delhi, India, [Collaborative Research and Joint Research Proposal and Joint Publication]
- Dr. Supriya Pal, Dept. of Civil Engineering, NIT Durgapur, India [Collaborative Research and Joint Research Proposal and

Joint Publication]

- Dr. Mrinal Kanti Mandal, Department of Chemical Engineering, NIT Durgapur, India [Collaborative Research and Joint Research Proposal and Joint Publication]
- Dr. Soumen Basu, Department of Physics, NIT Durgapur, India [Collaborative Research and Joint Research Proposal and Joint Publication]

**(C) Environmental Radioactivity monitoring (in water bodies, sub-soil gas)**

**Indian Collaboration**

- Dr. Chiranjib Barman, Department of Physics, Sidho-Kanho-Birsha University, Purulia, WB, (since 2020) [Collaborative Research and Joint Research Proposal and Joint Publication]

**(D) Nonlinear Time Series Analysis of climate data, geochemical data, medical data:**

**Indian Collaboration**

- Nonlinear Analysis of Geochemical Precursory Signals for earthquakes (since September, 2010 to till date) [Collaborative Research and Joint Research Proposal and Joint Publication]  
Collaborator: Prof. A. N. Sekar Iyengar, Senior Professor (Rtd.) and Former Head, Plasma Division, Saha Institute of Nuclear Physics, Kolkata, India.
- Nonlinear Analysis of medical data (EEG signals) (since June, 2017 to till date) [Collaborative Research and Joint Research Proposal]  
Collaborator: Prof. A. N. Sekar Iyengar, Senior Professor (Rtd.) and Former Head, Plasma Division, Saha Institute of Nuclear Physics, Kolkata, India.
- Nonlinear Analysis of climate data (since June, 2020) [Collaborative Research]  
Collaborator: Dr. Somenath Mukherjee, Kazi Nazrul University, Asansol, WB

**(E) Earthquake Precursory Study:**

**Foreign Collaboration**

- Study on Earthquake Precursory signals [Collaborative Research]  
Collaborator: Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia (from 22.06.2017 to till date)
- Global Earthquake Forecasting System: [Collaborative Research]  
Collaborator: Prof. Fiedemann Frenud, NASA Ames Research Center, California, USA (from May 19, 2014 to 2016)

**Indian Collaboration**

- Seismo-Geochemical Monitoring at Kutch region, Gujarat for earthquake precursor study: [Collaborative Research and Joint Research Proposal]  
Collaborator: Dr. K. Madhusudhana Rao, Scientist D, Institute of Seismological Research (ISR), Gandhinagar, Gujarat (from November, 2012 to 2016)
- Monitoring of seismic data from Broad Band Seismo-meter installed at Bakreswar Geothermal Province; (from December, 2011 to 2014): [Collaborative Research]  
Collaborator: Dr. Supriyo Mitra, Professor, Earth Science Department, Indian Institute of Science Education and Research (IISER), Kolkata (Mohanpur Campus), India.
- Monitoring of thermal spring gas-geochemistry for earthquake precursor study in Himalayan region, Jammu Province, India. (from August, 2009 to 2014) [Collaborative Research and Joint Research Proposal and Joint Publication]  
Collaborator: Dr. Waseem Bari, Associate Professor, Department of Physics, Kashmir University, Srinagar, India.
- Monitoring of precursory signals for earthquakes and landslide (since August, 2015) [Collaborative Research and Joint Research Proposal and Joint Publication]  
Collaborator: Dr. Supriya Pal, Dept. of Civil Engineering, NIT Durgapur, India.

**(F) Geothermal Exploration and Helium Exploration:**

**Foreign Collaboration**

- Geothermal exploration at Bakreswar geothermal area: [Collaborative Research]  
Collaborator: Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia (from 22.06.2017 to till date)
- Geothermal exploration at Bakreswar geothermal area [Collaborative Research and Joint Research Proposal]  
Collaborator: Dr. Kapil, Mohan, Scientist, Institute of Seismological Research (ISR), Gandhinagar, Gujarat (from 18.09.2014 to 2016)

**Indian Collaboration**

- Geothermal exploration at Bakreswar geothermal area: [Collaborative Research]  
Collaborator: Dr. P. B. Sarolkar, Director General, GSI, Kolkata and Dr. Amit Roy, Director, GSI, Kolkata and Dr. Agarwal, Director, GSI, Lucknow (from 18.09.2014 to 2016)
- Development of a Geothermal Power Plant and Helium Plant at Bakreswar-Tantloi Geothermal area. (February, 2012 to December 2014): [Collaborative Research and Joint Research Proposal and Joint Publication]  
Collaborator: Dr. D. Chandrasekharam, IIT Chair Professor, Department of Earth Sciences, Bombay IIT (Indian Institute of Technology), Mumbai, 400076 and Chairman M/s Geo Syndicate Power P Ltd, Mumbai.
- Development of a Geothermal Power Plant and Helium Plant at Bakreswar-Tantloi Geothermal area. (February, 2012 and onwards): [Collaborative Research and Joint Research Proposal and Joint Publication]  
Collaborator: Prof. Bikash Sinha, INSA Senior Scientist, VECC, Kolkata
- Development of a Geothermal Power Plant and Helium Plant at Bakreswar-Tantloi Geothermal area. (from August 2020 and Onwards)  
Collaborator: Atomic Mineral Directorates, Department of Atomic Energy, Govt. of India

**(G) Extraction of metals from fly ash****Foreign Collaboration**

- Extraction of metals from fly ash (since August, 2017) [Collaborative Research and Joint Research Proposal]  
Collaborator: Prof. A. Taskin, Far Eastern Federal University, Vladivostok, Russia

**(H) Climate Change****Foreign Collaboration**

- An interdisciplinary approach for assessment of the impacts of climate change on socio-ecological systems of some selected regions of BRICS countries [Collaborative Research and Joint Research Proposal]

Collaborator: Prof. Otto Corrêa Rotunno Filho, Federal University of Rio de Janeiro, Brazil

Collaborator: Prof. Yali Edessa Woyessa, Central University of Technology, South Africa

**Indian Collaboration**

- Water sample collection and analysis from Sagar Island, Sundarban delta, India [Collaborative Research and Joint Research Proposal]  
Collaborator: Prof. (Dr.) Pankaj Kumar Roy, Jadavpur University, Kolkata, India

**MoU with foreign Universities**

1. Far Eastern Federal University (FEFU), Russia (since 25.06.2017)
2. Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch of Russian Academy of Sciences, The Russian Federation (IPGG SB SRAS) (since 22.06.2017)
3. Federal University of Rio De Janeiro, Brazil (since 18.01.2018)
4. Hohai University, China (since 05.12.2018)
5. Tomsk Polytechnic University, Russia (since 29.01.2018)

**Research Projects / Sponsored project:**

Sponsoring Agency	Title of the Project	Sanction Letter no/Project No.	Period	Amount	Status (Completed/ongoing)
BRICS STI	An interdisciplinary approach for assessment of the impacts of climate change on socio-ecological systems of some selected regions of BRICS countries PI - Prof Pankaj Roy, Jadavpur University, Dr. Hirok Chaudhuri, NIT Durgaur, Dr. Kankana Seal Co PI – Dr. Supriya Pal, Dr. Soumen Basu, Dr. Mrinal Kanti Mandal, Dr. Raj Narayan Saha <b>Implementing Institution:</b> NIT Durgapur, Jadavpur University, Koakata	052 – BRICSEIBEX dated 26/08/2024 and 07/01/2025	2025-2028 (3 years)	NIL	Ongoing Approval received on 26/08/2024 and 07/01/2025 Starting date 07/01/2025  Proposed date of completion: 06.01.2028
Mangalswastik Imperial SSR Construction & Development Private Limited	Investigation on helium extraction at Bakreswar hot spring, West Bengal PI- Dr. Hirok Chaudhuri Co. PI – Dr. Kankana Seal <b>Implementing Institution:</b> NIT Durgapur	MISSR/FEB/H RP/0002	2024-2027 (3 years)	7.65 lakh	Ongoing Approval received on 20/03/2024 Starting date 01/04/2024 Proposed date of completion: 31/03/2027
Mangalswastik Imperial SSR Construction & Development Private Limited	Investigation on bulk utilization of fly ash (from energy enterprises and steel industries of the Damodar river basin) for sustainable product development PI- Dr. Hirok Chaudhuri Co. PI – Dr. Kankana Seal <b>Implementing Institution:</b> NIT Durgapur	MISSR/APR/F AUP/002	2024-2025 (1 year)	1.00 lakh	Ongoing Starting date 21/04/2024 Proposed date of completion: 20/04/2025
MS Traders	Study on bulk utilization of fly ash deposition (from energy enterprises		2024-2025 (1 year)	0.50 lakh	Ongoing

	and steel industries) and cold dust (from coal mines) of Jharkhand state for sustainable product development PI- Dr. Hirok Chaudhuri Co. PI – Dr. Kankana Seal <b>Implementing Institution:</b> NIT Durgapur	NITD/DS/2024/27			Starting date 21/04/2024  Proposed date of completion: 20/04/2025
Mission Steering Group (MSG)- National Technical Textile Mission (NTTM)- Ministry of Textiles, Govt. of India	<b>Research Project:</b> Development of an IoT Based Organic-Inorganic Contaminants Removal System (CRS) for Purifying Domestic Wastewater through Constructed Wetland using Durable, Nano-Composite Jute-Geotextile Sandwiched LECA Cartridges. PI: Dr. M. K. Mandal Co PI:, Dr. Supriya Pal,, <b>Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri, Dr. T. K. Bera</b> <b>Implementing Institution:</b> NIT Durgapur	07/MSG/2023-NTTM-Part (1): dated 10.10.2023  No. 2/10/2023-NTTM Date- 31/12/2023	2023-2025 (1.5 Years)	99.96 Lakh  1 <sup>st</sup> Installment received 2600000	Ongoing  Approval Received on 10.10.2023  Started on: (15/05/2024)  Proposed date of completion: 14/12/2025
National Technical Textile Mission (NTTM)- Ministry of Textiles, Govt. of India	Educational Project: Education Application under NTTM PI: Dr. Supriya Pal, Co PI., Dr. M. K. Mandal., Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri, Dr. T. K. Bera Implementing Institution: NIT Durgapur	4/2/2023 -NTTM (EPC Meetings) date: 28.08.2023 (Education Proposal ID "Edu-23-00056")	2023-2026 (3 Years)	847.20 lakh	Ongoing  Approval Received on 28.08.2023  Started on: Proposed date of – 07/11/2024  Completion date- 06/11/2027
Mission Steering Group (MSG)- National Technical Textile Mission (NTTM)- Ministry of Textiles, Govt. of India	<b>Research Project:</b> Development of nano-composite jute-geotextile for high-speed railway embankment system to enhance the durability and its remotely health monitoring using Internet of Things (IoT.) PI: Dr. Supriya Pal, Co PI., Dr. M. K. Mandal., <b>Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri, Dr. T. K. Bera</b> <b>Implementing Institution:</b> NIT Durgapur	2/3/2021-NTTM (Pt.), Date, 30/11/2023	2023-2025 (1.5 Years)	99.70 Lakhs	Ongoing  Approval Received on 12.04.2023 Started on:  Proposed date of 17/01/2023  Completion date- 16/07/2024
National Rural Infrastructure Development Agency (NRIDA), Govt. of India	<b>Research Project:</b> Performance Evaluation of Fly Ash–Cement Stabilized Coal Mine Overburden as a Potential Sub-base and Base Course Material in Flexible Pavement Systems (p380-395/C) PI: Dr. Supriya Pal, Co PI., Dr. M. K. Mandal., <b>Dr. Hirok Chaudhuri, Dr. Rajib Ghosh Chaudhuri</b> <b>Implementing Institution:</b> NIT Durgapur	NRIDA/A/3/2023-Dir (P-II) (E:383141) date.03/03/2023 and 22.02.2023	2023-2025 (1.5 Years)	18.92 lakhs	On-going  Started on: 03.03.2023  Proposed date of completion: 02.09.2024

National Jute Board (NJB), A Statutory Body, Ministry of Textiles, Govt. of India	<b>Research Project:</b> Nano technological Intervention on jute-geotextile to adapt long term sustainability and enhanced durability for its cost effective and wide application in flexible pavement systems PI: Dr. Supriya Pal, Co PI: <b>Dr. Hirok Chaudhuri</b> , Dr. M. K. Mandal. Dr. Rajib Ghosh Chaudhuri <b>Implementing Institution:</b> NIT Durgapur	NJB/Tech./JPD S/2 nd EMC/2021-22/6234 dated 11.11.2021	2021 –2024 (3 yrs)	69.52 lakhs	On-going Started on: 11.11.2021 Proposed date of completion: 10.11.2024
National Jute Board (NJB), A Statutory Body, Ministry of Textiles, Govt. of India	<b>Research Project:</b> Development of guidelines to adopt the process of height increment of overburden dumps at open cast coal mines in India using jute-geotextile as reinforcing material PI: Dr. Supriya Pal, Co PI: <b>Dr. Hirok Chaudhuri</b> , Dr. M. K. Mandal. Dr. Rajib Ghosh Chaudhuri <b>Implementing Institution:</b> NIT Durgapur	NJB/Tech./JPD S/2 nd EMC/2021-22/6235 dated 11.11.2021	2021 –2024 (3 yrs)	71.72 lakhs	On-going Started on: 11.11.2021 Proposed date of completion: 10.11.2024
NIT Durgapur, Govt. of India, MoE	<b>Educational and social activity Project:</b> Center for digital Learning – NITD Pathshala PI: Dr. Hirok Chaudhuri, Dr. Jaydeep Howlader, Dr. Anita Pal, Dr. P. Chaudhuri. Dr. K. Mandal <b>Implementing Institution:</b> NIT Durgapur	NITD/REG/ID M-03/53 rd FC dated /06.10.2021	2021-2024 (3 years)	10.00 lakh	Completed Started on: 06.10.2021 Completion: 05.10.2024
SERB, DST Govt. of India,	<b>Research Project:</b> “Nonlinear dynamics (NLD) of long range anticorrelated chaotic oscillation in plasmas and application of nonlinear dynamics to condensed matter and dark matter research, geo-chemical oscillations from hot springs and chaos control” PI: Prof. A. N. Sekar Iyengar, CO-PI: Prof. K. SR. Menon, <b>Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> SINP, Kolkata and NIT Durgapur	CRG/2020/0 01747 dated 18.01. 2021	2021-2024 (3 yrs)	29.90 Lakh	Completed Started on: 18.01.2021 Completion: 17.01.2024
HEFA, MHRD, Govt. of India	<b>Instrumental Facility Development Project:</b> Center for Research on Environment and Water Co-Investigator: <b>Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> NIT Durgapur	F.No.A51201& TS.III dated 23.08.2018	2019-2025	400.00 lakh	Ongoing and delayed started on 28.01.2020 Proposed date of completion: 27.01.2024
Govt. of India MHRD through IIT Delhi	<b>Educational and social activity Project:</b> Unnat Bharat Abhiyan 2.0 Co-Investigator: <b>Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> NIT Durgapur	Unnat Bharat Abhiyan'- Reg dated 03.06.2020	2019-2021 (2 yr)	5.00 Lakh + 7.5 lakh	Completed Started on: 25.07.2019 Completed on 24.07.2020
DST, Govt. of India	<b>Research Project : ( International Project under BRICS)</b> Environmental geochemistry and treatment of organic pollutants in	DST/IMRCD/ Pilot Call2/Envirorganic/2018(G)	2019-2022 (3.5 yrs)	44.08 lakh	Completed Started on: 01.04.2019

	aquatic systems in the selected areas of China, India and Russia PI: Dr. Supriya Pal, Co PI: <b>Dr. Hirok Chaudhuri</b> , Dr. M. K. Mandal, Dr. K. Dubey, Prof. Oleg Savichev, Prof. Zhanxue Sun <b>Implementing Institution:</b> NIT Durgapur, India Tomsk Polytechnic University, Russia East China University of Technology, China	Dated 28.03.2019			Completed on 27. 09.2022
Paschim Banga Sarvasiksha Mission, Govt. of W.B. and Govt. of India, MHRD	<b>Educational Project:</b> Developing module with teaching learning materials for mathematics, physics, chemistry and biology for school level. <b>Project Coordinator: Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> NIT Durgapur	1(4)/04/RAA-PBSSM, dated 09/03/2018	2018 – 2019 (1 yr)	5.00 lakh	Completed  Started on: 09.03.2018  Completed on 08.03.2019
RIG Project, NIT Durgapur, Govt. of India, MHRD	<b>Research Project:</b> Investigation on radioactive profile of geothermal areas <b>PI: Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> NIT Durgapur	NITD/Estab_Sec.IRIG/996/2017, dated 18.09.2017	2017-2020 (3 yrs)	10.00 Lakh	Completed  Started on: 18.09.2017  Completed on 17.09.2020
SERB, DST Govt. of India,	<b>Research Project:</b> “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” <b>PI:</b> Prof. A. N. Sekar Iyengar, CO-PI: Prof. M. S. Janaki, <b>Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> SINP, Kolkata and NIT Durgapur	EMR/2014/00771 dated 09.03.2017	2017-2020 (3 yrs)	33.01 Lakh	Completed  Started on: 09.03.2017  Completed on 08.03.2020
NIT Durgapur, Govt. of India, MHRD	<b>Research Project:</b> “Exploration of Helium and Geothermal Power at Bakreswar Tantloi Geothermal Area (West Bengal-Jharkhand)” <b>Investigators:</b> Prof. Bikash Sinha, Prof. T. Kumar, Prof. A. Gangopadhaya, Prof. N. K. Roy, Dr. Kalyan Adhikari, <b>Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> NIT Durgapur	NITD/REG/OR/2014/15 dated 08.05.2014	2014-2016 (2 yrs)	92.00 Lakh	Completed  Started on: 08.05.2014  Completed on 31.05.2016
NIT Durgapur, Govt. of India, MHRD	<b>Research Project:</b> “Earthquake Precursory Study at Bakreswar (WB), Tantloi, (Jharkhand), Baratang (A&N), Tatta Pani (J&K)” <b>Investigators:</b> Prof. Bikash Sinha, Prof. T. Kumar, Prof. A. Gangopadhaya, Prof. N. K. Roy, Dr. Kalyan Adhikari, <b>Dr. Hirok Chaudhuri</b> <b>Implementing Institution:</b> NIT Durgapur	NITD/REG/OR/2014/27 dated 18.06.2014  and  NITD/REG/OR/2014/08 dated 10.02.2014	2014-2016 (2 yr)	59.00 + 16.00 Lakh	Completed  Started on: 01.07.2014  Completed on 31.05.2016
MoES, Govt. of India, New Delhi	<b>Research Project:</b> “Pre-Seismic Geochemical Monitoring Continuation”	MOES/P.O.(SE ISMO)/NPEP(14)/2009 dated 18.03.2010	2010-2013 (03 Yrs.) & 01 yr extension	181.15 Lakh	Completed  Started on: 28.04.2010



	<b>PI</b> – Prof. Bikash Sinha, Co-PI- Prof. Sibaji Raha, <b>CI</b> – <b>Dr. Hirok Chaudhuri</b> CI- Dr. R. K. Bhandari, CI- Prof. Prasanta Sen, CI – Dr. Debasis Ghose <b>Implementing Institution:</b> VECC, Kolkata and Bose Institute, Kolkata				Completed on 30.11.2013
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### Consultancy Projects:

Sl. No.	Title of the Project	Funding Agency	Financial Outlay	Year of Start & Total Period	Name of the P.I. and Other Investigators	Started/ Complete /In Progress

NIL

### Research Publications :

Paper publications in National / International Journal (in SCI / SCOPUS / Web of Science):

Title of Paper	Author(s)	Name of the Journal Publisher Journal Indexing Q1 or Q2 or Q3	Vol. & Year	Pages	Impact Factor (IF)
<b>2025</b>					
Nanocomposite-Modified Jute Geotextile as a Sustainable Solution for Subgrade Strength in Low-Traffic Roadways: A Performance Analysis <a href="https://doi.org/10.1061/JMCEE7.MTENG-18611">https://doi.org/10.1061/JMCEE7.MTENG-18611</a>	Sahinur Rahaman Mondal, Tapabrata Chakraborty, Rajib Ghosh Chaudhuri, Mrinal Kanti Mandal, Hirok Chaudhuri, Supriya Pal	Journal of Materials in Civil Engineering  Publisher (American Society of Civil Engineers )  (SCIE)  Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=16299&amp;tip=sid">https://www.scimagojr.com/journalsearch.php?q=16299&amp;tip=sid</a>	Vol. 37 Issue 3, 2025	04024535	3.1
<b>2024</b>					
Performance evaluation of cement-stabilized coalmine overburden-furnace slag-fly ash mixes as economical and sustainable base course material for flexible pavement  <a href="https://doi.org/10.1007/s10098-024-03098-1">https://doi.org/10.1007/s10098-024-03098-1</a>	Arindam Karmakar, Supriya Pal, Kamal Bhattacharya, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, Hirok Chaudhuri	Clean Technologies and Environmental Policy  Publisher Springer Berlin Heidelberg  SCIE  Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=130111&amp;tip=sid">https://www.scimagojr.com/journalsearch.php?q=130111&amp;tip=sid</a>	2024	1-19	4.2
A machine learning approach to investigate the impact of land use land cover (LULC) changes on groundwater quality, health risks and ecological risks through GIS and response surface methodology (RSM)  <a href="https://doi.org/10.1016/j.jenvman.2024.121911">https://doi.org/10.1016/j.jenvman.2024.121911</a>	Mobarok Hossain, Bettina Wiegand, Arif Reza, Hirok Chaudhuri, Aniruddha Mukhopadhyay, Ankit Yadav, Pulak Kumar Patra	Journal of Environmental Management  Publisher - Academic Press  (SCOPUS/ SCIE)  Q1	Vol 366 (2024)	121911	8.0

		<a href="https://www.scimagojr.com/journalsearch.php?q=23371&amp;tip=sid">https://www.scimagojr.com/journalsearch.php?q=23371&amp;tip=sid</a>			
Impact of industrial hotspots on Tamla nala and Nunia nala confluence – a tributary of the Damodar river  <a href="https://doi.org/10.1007/s10661-024-12668-1">https://doi.org/10.1007/s10661-024-12668-1</a>	Trina Dutta · Hirok Chaudhuri	Journal Environmental Monitoring and Assessment  Publisher Springer International Publishing  SCOPUS Q2  <a href="https://link.springer.com/journal/10661">https://link.springer.com/journal/10661</a>	(2024) 196:488	1-16	3.1
Radiation profile mapping and health impact assessment due to <sup>222</sup> Rn exposure from groundwater in coal mining city Asansol, West Bengal, India  <a href="https://doi.org/10.1007/s10967-023-09263-y">doi.org/10.1007/s10967-023-09263-y</a>	Ankita Dawn, Hirok Chaudhuri	Journal of Radioanalytical and Nuclear Chemistry (ISSN:0236-5731)  (Publisher: Springer Netherlands)  (SCOPUS/ SCIE) <a href="https://link.springer.com/journal/10967">https://link.springer.com/journal/10967</a>  Q2 ( <a href="https://www.resurchify.com/impact/details/24060">https://www.resurchify.com/impact/details/24060</a> )	Vol. 333, Issue 3, 2024	1611 - 1625	1.63
<b>2023</b>					
Health risk assessment due to natural gamma radiation in Durgapur industrial zone and Bakreswar geothermal area, India  <a href="https://doi.org/10.1007/s10967-023-09167-x">doi.org/10.1007/s10967-023-09167-x</a>	Ankita Dawn, Saroj Khutia, Chiranjit Maji, Hirok Chaudhuri	Journal of Radioanalytical and Nuclear Chemistry (ISSN:0236-5731)  (Publisher: Springer Netherlands)  (SCOPUS/ SCIE) <a href="https://link.springer.com/journal/10967">https://link.springer.com/journal/10967</a>  Q2 ( <a href="https://www.resurchify.com/impact/details/24060">https://www.resurchify.com/impact/details/24060</a> )	2023	1-13	1.63
Efficacy Evaluation of Silty-Sandy Soil and Chrysopogon zizanioides to Attenuate Doxycycline from Wastewater in a Constructed Wetland System  DOI: 10.1061/JOEEDU.EEENG-7117	Avishek Adhikary; Sandeep Kumar; Supriya Pal; Sudipta Ghosh; <b>Hirok Chaudhuri</b> ; and Mrinal Kanti Mandal	Journal of Environmental Engineering ISSN (print): 0733-9372  (Publisher: American Society of Civil Engineers)  (SCOPUS) <a href="https://www.scopus.com/sourceid/23355">https://www.scopus.com/sourceid/23355</a>  Q2	149 (6), 2023	04023024 (1-12)	2.21

		<a href="https://www.scimagojr.com/journalsearch.php?q=23355&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=23355&amp;tip=sid&amp;clean=0</a>			
Age-dependent potential health risk assessment due to radioactive radon-222 in the environs of highly populated Durgapur industrial zone and nearby Bakreswar hot spring, India  doi.org/10.1007/s10653-023-01478-y	Saroj Khutia, Ankita Dawn, Kankana Seala, <b>Hirok Chaudhuri</b> , Chiranjit Maji, Suvashree Mukherjee	Environmental Geochemistry and Health (Print ISSN 0269-4042)  (Publisher : Springer Netherlands)  (SCOPUS/ SCIE) <a href="https://link.springer.com/journal/10653">https://link.springer.com/journal/10653</a>  Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=20992&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=20992&amp;tip=sid&amp;clean=0</a>	45, 2023	5727 – 5759	4.93
<b>2022</b>					
A study on water pollution scenario of the Damodar river basin, India: assessment of potential health risk using long term database (1980-2019) and statistical analysis  DOI: 10.1007/s11356-022-19402-9	Kankana Seal, <b>Hirok Chaudhuri</b> , Sanhita Pal, Raj Ranjan Srivastava, Evgeniya Soldatova	Environmental Science and Pollution Research (Electronic ISSN 1614-7499)  (Publisher : Springer Berlin Heidelberg)  (SCOPUS/ SCIE) <a href="https://link.springer.com/journal/11356">https://link.springer.com/journal/11356</a>  Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=23918&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=23918&amp;tip=sid&amp;clean=0</a>	29 (35), 2022	53320-53352	4.3
A novel understanding of morphological anisotropy features of nanorod units in brookite dominated triphase mesoporous TiO <sub>2</sub> and its excellent photocatalytic activity in phenol decomposition: The role of synthesis pH and surface hydroxylation  DOI: 10.1016/j.surfin.2021.101715	Kankana Seal, <b>Hirok Chaudhuri</b>	Surfaces and Interfaces (Online ISSN: 2468-0230)  (Publisher : Elsevier)  (SCOPUS/ SCIE) <a href="https://journalsearches.com/journal.php?title=SURFACES%20AND%20INTERFACES">https://journalsearches.com/journal.php?title=SURFACES%20AND%20INTERFACES</a>  Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=21100788797&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=21100788797&amp;tip=sid&amp;clean=0</a>	29, 2022	101715 (1-24)	4.83
<b>2021</b>					
Impact of climate change on seismicity: a statistical approach  DOI: 10.1007/s12517-021-08946-8	Chiranjit Maji, Bikash Sadhukhan, Somenath Mukherjee, Saroj Khutia, <b>Hirok Chaudhuri</b>	Arabian Journal of Geosciences Print ISSN 1866-7511  (Publisher :	14 (24), 2021	2725 (1-21)	

		Springer International Publishing)  (SCOPUS/ SCIE) <a href="https://www.scopus.com/sourceid/17400154823">https://www.scopus.com/sourceid/17400154823</a>  Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=17400154823&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=17400154823&amp;tip=sid&amp;clean=0</a>			1.9
Spatial and temporal distribution characteristics and source analysis of nitrate in shallow groundwater of Poyang Lake Region  ISSN: 10048227	YH Dong, CH Liu, JL Li, W Guo, ZX Sun, JJ Zan, CF Wei, J Chu, E Soldatova, <b>H Chaudhuri</b>	Changjiang Liuyu Ziyuan Yu Huanjing (Resources and Environment in the Yangtze Valley)  (Publisher: Kexue Chubanshe/Science Press)  (SCOPUS) <a href="https://www.clzyhreyv-10048227.com/">https://www.clzyhreyv-10048227.com/</a>  Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=23472&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=23472&amp;tip=sid&amp;clean=0</a>	30 (12), 2021	2972-2981	0.58
Study on effect of the solvothermal temperature on synthesis of 3D hierarchical TiO <sub>2</sub> nanoflower and its application as photocatalyst in degradation of organic pollutants in wastewater  DOI: 10.1007/s13369-020-04988-4	Kankana Seal, <b>Hirok Chaudhuri</b> , Soumen Basu, Mrinal Kanti Mandal, Supriya Pal	Arabian Journal for Science and Engineering Print ISSN 2193-567X  (Publisher : Springer Berlin Heidelberg)  (SCOPUS/ SCIE) <a href="https://link.springer.com/journal/13369">https://link.springer.com/journal/13369</a>  Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=13951&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=13951&amp;tip=sid&amp;clean=0</a>	46 (7), 2021	6315 - 6331	1.71
<b>2020</b>					
Ecologo-geochemical conditions of water bodies in the Damodar River Basin (West Bengal, India)  doi.org/10.1134/S1875372841030117	O. G. Savichev, E. A. Soldatova, <b>H. Chaudhuri</b> , S. S. Ulaeva.	Geography and Natural Resources Print ISSN 1875-3728  [Publisher : Pleiades Publishing]  (SCOPUS) <a href="https://link.springer.com/journal/13541">https://link.springer.com/journal/13541</a>  Q3 <a href="https://www.scimagojr.com/journalsearch.php?">https://www.scimagojr.com/journalsearch.php?</a>	41 (3), 2020	293-300	0.29

		<a href="https://doi.org/10.4401/ag-8174">q=11700154716&amp;tip=sid&amp;clean=0</a>			
<p>Imprints of nonlinearity in radioactive gas Radon-222 expelled out of Bakreswar hot spring, India</p> <p>doi: <a href="https://doi.org/10.4401/ag-8174">https://doi.org/10.4401/ag-8174</a></p>	<p><b>Chiranjit Maji</b>, Nimagna Hazra, Animesh Datta, <b>Hirok Chaudhuri</b>, A. N. Sekar Iyengar</p>	<p>Annals of Geophysics ISSN: 1593-5213 (PRINT)</p> <p>(Publisher: IST NAZIONALE DI GEOFISICA E VULCANOLOGIA)</p> <p>(SCOPUS/ SCIE) <a href="https://journalsearches.com/journal.php?title=Annals%20of%20Geophysics#:~:text=The%20Annals%20of%20Geophysics%20is%20a%20reputed%20research%20journal.,%2C%20Scopus%2C%20SCIE%2C%20DOAJ.&amp;text=The%20(SJR)%20SCImago%20Journal%20Rank%20is%200.303.">https://journalsearches.com/journal.php?title=Annals%20of%20Geophysics#:~:text=The%20Annals%20of%20Geophysics%20is%20a%20reputed%20research%20journal.,%2C%20Scopus%2C%20SCIE%2C%20DOAJ.&amp;text=The%20(SJR)%20SCImago%20Journal%20Rank%20is%200.303.</a></p> <p>Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=27426&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=27426&amp;tip=sid&amp;clean=0</a></p>	63 (3), 2020	GT333 (1-18)	2.79
<b>2019</b>					
<p>The unrevealed facts of helium resources of India</p> <p>doi.org/10.1007/s12517-019-4369-1</p>	<p>Hirok Chaudhuri, Kankana Seal, Chiranjit Maji, Supriya Pal, Mrinal Kanti Mandal</p>	<p>Arabian Journal of Geosciences Print ISSN 1866-7511</p> <p>(Publisher: Springer International Publishing)</p> <p>(SCOPUS/ SCIE) <a href="https://www.scopus.com/sourceid/17400154823">https://www.scopus.com/sourceid/17400154823</a></p> <p>Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=17400154823&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=17400154823&amp;tip=sid&amp;clean=0</a></p>	12(6) 2019	216 (1-19)	1.53
<p>Physical and numerical modeling for assessing chromium migration and retention dynamics in clayey soil</p> <p>ISSN: 0019-4522</p>	<p>Sumanta Rakshit, Supriya Paa, Soumya Bhattacharya, Mrinal Kanti Mandal, <b>Hirok Chaudhuri</b> and Chiranjit Maji</p>	<p>Journal of the Indian Chem. Soc. Online ISSN: 2667-2847</p> <p>(Publisher : Elsevier)</p> <p>(SCOPUS/ SCIE) <a href="https://www.sciencedirect.com/journal/journal-of-the-indian-chemical-">https://www.sciencedirect.com/journal/journal-of-the-indian-chemical-</a></p>	96(2) 2019	275-280	1.3

		<a href="https://www.scimagojr.com/journalsearch.php?q=24097&amp;tip=sid&amp;clean=0">society/about/insights#abstracting-and-indexing</a> Q4 <a href="https://www.scimagojr.com/journalsearch.php?q=24097&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=24097&amp;tip=sid&amp;clean=0</a>			
<b>2018</b>					
<p>Granulometric and chemical studies of industrial ash and slag wastes of the russian far east (based on the example of chpp-2, Vladivostok</p> <p>ISSN: 2241-3146</p>	<p>A. Taskin, L. Alekseiko, <b>H. Chaudhuri</b>, S. Ivannikov, O. Danilov, O. Elkin</p>	<p>Waste Management: International Journal of Integrated Waste Management, Science and Technology Print ISSN: 0956-053X</p> <p>(Publisher : Elsevier)</p> <p>(SCOPUS/ SCIE)  <a href="https://www.sciencedirect.com/journal/waste-management/about/insights#abstracting-and-indexing">https://www.sciencedirect.com/journal/waste-management/about/insights#abstracting-and-indexing</a></p> <p>Q1  <a href="https://www.scimagojr.com/journalsearch.php?q=26490&amp;tip=sid&amp;exact=no">https://www.scimagojr.com/journalsearch.php?q=26490&amp;tip=sid&amp;exact=no</a></p>	2018	1-7	8.81
<p>Exploration of geothermal activity using time series analysis of sub surface gases data from Bakreswar hot springs area, eastern India</p> <p>doi.org/10.1007/s12517-018-3665-5</p>	<p><b>Hirok Chaudhuri</b>, Chiranjit Maji, Kankana Seal, Supriya Pal, Mrinal Kanti Mandal</p>	<p>Arabian Journal of Geosciences Print ISSN 1866-7511</p> <p>(Publisher: Springer Berlin Heidelberg)</p> <p>(SCOPUS/ SCIE)  <a href="https://www.scopus.com/sourceid/17400154823">https://www.scopus.com/sourceid/17400154823</a></p> <p>Q2  <a href="https://www.scimagojr.com/journalsearch.php?q=17400154823&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=17400154823&amp;tip=sid&amp;clean=0</a></p>	Vol.11 (12) 2018	324 (1-17)	1.53
<p>Dynamic stability of rural road embankment founded on electro-kinetically stabilized soft soil sub-grade, International Journal of Mechanical and Production Engineering Research and Development. Accepted for publication.</p> <p>ISSN (E): 2249-8001 DOI: 10.24247/ijmperdfeb2018153</p>	<p>Mondal S R, Hazra D, Pal S, <b>Chaudhuri H</b>, Mandal M K,</p>	<p>International Journal of Mechanical and Production Engineering Research and Development</p> <p>(Publisher: Transstellar Journal Publications and Research Consultancy Private Limited)</p> <p>(SCOPUS)  <a href="https://journals.indexcopernicus.com/search/details?id=45150">https://journals.indexcopernicus.com/search/details?id=45150</a></p> <p>Q3</p>	2018	371-378	9.62

		<a href="https://www.scimagojr.com/journalsearch.php?q=21100814505&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=21100814505&amp;tip=sid&amp;clean=0</a>			
<p>3DFE dynamic analysis of stability of high rise building foundation resting on geogrid reinforced soft clay, international journal of mechanical and production engineering research and development</p> <p>ISSN (E): 2249-8001 DOI: 10.24247/ijmperdfeb2018153</p>	<p>R Ghosh, S Pal, <b>H Chaudhuri</b>, M K Mandal</p>	<p>International Journal of Mechanical and Production Engineering Research and Development</p> <p>(Publisher: Transstellar Journal Publications and Research Consultancy Private Limited)</p> <p>(SCOPUS) <a href="https://journals.indexcopernicus.com/search/details?id=45150">https://journals.indexcopernicus.com/search/details?id=45150</a></p> <p>Q3 <a href="https://www.scimagojr.com/journalsearch.php?q=21100814505&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=21100814505&amp;tip=sid&amp;clean=0</a></p>	2018	329-336	9.62
<p>Strength evolution of proportioned mix of cement-sand-fly ash used as an alternate sub-base course material in the flexible pavement</p> <p>ISSN (E): 2249-8001 DOI: 10.24247/ijmperdfeb2018153</p>	<p>S Das, S Islam, S Pal, <b>H Chaudhuri</b>, M K Mandal</p>	<p>International Journal of Mechanical and Production Engineering Research and Development</p> <p>(Publisher: Transstellar Journal Publications and Research Consultancy Private Limited)</p> <p>(SCOPUS) <a href="https://journals.indexcopernicus.com/search/details?id=45150">https://journals.indexcopernicus.com/search/details?id=45150</a></p> <p>Q3 <a href="https://www.scimagojr.com/journalsearch.php?q=21100814505&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=21100814505&amp;tip=sid&amp;clean=0</a></p>	2018	234-240	9.62
<b>2015</b>					
<p>The Essence of Multifractal Detrended Fluctuation Technique to Analyse the Dynamics of Pre-seismic Soil Radon Time Series</p> <p>DOI 10.1007/s11069-015-1747-1</p>	<p>Chiranjib Barman, <b>Hirok Chaudhuri</b>, Argha Deb, Debasis Ghose, Bikash Sinha</p>	<p>Natural Hazards Print ISSN 0921-030X (Publisher: Springer)</p> <p>(SCOPUS/ SCIE) <a href="https://link.springer.com/journal/11069">https://link.springer.com/journal/11069</a></p> <p>Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=23282&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=23282&amp;tip=sid&amp;clean=0</a></p>	Vol. 78 (2) 2015	855-877	3.15
<b>2013</b>					

<p>Long range correlation in earthquake precursory signals</p> <p>DOI: 10.1140/epjst/e2013-01886-y</p>	<p><b>H. Chaudhuri,</b> C. Barman, A. N. S. Iyengar, D. Ghose, P. Sen, B. Sinha</p>	<p>The European Physical Journal, Special Topics Print ISSN 1951-6355</p> <p>(Publisher : Springer International Publishing)</p> <p>(SCOPUS/ SCIE) <a href="https://link.springer.com/journal/11734">https://link.springer.com/journal/11734</a></p> <p>Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=5600152816&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=5600152816&amp;tip=sid&amp;clean=0</a></p>	<p>Vol. 222, Issue 3-4, 2013</p>	<p>827-838</p>	<p>2.89</p>
<p>Network of seismo-geochemical monitoring observatories for earthquake prediction research in India</p> <p>DOI: 10.2478/s11600-013-0134-0</p>	<p><b>Hirok Chaudhuri,</b> Chiranjib Barman, A. N. Sekar Iyengar, Debasis Ghose, Prasanta Sen and Bikash Sinha</p>	<p>Acta Geophysica Electronic ISSN 1895-7455</p> <p>(Publisher: Springer)</p> <p>(SCOPUS/ SCIE) <a href="https://link.springer.com/journal/11600">https://link.springer.com/journal/11600</a></p> <p>Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=4700152838&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=4700152838&amp;tip=sid&amp;clean=0</a></p>	<p>Vol. 61, Issue 4, 2013</p>	<p>1000-1025</p>	<p>2.29</p>
<p><b>2012</b></p>					
<p>A geochemical approach to earthquake reconnaissance at the Baratang mud volcano, Andaman and Nicobar Islands</p> <p>doi:10.1016/j.jseaes.2011.10.007</p>	<p><b>Hirok Chaudhuri,</b> Debasis Ghose, Rakesh K. Bhandari, Prasanta Sen and Bikash Sinha</p>	<p>Journal of Asian Earth Sciences Online ISSN: 1878-5786</p> <p>(Publisher : Elsevier)</p> <p>(SCOPUS/ Web of Science) <a href="https://www.sciencedirect.com/journal/journal-of-asian-earth-sciences/about/insights#abstracting-and-indexing">https://www.sciencedirect.com/journal/journal-of-asian-earth-sciences/about/insights#abstracting-and-indexing</a></p> <p>Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=27602&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=27602&amp;tip=sid&amp;clean=0</a></p>	<p>Vol. 46, 2012</p>	<p>52–60</p>	<p>3.05</p>
<p><b>2011</b></p>					
<p>Long range gas-geochemical anomalies of a remote earthquake recorded simultaneously at distant monitoring stations in India on the multi-parametric and multi-station geochemical signatures for the earthquake prediction Online</p> <p>ISSN 1880-5973</p>	<p><b>Hirok Chaudhuri,</b> Waseem Bari, Nasser Iqbal, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha</p>	<p>Geochemical Journal</p> <p>(Publisher: Geochemical Society of Japan)</p> <p>(SCOPUS/ SCIE) <a href="https://en.wikipedia.org/wiki/Geochemical_Journal">https://en.wikipedia.org/wiki/Geochemical_Journal</a></p>	<p>Vol. 45, 2011</p>	<p>137-156</p>	<p>1.21</p>



		<p>Q2  <a href="https://www.scimagojr.com/journalsearch.php?q=25163&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=25163&amp;tip=sid&amp;clean=0</a></p>			
<b>2010</b>					
<p>The Enigma of Helium  DOI: 10.1556/AGeod.45.2010.4.5</p>	<p><b>H Chaudhuri,</b>  D Ghose, R. K. Bhandari, P. Sen and B. Sinha</p>	<p>Acta Geodaetica et Geophysica Hungarica  Print ISSN: 1217-8977  (Publisher: Springer)  (SCOPUS/ SCIE)  <a href="https://link.springer.com/journal/40328">https://link.springer.com/journal/40328</a></p> <p>Q2  <a href="https://www.scimagojr.com/journalsearch.php?q=21100236211&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=21100236211&amp;tip=sid&amp;clean=0</a></p>	<p>Vol. 45(4),  2010</p>	<p>452–470</p>	<p>1.76</p>
<p>Radon activity measurements around Bakreswar Thermal Springs  doi:10.1016/j.radmeas.2009.11.039</p>	<p><b>Hirok Chaudhuri,</b>  Nisith K. Das, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha</p>	<p>Radiation Measurements  Print ISSN: 1350-4487  (Publisher : Elsevier)  (SCOPUS/ SCIE)  <a href="https://www.sciencedirect.com/journal/radiation-measurements/about/insights#abstracting-and-indexing">https://www.sciencedirect.com/journal/radiation-measurements/about/insights#abstracting-and-indexing</a></p> <p>Q1  <a href="https://www.scimagojr.com/journalsearch.php?q=29512&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=29512&amp;tip=sid&amp;clean=0</a></p>	<p>Vol. 45,  2010</p>	<p>143-146</p>	<p>1.36</p>
<b>2008</b>					
<p>Purification of Helium from Natural Gas by Pressure Swing Adsorption  ISSN 0011-3891</p>	<p>Nisith K. Das, <b>Hirok Chaudhuri</b>, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha</p>	<p>Current Science  (Publisher : Indian Academy of Sciences)  (SCOPUS/ Web of Science)  <a href="https://en.wikipedia.org/wiki/Current_Science">https://en.wikipedia.org/wiki/Current_Science</a></p> <p>Q1  <a href="https://www.scimagojr.com/journalsearch.php?q=20699&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=20699&amp;tip=sid&amp;clean=0</a></p>	<p>Vol. 95,  No. 12,  2008</p>	<p>1684-1687</p>	<p>0.75</p>
<b>2006</b>					
<p>Continuous monitoring of <sup>222</sup>Rn and Its progeny at a remote station for seismic hazard surveillance  doi:10.1016/j.radmeas.2009.11.039</p>	<p>Nisith K. Das, <b>Hirok Chaudhuri</b>, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha</p>	<p>Radiation Measurements  Print ISSN: 1350-4487  (Publisher : Elsevier)  (SCOPUS/ SCIE)</p>	<p>Vol. 41,  2006</p>	<p>634-637</p>	<p>1.36</p>

		<a href="https://www.sciencedirect.com/journal/radiation-measurements/about/insights#abstracting-and-indexing">https://www.sciencedirect.com/journal/radiation-measurements/about/insights#abstracting-and-indexing</a> Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=29512&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=29512&amp;tip=sid&amp;clean=0</a>			
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#### Other than SCI / SCOPUS / Web of Science

Title of Paper	Author(s)	Name of the Journal	Vol. & Year	pages
<b>2021</b>				
Hurst Exponent-Based Nonlinear Analysis for the Identification of Arrhythmia-Affected Cardiac Systems.  doi.org/10.21203/rs.3.rs-898132/v1  Available at SSRN: <a href="https://ssrn.com/abstract=4234108">https://ssrn.com/abstract=4234108</a>	Maji Chiranjit, Sengupta Pratyay, Nandi D. and <b>Chaudhuri Hirok</b>	Social Science Research Network (SSRN) 4234108  Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=26441&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=26441&amp;tip=sid&amp;clean=0</a>	2021	1-20
<b>2020</b>				
Nonlinear and statistical analysis of ECG signals from arrhythmia affected cardiac system through the EMD process  doi.org/10.48550/arXiv.2002.03840	Chiranjit Maji, Pratyay Sengupta, Anandi Batabyal, <b>Hirok Chaudhuri</b>	Signal Processing (arXiv preprint arXiv:2002.03840)  Q1 <a href="https://www.scimagojr.com/journalsearch.php?q=25548&amp;tip=sid&amp;clean=0">https://www.scimagojr.com/journalsearch.php?q=25548&amp;tip=sid&amp;clean=0</a>	2020	1-24
<b>2016</b>				
Designing of software for data automation for on-line monitoring of earthquake precursory signals  ISSN: 0970-9983	Avishek Kumar and <b>Hirok Chaudhuri</b>	Journal of the Instrument Society of India Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=4900152808&amp;tip=sid">https://www.scimagojr.com/journalsearch.php?q=4900152808&amp;tip=sid</a>	Vol. 46, (2), 2016	70-74
Non-linear analysis of geochemical precursors for earthquakes  ISSN: 0970-9983	Ritwik Das, Ritesh Kant Gupta and <b>Hirok Chaudhuri</b>	Journal of the Instrument Society of India Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=4900152808&amp;tip=sid">https://www.scimagojr.com/journalsearch.php?q=4900152808&amp;tip=sid</a>	Vol. 46, (1), 2016	47-51
<b>2015</b>				
Simple instrumentation for the study of complex earthquake precursors  ISSN: 0970-9983	Ritesh Kant Gupta and <b>Hirok Chaudhuri</b>	Journal of the Instrument Society of India Q2 <a href="https://www.scimagojr.com/journalsearch.php?q=4900152808&amp;tip=sid">https://www.scimagojr.com/journalsearch.php?q=4900152808&amp;tip=sid</a>	Vol. 45, (4), 2015	223-227
<b>2014</b>				
Multifractal Detrended Fluctuation Analysis of Seismic Induced Radon-222 Time Series	Chiranjib Barman, <b>Hirok Chaudhuri</b> , Debasis Ghose, Argha Deb, Bikash Sinha	Journal of Earthquake Science Q3 <a href="https://www.scimagojr.com/journalsearch.php?q=17300154921&amp;tip=sid">https://www.scimagojr.com/journalsearch.php?q=17300154921&amp;tip=sid</a>	Vol. 1, 2014	1-21
<b>2013</b>				

Multi-parametric and Multi-station Facility for Earthquake Precursory Study ISSN 2320 - 6217	<b>Hirok Chaudhuri</b>	Bhoo-Kampan, (Newsletter of Indian Society of Earthquake Science)	Vol. 2, Issue 2, 2013	1–2
<b>2007</b>				
Implications of geochemical precursory Signals vis a vis Earthquakes ISSN 1607-7962	N. K. Das, <b>H Chaudhuri</b> , R. K. Bhandari, D. Ghose, P Sen and B. Sinha	Geophysical Research Abstracts	Vol. 9, 2007	00102
Scaling and Crossover phenomena in pre-seismic helium signal ISSN 1607-7962	N. K. Das, <b>H Chaudhuri</b> , R. K. Bhandari, D. Ghose, P Sen and B. Sinha	Geophysical Research Abstracts	Vol. 9, 2007	00103

### Books/Monographs/Book chapters written:

Title	Author's Name	Publisher	Vol. No. (Year), Page Nos.
<b>2024</b>			
<b>Title:</b> Critical Assessment of Groundwater Overflow Zone for Sustainable Management in North East India <b>Name of the Book:</b> BRICS Countries: Sustainable Water Resource Management and Pollution Control: Challenges and Opportunities. <b>Eds:</b> Yiping Li, Hirok Chaudhuri, Otto Corrêa, Rotunno Filho, Natalia Guseva, Faizal Bux ISBN No. 978-981-99-9580-6 doi.org/10.1007/978-981-99-9581-3	Malabika Biswas Roy, Jayanta Debbarma, Sudipa Halder, Pankaj Kumar Roy, Supriya Pal, Hirok Chaudhuri, Mrinal Kanti Mondal	Springer Nature Singapore	PP 91-109 2024
<b>Title:</b> Performance Evaluation of Seismic Resisting Potential of Geo-Composite Liner in Waste Containment Structures–Some Case Studies <b>Name of the Book:</b> BRICS Countries: Sustainable Water Resource Management and Pollution Control: Challenges and Opportunities. <b>Eds:</b> Yiping Li, Hirok Chaudhuri, Otto Corrêa, Rotunno Filho, Natalia Guseva, Faizal Bux ISBN No. 978-981-99-9580-6 doi.org/10.1007/978-981-99-9581-3	Supriya Pal, Avishek Adhikary, Hirok Chaudhuri, Mrinal Kanti Mandal, Kashyap Kumar Dubey, Pankaj Kumar Roy, and Malabika Biswas Roy	Springer Nature Singapore	PP 111-117 2024
<b>Title:</b> Study on Photocatalyst for Removal of Organic Pollutants from the Water of Damodar River, India <b>Name of the Book:</b> BRICS Countries: Sustainable Water Resource Management and Pollution Control: Challenges and Opportunities 978-981-99-9580-6 <b>Eds:</b> Yiping Li, Hirok Chaudhuri, Otto Corrêa, Rotunno Filho, Natalia Guseva, Faizal Bux ISBN No. 978-981-99-9580-6 doi.org/10.1007/978-981-99-9581-3	Kankana Seal, <b>Hirok Chaudhuri</b> , Soumen Basu, Mrinal Kanti Mandal, Supriya Pal, Kashyap Kumar Dubey, and Pankaj Kumar Roy	Springer Nature Singapore	PP 119-132 2024
<b>2023</b>			
<b>Title:</b> A study on the water pollution scenario of the Damodar river basin, India <b>Name of the Book:</b> Climate Change, Sustainable Development And Human Rights Issues & Challenges In India <b>Eds,</b> Susmita Dhar and Dr. Subir Kumar Roy ISBN: 978-81-19119-21-9	<b>Hirok Chaudhuri</b> , Kankana Seal, Rajalaxmi Nath	Satyam Law International, New Delhi	pp – 179-188, 2023
<b>Title:</b> Study on structural anisotropy and surface hydroxylation of nanorod units of triphase mesoporous TiO <sub>2</sub> for its application in			

<p>photocatalytic degradation of organic pollutants in wastewater  <b>Name of the Book:</b> Education in Chemical Science and Technology, Special Issue on: Emerging trends and application of green technologies for sustainable development (Green Tech – 2022)  <b>Eds:</b> Radha Das  doi.org/10.5281/zenodo.7805235</p>	<p><b>Hirok Chaudhuri,</b> Kankana Seal, Rajalaxmi Nath</p>	<p>Indian Chemical Society, Kolkata</p>	<p>Vol. 12, pp – 18-27, 2023</p>
<b>2022</b>			
<p><b>Title:</b> Membrane bioreactor for the treatment of emerging pharmaceutical compounds in a circular bioeconomy  <b>Name of the Book</b>  Biomass, Biofuels, Biochemicals  Circular Bioeconomy: Technologies for Waste Remediation  <b>Eds:</b> Sunita Varjani, Ashok Pandey, Mohammad J. Taherzadeh, Huu Hao Ngo, R.D. Tyagi  ISBN 9780323885119  doi.org/10.1016/B978-0-323-88511-9.00008-2</p>	<p>Punit Kumar, Mrinal Kanti Mandal, Supriya Pal, <b>Hirok Chaudhuri,</b> Ankush Kumar, Kashyap Kumar Dubey</p>	<p>Elsevier</p>	<p>pp 203-221, 2022</p>
<p><b>Title:</b> Wastewater treatment and sludge management strategies for environmental sustainability  <b>Name of the Book:</b> Circular Economy and Sustainability VOLUME2, Environmental Engineering  <b>Eds:</b> Dr. Alexandros Stefanakis and Dr. Ioannis Nikolaou  ISBN 978-0-12-821664-4  doi.org/10.1016/B978-0-12-821664-4.00027-3</p>	<p>Manisha Sharma, Ankush Yadav, Mrinal Kanti Mandal, Shailesh Pandey, Supriya Pal, <b>Hirok Chaudhuri,</b> Sandip Chakrabarti, and Kashyap Kumar Dubey</p>	<p>Elsevier</p>	<p>pp 97-112, 2022</p>
<b>2021</b>			
<p><b>Title:</b> "Quantitative approximation of geothermal potential of Bakreswar geothermal area in eastern India"  <b>Name of the Book:</b> "Geothermal Energy"  <b>Eds:</b> Dr. Basel Ismail  <b>ISBN:</b> 978-1-83969-235-2  DOI: 10.5772/intechopen.96367</p>	<p>Chiranjit Maji, Saroj Khutia, <b>Hirok Chaudhuri</b></p>	<p>Intech Open, London</p>	<p>pp 1-16, 2021</p>
<p><b>Title:</b> Water Pollution in Damodar River Basin- A statistical analysis  <b>Name of the Book:</b> "Advances in Water Resources Management for Sustainable Use": Lecture Notes in Civil Engineering  <b>Eds:</b> Roy Pankaj Kumar, Roy Malabika Biswas, Pal Supriya  <b>ISBN: 978-981-336-411-0</b></p>	<p>Trina Dutta1, <b>Hirok Chaudhuri,</b> and Chiranjit Maji</p>	<p>Springer, Singapore</p>	<p>Vol. 131, pp 187-215, 2021</p>
<b>2020</b>			
<p><b>Title:</b> Bioeconomy of municipal solid waste (MSW) using gas fermentation  <b>Name of the Book:</b> Current Developments in Biotechnology and Bioengineering: Resource Recovery from Wastes  <b>Eds:</b> Sunita Varjani, Ashok Pandey, Edgard Gnansounou, Samir Kumar Khanal, Sindhu Raveendran  <b>ISBN:</b> 978-0-444-64321-6</p>	<p>Khushboo, Ankush, Karuna Yadav, Mrinal Kanti Mandal, Supriya Pal, <b>Hirok Chaudhuri,</b> Kashyap Kumar Dubey</p>	<p>Elsevier</p>	<p>pp 289-304 2020</p>
<b>2016</b>			
<p><b>Title:</b> Linear and nonlinear analysis in exploration of geothermal resources for power generation  <b>Name of book:</b> Green Energy- Sustainable Environment, (Proceeding of the International Conference on Renewable Energy- Extension &amp; Outreach held at Department of Environmental Studies held at Visva-Bharati, Santiniketan, India, during March 20-21, 2016)</p>	<p>Chiranjit Maji, Ritesh Kant Gupta, Ritwik Das, Tapapriya Gupta, <b>Hirok Chaudhuri</b></p>	<p>Akshar Prakashni Publishers, ISBN: 978-81-922916-6-6</p>	<p>pp 102-115, 2016</p>

<b>Eds:</b> Shibani Chaudhury, Amit Kumar Hazra, Srinivasan Balachandran			
<b>Title:</b> Harnessing geothermal energy at Bakreswar geothermal area <b>Name of book:</b> Green Energy- Sustainable Environment (Proceeding of the International Conference on Renewable Energy- Extension & Outreach held at Department of Environmental Studies held at Visva-Bharati, Santiniketan, India, during March 20-21, 2016) <b>Eds:</b> Shibani Chaudhury, Amit Kumar Hazra, Srinivasan Balachandran ISBN: 978-81-922916-6-6	Tapapriya Gupta, Chiranjit Maji, Ritesh Kant Gupta, Ritwik Das, <b>Hirok Chaudhuri</b>	Akshar Prakashni Publishers,	pp 57-70, 2016
<b>2007</b>			
<b>Title:</b> “Radon and helium fluctuations prior to seismic events in thermal spring gas” <b>Name of book :</b> Electromagnetic Phenomenon Related to Earthquakes & Volcanoes International Workshop on Electromagnetic Studies Related to Earthquakes & Volcanoes held at RBS Engineering College, Agra during November 20-22, 2006 <b>Eds:</b> Birbal Singh ISBN: 978-81-7319-858-8	<b>Hirok Chaudhuri</b> , Nisith K. Das, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha	Narosa Publishing House,	pp 147-155, 2007
<b>Title:</b> “Observation of pre-seismic signals through geochemical monitoring <b>Name of book :</b> “Recent Development in Disaster Management” (Proceeding of the National Seminar on “Recent Development in Disaster Management: Indian Perspective” held at Suri Vidyasagar College, Suri, Birbhum, W.B. during November 24-25, 2006) <b>Eds:</b> Amiya Kr. Ghosh, Sabyasachi Raychaudhuri ISBN: 81-8064-137-6	<b>Hirok Chaudhuri</b> , Nisith K. Das, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha	Pragati Publication,	pp 67-75, 2007
<b>Title:</b> “Geo-chemical and Geophysical Techniques for Seismic Surveillance” <b>Name of book :</b> “Recent Development in Disaster Management” (Proceeding of the National Seminar on “Recent Development in Disaster Management: Indian Perspective” held at Suri Vidyasagar College, Suri, Birbhum, W.B. during November 24-25, 2006) <b>Eds:</b> Amiya Kr. Ghosh, Sabyasachi Raychaudhuri ISBN: 81-8064-137-6,	Nisith K. Das, <b>Hirok Chaudhuri</b> , Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha	Pragati Publication,	pp 60-66, 2007
<b>Title:</b> Nonlinear analysis of radon time series related to earthquake <b>Name of book :</b> “Modeling Critical and Catastrophic Phenomena in Geosciences” Lecture Notes in Physics <b>Eds:</b> Pratip Bhattacharyya, Bikas K. Chakrabarti DOI 10.1007/3-540-35375-5 17	N. K. Das, <b>H. Chaudhuri</b> , R. K. Bhandari, D. Ghose, P Sen and B. Sinha	Springer	Vol. 705, pp 481-490 2007

### Books Edited/Books Authored

Title	Authors/Editors	Publisher	Vol. No. (Year), Page Nos.
Name of the Book: BRICS Countries: Sustainable Water Resource Management and Pollution Control: Challenges and Opportunities 978-981-99-9580-6 Eds: Yiping Li, Hirok Chaudhuri, Otto Corrêa, Rotunno Filho, Natalia Guseva, Faizal Bux	Yiping Li, <b>Hirok Chaudhuri</b> , Otto Corrêa Rotunno Filho, Natalia Guseva, Faizal Bux	Springer Nature Singapore	PP 1-246 2024

**Products/Processes Development and Technology Transfer/Copyrights**

Sl. No.	Particulars	Names of the Group Members Involved	Date	Status	Remarks

NIL

**Detail of patents.**

Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/ Country	Status (Filed/Awarded)
Industrial and Mining Waste-Based Composite Material for Use as Base Course in Flexible Pavements and the Method of Production Thereof	Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, <b>Hirok Chaudhuri</b> , Arindam Karmakar	Application no:		Intellectual Property India	Filed:
Jute geotextile for overburden dump height increment with stability at open cast mines and method thereof	Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, <b>Hirok Chaudhuri</b> , Tapabrata chakraborty	Application no: 202431064290		Intellectual Property India	Filed: 26.08.2024
Nanotechnology based Jute Geotextile for pavement construction and method of production thereof	Sahinur Rahaman Mondal, Supriya Pal, Mrinal Kanti Mandal, Rajib Ghosh Chaudhuri, <b>Hirok Chaudhuri</b>	Application No.: 202331056396,		Intellectual Property India	Filed: 23.08.2023

**Papers publication in National/ International Conferences**

Title of paper	Co-author(s), if any	Name of the Conference (National/ International)	Date & year
<b>2024</b>			
Health risk assessment due to the presence of antibiotics in groundwater of India's Damodar river basin	Rajalaxmi Nath, <b>Hirok Chaudhuri</b>	First International Conference on Sustainable Technologies (ICST-2024) Venue- National Institute of Technology Durgapur, India	December 12 -14, 2024
Predicting Thunderstorm, Rainfall, and Temperature in Mega City Kolkata. Using Machine Learning Technique.	Debapriya Nandi, <b>Hirok Chaudhuri</b> , <b>Syantari Ghosh</b>	International Conference on Sustainable Technologies (ICST-2024) Venue- National Institute of Technology Durgapur, India	December 12 -14, 2024
Synthesis of Nd-doped TiO <sub>2</sub> photocatalyst for efficient removal of tetracycline antibiotic in wastewater under visible light irradiation	Rajalaxmi Nath, <b>Hirok Chaudhuri</b>	International Conference on Functional Materials (ICFM-2024) Venue-Material Science Centre, Indian Institute of Technology Kharagpur, India	January 9 -11, 2024

2023			
Health risk assessment due to gamma radiation exposure in Durgapur industrial zone and Bakreswar geothermal area, India.	Ankitas Dawn, Saroj Khutia, Chiranjit Maji, <b>Hirok Chaudhuri</b>	First International Conference on Radiation Awareness and Detection in Natural Environment  Venue- Dolphin (PG) Institute of Biomedical and Natural Sciences, Dehradun	March 2-4, 2023
Radiation profile mapping and health impact assessment due to <sup>222</sup> Rn exposure in Asansol mining zone.	Ankita Dawn, <b>Hirok Chaudhuri</b>	The Fifth International Conference on Application of Radioisotopes and Energetic Beams in Sciences, ARCEBS-2023 Venue -SKBU(Sidho Kanho Birsha University) Organized by SKBU in collaboration with International Atomic Energy Agency	January 31 - February 05, 2023
2022			
Exploring the nonlinear dynamics of thunderstorms by empirical mode decomposing method and its relation with climate change.	Debapriya Nandi, Chiranjit Maji, <b>Hirok Chaudhuri</b>	International Conference on Physics (ICP) The Pearl Hotel, Kolkata, Organized by ARSSS, Associated with IRAJ and ISSRD	14th November, 2022, Kolkata
Multifractal detrended fluctuation analysis for <sup>222</sup> Rn precursors for earthquakes	Premanshusekhar Dey, Chiranjit Maji, <b>Hirok Chaudhuri</b>	International Conference on Physics (ICP) The Pearl Hotel, Kolkata, Organized by ARSSS, Associated with IRAJ and ISSRD	14th November, 2022, Kolkata
Synthesis of mixed phase TiO <sub>2</sub> for treatment of organic pollutants in wastewater	Rajalaxmi Nath, Kanka Seal, <b>Hirok Chaudhuri</b>	International Conference on Physics (ICP) The Pearl Hotel, Kolkata, Organized by ARSSS, Associated with IRAJ and ISSRD	14th November, 2022, Kolkata
2021			
Trend analysis of precipitation under climate change scenario	Trina Dutta, <b>Hirok Chaudhuri</b>	"Climate change and disaster management" [Three days national conference cum training], 4 - 6 October, 2021, jointly organized by National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India and School of Law, Christ (Deemed to be University), Delhi	4 - 6 October, 2021,
Statistical study of thunderstorms during pre-monsoon	Debapriya Nandi, Atanu Nag, Saroj Khutia, <b>Hirok Chaudhuri</b>	"Climate change and disaster management" [Three days national conference cum training], 4 - 6 October, 2021, jointly organized by	4 - 6 October, 2021,

		National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India and School of Law, Christ (Deemed to be University), Delhi	
Synthesis of triphase mesoporous TiO <sub>2</sub> photocatalyst for degradation of organic pollutants in wastewater	Kankana Seal, <b>Hirok Chaudhuri</b> , Soumen Basu, Mrinal Kanti Mandal, Supriya Pal	International Conference - BRICS NUs: Water Resources and Pollution Treatment [WRPT-21], Organised by NIT Durgapur, IIT Kanpur and BRICS ITG	July 6-8, 2021
Radioactive survey on waterbodies of Durgapur industrial city, India	Suvashree Mukherjee, <b>Hirok Chaudhuri</b> , Mrinal Kanti Mandal, Supriya Pal		
Health risk assessment of toxic heavy metals in waterbodies of Durgapur Steel city, India	Kankana Seal, <b>Hirok Chaudhuri</b> , Sanhita Pal, Soumen Basu, Mrinal Kanti Mandal, Supriya Pal		
COVID 19: Blessings or hazard to the water quality	Trina Dutta, <b>Hirok Chaudhuri</b>		
Environmental Geotechnics: Some Case Studies	Avishek Adhikary, Ramiz Raja, Sahinur Rahaman Mondal, Supriya Pal <b>Hirok Chaudhuri</b> , Mrinal Kanti Mandal		
Water Resources and Pollution Treatment	Hirok Choudhuri	Environmental Awareness Campaign Srinkhala, Bahrain	June 30, 2021
Science and Litarature	Hirok Chaudhuri	“Sikarer Sandhaney” organized by Sabujer Avijan, Suri, Birbhum	February 19, 2021
Helium exploration in geothermal fields of India	Hirok Chaudhuri	Webinar on Geothermal Energy: Geothermal as a green energy : 5 <sup>th</sup> International Geothermal Conference 2020 Pandit Deendayal Petroleum University, Gandhinagar, Gujarat	January 21, 2021
<b>2020</b>			
Environmental Radioactivity and its applications for benefit of mankind	Hirok Chaudhuri	Brainware University, Kolkata	Oct 19, 2020
Research in BRICS Countries relating to water resources and water crisis	Hirok Chaudhuri	One week FDP on Facts and Facets of Environment : A Post COVID-19 Perspective, Organized by Department of Phys-Chem-Math-Hu, JIS College of Engineering	18-22 May, 2020
Research in BRICS Countries relating to water pollution treatment			
Presence of hazardous radioactive elements in geothermal water of Bakreswar spring ( <b>Full-length paper</b> )	<i>Chiranjit Maji</i> , Saroj Khutia, <b>Hirok Chaudhuri</b>	“Sustainable Water Resources Management under Changed Climate” organized by the School of	March 13-15, 2020



Pollution in Damodar River Basin- A statistical analysis ( <b>Full-length paper</b> )	Trina Dutta, <b>Hirok Chaudhuri</b> , <i>Chiranjit Maji</i>	Water Resources Engineering, Jadavpur University, Kolkata, Calcutta Women College, Kolkata and NIT Durgapur, and held at Jadavpur University, West Bengal (India)	
Synthesis of novel materials for degradation of phenolic compounds and antibiotics in water ( <b>Abstract</b> )	Hirok Chaudhuri		
Synthesis of UV-VIS enabled photocatalyst for degradation of Organic Pollutants of Damodar river water ( <b>Full-length paper</b> )	Suvashree Mukherjee, <b>Hirok Chaudhuri</b> , Mrinal Kanti Mandal, Supriya Pal,		
Health Hazard on the dwellers of Damodar River Basin due to radioactive radon-222 in water bodies.	Saroj Khutia, <b>Hirok Chaudhuri</b> , Chiranjit Maji, Kankana Seal, Suvashree Mukherjee		
Ground and Surface Water Survey of the Damodar Basin Dhanbad-Asansol-Durgapur Area, West Bengal, India	Sanhita Pal, Kankana Seal, Hirok Chaudhuri		
Quantitative approximation of geothermal potential of Bakreswar geothermal area through helium exploration study ( <b>Abstract</b> )	<i>Chiranjit Maji</i> , Saroj Khutia, <b>Hirok Chaudhuri</b>	4 <sup>th</sup> International Geothermal Conference 2020 held at Pandit Deendayal Petroleum University, Gandhinagar, India	January 21, 2020
Study on geothermal potential of Bakreswar hot spring through geochemical investigations ( <b>Abstract</b> )	<i>Hirok Chaudhuri</i>		
Cationic stabilization of highly plastic clayey soil under electric fields	Supriya Pal, Avishek Adhikary, Debanjali Hazra, Saptarshi Bhunia, <b>Hirok Chaudhuri</b> , Mrinal Kanti Mandal, Sun Zhanxue, Evgeniya Soldatova	International Conference on Water, Energy, and Environmental Sustainability (WEES) 2020 at NIT Durgapur, India in Collaboration with RMIT, Australia	13-15, January 2020
<b>2019</b>			
Signature of SOC in terrestrial helium emanation ( <b>Abstract</b> )	Saroj Khutia, <b>Hirok Chaudhuri</b> , <i>Chiranjit Maji &amp; Kankana Seal</i>	Conference on Nonlinear Systems and Dynamics (CNSD) 2019 held at IIT Kanpur	Dec. 12-15, 2019
Investigation on dynamics of Geothermal Reservoir by applying EMD Technique on Radon-222 gas expelled out of Bakreswar Hot Spring Vent ( <b>Abstract</b> )	Debadyuti Sinha, <i>Chiranjit Maji</i> , <b>Hirok Chaudhuri</b>	4 <sup>th</sup> Regional Science & Technology Congress (Wester Region), 2019 held at Burdwan University	Dec. 9-10, 2019
Measurement of gamma dose-rate in Durgapur industrial area and comparison of the same with Bakreswar geothermal area ( <b>Abstract</b> )	Debadyuti Sinha, Saroj Khutia, <i>Chiranjit Maji</i> , <b>Hirok Chaudhuri</b>	Environmental Radiation: Impact on Society and its Implications held at Jadavpur University	Nov. 15-16, 2019
Study on radioactive element radon-222 profile and few geochemical parameters in water bodies at Damodar river basin- Durgapur industrial zone, India ( <b>Full-length paper</b> )	Suvashree Mukherjee, Chiranjit Maji, Kankana Seal, Saroj Khutia, <b>Hirok Chaudhuri</b> , Mrinal Kanti Mandal, Supriya Pal, Sun Zhanxue	6 <sup>th</sup> International Symposium on Soil and Groundwater (SG-2019) at Shenzhen, China	Shenzhen, China , October 26-28, 2019

Geochemical aspects of ground and surface water at Damodar basin (Dhanbad-Asansol-Durgapur area), India <b>(Full-length paper)</b>	Kankana Seal, <b>Hirok Chaudhuri</b> , Soumen Basu, Mrinal Kanti Mandal, Supriya Pal, Sanhita Pal, Suvashree Mukherjee, Evgeniya Soldatova, Oleg Savichev		
Synthesis of Novel materials for degradation of phenolic compounds in industrial wastewater <b>(Abstract)</b>	Hirok Chaudhuri		
Scenario on water crisis, water pollution and wastewater treatment in BRICS nations <b>(Abstract)</b>	Hirok Chaudhuri	International Conference on green technologies, circular economy and restoration of cultural heritage,	RBS College Agra, November 08-29, 2019
Water Resources and Pollution Treatment in BRICS Nations <b>(Abstract)</b>	Hirok Chaudhuri	International Conference ICCAES 2019,	IEM, Kolkata, September 21, 2019
Water Pollution Treatment <b>(Abstract)</b>			
Water crisis and sustainable development <b>(Abstract)</b>			
Geothermal power potential of Bakreswar hot spring, West Bengal <b>(Abstract)</b>	Hirok Chaudhuri	Short Term Training Programmes (STTP) on Environmental crisis and sustainable development	Department of Chemistry, JIS Engineering College, September 2-7, 2019
Nonlinear analysis of radioactive data for earthquake precursor study <b>(Abstract)</b>			
Radioisotopes and controlled radiation for sustainable agriculture, food security and safety <b>(Extended Abstract)</b>	Hirok Chaudhuri	National Workshop on Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity and Food Safety	School of Chemical Engineering, Biotechnology and Food Technology, Haldia Institute of Technology, August 30 -31, 2019
Preliminary studies of surface water quality in Damodar River basin (West Bengal, India) <b>(Full Length Paper)</b>	Evgeniya Soldatova, Irina Ivanova, <b>Hirok Chaudhuri</b> , Svetlana Ulaeva, Oleg Savichev, Supriya Pal, Mrinal Kanti Mandal, Kashyap Kumar Dubey, Kankana Seal	International Symposium on Water-Rock Interaction	Tomsk Polytechnic University, Tomsk, Russia, July 21 – 26, 2019
Smart materials for energy harvesting <b>(Extended Abstract)</b>	Hirok Chaudhuri	SERB School on “Smart Energy Materials & Device”	Applied Physics Department, IIT ISM, Dhanbad, April 29-May 3, 2019
Comparison Study of Catalytic Activity of different morphology	<b>Hirok Chaudhuri</b> , Supriya Pal, Mrinal	Five Days Workshop on	March 25-29, 2019

of Tio <sub>2</sub> Based Photocatalyst for Wastewater Treatment ( <b>Abstract</b> )	Kanti Mandal, Kankana Seal	“Recent Trends On Remediation of Contaminated Water Bodies and Soil” organised by Centre for Research on Environment and Water (CREW) held at NIT Durgapur, Durgapur, India (International)	
Investigation on radioactive and geochemical profile of hydrothermal and ground water of Bakreswar (WB)-Tantloi (JH) geothermal area ( <b>Abstract</b> )	Chiranjit Maji, Saroj Khutia, <b>Hirok Chaudhuri</b>		
Impacts of Industrial Wastewater Contaminants in Durgapur City, West Bengal, India and Its Possible Remediation ( <b>Abstract</b> )	Kankana Seal, Soumen Basu, Mrinal Kanti Mandal, <b>Hirok Chaudhuri</b>		
Efficacy Assessment of Earthquake Resistant Geo-Composite Liner for Waste Containment Structures- Some Studies ( <b>Abstract</b> )	Supriya Pal, <b>Hirok Chaudhuri</b> , Mrinal Kanti Mandal, Avishek Adhikary, Kashwap Kumar Dubey		
Synthesis of Nitrogen Doped Mesoporous Tio <sub>2</sub> Using Inorganic Precursors and Solvothermal Process for Treatment of Organic Pollutants in Wastewater ( <b>Abstract</b> )	Indradev Kumar, Suvendu Kumar Mahto, Kankana Seal, Mrinal Kanti Mandal, Supriya Pal, <b>Hirok Chaudhuri</b>		
Electrokinetic Remediation of the Saline Soil to Remove Excessive Chloride Concentration from Soil ( <b>Abstract</b> )	Prerana Shinde, Mrinal Kanti Mandal, Supriya Pal, <b>Hirok Chaudhuri</b>		
Remote Sensing & GIS ( <b>Extended Abstract</b> )	Hirok Chaudhuri	Refresher Course	UGC-Human Resource Development Centre, The University of Burdwan, West Bengal, India on March 12, 2019
<b>2018</b>			
Synthesis of heterogeneous photocatalyst for degradation of organic contaminants in wastewater ( <b>Abstract</b> )	Kankana Seal, Soumen Basu, Mrinal Kanti Mandal, Hirok Chaudhuri	International conference on advanced technologies for industrial pollution control (ATIPC-2018)	December 17 – 19, 2018
Novel frontiers for integrated and sustainable technology solutions for organic wastewater treatment ( <b>Abstract</b> )	Hirok Chaudhuri, Supriya Pal, Mrinal Kanti Mandal, Soumen Basu, Kashwap Kumar Dubey, Kankana Seal	BRICS International Symposium on Water Environmental Protection and Water Resources Management held at Hohai University, Nanjing, China	December 4-7, 2018
Imprints of Nonlinearity in Radioactive Radon-222 expelled out of Bakreswar hot spring, India ( <b>Abstract</b> )	Chiranjit Maji, Nimagna Hazra, Animesh Datta, Saroj Khutia, <b>Hirok Chaudhuri</b>	Conference on Nonlinear Systems and Dynamics organized by Scholl of computation and Mathematics at Jawaharlal Nehru University, Delhi ( <b>International</b> )	October 11-14, 2018
Analysis of Parkinsonian Low Amplitude Tremor with the effect of Medication by Non-Linear signal analysis ( <b>Abstract</b> )	Meghla Maji, Chayanika Porel, <b>Hirok Chaudhuri</b> , A.N. Sekar Iyengar, M.S.Janaki		
Granulometric and chemical studies of industrial ash and slag wastes of the russian far east	A. Taskin, L. Alekseiko, H. Chaudhuri, S.	6th International Conference on Industrial and Hazardous Waste Management held at	September 4-7, 2018

(based on the example of chpp-2, vladivostok)	Ivannikov, O. Danilov, O. Elkin	Minoa Palace Resort, Chania in Western Crete, Greece during September 4-7, 2018 and organized by Technical University of Crete, University of Padua and Hamburg University of Technology	
<b>2017</b>			
An attempt to develop geothermal power plant at Bakreswar hot spring site India (Abstract)	Hirok Chaudhuri, Kankana Seal, Chiranjit Maji	World Multidisciplinary Earth Sciences Symposium-WMESS held at Prague (International)	September 11-15, 2017
Earthquake precursor study by nonlinear and statistical analysis (Abstract)	Kankana Seal, Hirok Chaudhuri	World Multidisciplinary Earth Sciences Symposium-WMESS held at Prague (International)	September 11-15, 2017
Bakreswar-Tantloi Geothermal Area – A Promising Geothermal Resource for Power Generation (Extended Abstract)	Hirok Chaudhuri, Chiranjit Maji, Kankana Seal	International Workshop “Shallow, sub-surface investigation for resource exploration and seismic hazard assessment” held at ISR, Gandhinagar, India (International)	January 19-20, 2017
Geothermal energy and helium from Bakreswar-Tantloi Geothermal Area (Abstract)	Hirok Chaudhuri, Kankana Seal, Chiranjit Maji	Platinum Jubilee Science Seminar of Suri Vidyasagar College, Suri Birbhum held at DRDA Hall, Suri, Birbhum, India (National)	January 14, 2017
<b>2016</b>			
Study on Geothermal Power Generation Techniques for Bakreswar-Tantloi Geothermal Area (Extended Abstract & Poster)	Chiranjit Majia, Ritwik Dasb, Kankana Seala, Keshav Kumar Jhaa, Rashmikanta, <b>Hirok Chaudhuria</b>	India International Science Festival-2016 (National)	December 7-11, 2016
Degradation of Phenolic Compounds in Wastewater under Solar Radiation through Advanced Oxidation Process using Hetero-Structured TiO <sub>2</sub> Nanotubes (Extended Abstract)	Hirok Chaudhuri, Mrinal Kanti Mandal, Supriya Pal, Kashyap Dubey, Shailes Pandey, Sumanta Rakshit	International Scientific Practical Conference “BRICS Water Forum” held at Higher School of Economics, Moscow, Russia (International)	September 29-30, 2016
Study on geothermal power generation techniques related to Bakreswar-Tantloi geothermal area (Extended Abstract)	Ritwik Das, Ritesh Kant Gupta, Tapapriya Gupta, Chiranjit Maji, <b>Hirok Chaudhuri</b>	International Conference on Renewable Energy-Extension & Outreach held at Department of Environmental Studies Visva-Bharati, Santiniketan, India (International)	March 20-21, 2016
India’s Geothermal Power Programme–Scientific and Technical aspects and future plan (Extended Abstract)	Hirok Chaudhuri	Renewable Energy Materials and Technology in Academia and Industry held at Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand (National)	March 01-02, 2016

Frequency Analysis of Complex Earthquake Precursory Signals (Abstract & Poster)	Ritesh Kant Gupta, Chiranjit Maji, Ritwik Das, Tapapriya Gupta, Rashmikant, <b>Hirok Chaudhuri</b>	International Conference on 4 <sup>th</sup> Complex Dynamical Systems and Application (CDSA 2016), held at NIT Durgapur. (International)	February 15-17, 2016
Multifractal Detrended Fluctuation Analysis of Natural Gas Emission from Hot Springs (Abstract & Poster)	Ritesh Kant Gupta, Biva Sharma, Chiranjit Maji, Tapapriya Gupta, <b>Hirok Chaudhuri</b>	International Conference on 4 <sup>th</sup> Complex Dynamical Systems and Application (CDSA 2016), held at NIT Durgapur. (International)	February 15-17, 2016
Wavelet in study of Earthquake Precursory Signals (Abstract & Poster)	Ritwik Das, Ritesh Kant Gupta, Tapapriya Gupta, Chiranjit Maji, <b>Hirok Chaudhuri</b>	International Conference on 4 <sup>th</sup> Complex Dynamical Systems and Application (CDSA 2016), held at NIT Durgapur. (International)	February 15-17, 2016
Recurrence Analysis of Geochemical Signal Recorded at Mud Volcano, Andaman Islands, India (Abstract & Poster)	Soumya Mukherjee, Kankana Seal, <b>Hirok Chaudhuri</b>	International Conference on 4 <sup>th</sup> Complex Dynamical Systems and Application (CDSA 2016), held at NIT Durgapur. (International)	February 15-17, 2016
<b>2015</b>			
Geothermal Potential at Bakreswar-Tantloi Geothermal Area, West Bengal-Jharkhand: A Promising Green Energy Resources (Full Paper published in the proceedings of India International Science Festival-2015 )	Ritesh Kant Gupta, Tapapriya Gupta, Ritwik Das, Chiranjit Maji, <b>Hirok Chaudhuri</b>	India International Science Festival-2015, held at IIT Delhi (National)	December 04-08, 2015
Earthquake Precursory Signals at Tatta Pani Hot Spring Site, J&K (Abstract)	<b>Hirok Chaudhuri</b>	Earthquake Hazard: Basic Approaches, Field Investigations and Modeling, held at Vaishno Devi University, Katra, Jammu & Kashmir (International Conference)	November 10-16, 2015
Nonlinearity in Earthquake Precursory Signals (Abstract)	<b>Hirok Chaudhuri</b>	International Conference: 7 <sup>th</sup> Dresden Symposium- Hazard Detection and Management held at Dresden University of Technology and SARAD GmbH, Germany (International)	August 31, 2015- September 04, 2015
Noble Gas Helium – A Tool for Earthquake Precursors (Abstract)	Kankana Seal and <b>Hirok Chaudhuri</b>	International Conference: 7 <sup>th</sup> Dresden Symposium- Hazard Detection and Management held at Dresden University of Technology and SARAD GmbH, Germany (International)	August 31, 2015- September 04, 2015
Non-Linear Analysis of Earthquake Precursors (Abstract & Poster)	Biva Sharma and <b>Hirok Chaudhuri</b>	Time Series Analysis Workshop, Indo-US Science & Technology Programme held at IISER Pune (International)	May 25-30, 2015
Helium from geothermal sources <b>Full Paper</b>	<b>Hirok Chaudhuri</b> , Bikash Sinha,	World Geothermal Congress 2015	April 19-25, 2015

Published in the proceedings of World Geothermal Congress 2015)	D. Chandrasekharam	held at Melbourne, Australia <b>(International)</b>	
Exploration of Helium and Geothermal Power <b>(Extended Abstract)</b>	Hirok Chaudhuri	National Training Programme on Advances in New and Renewable Energy Materials and Technology held at Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand, India <b>National)</b>	March 23 to 27, 2015
Nuclear Renaissance in India <b>(Extended Abstract)</b>	Hirok Chaudhuri	National Training Programme on Advances in New and Renewable Energy Materials and Technology held at Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand, India <b>National)</b>	March 23 to 27, 2015
Measurement techniques of lighter and heavier compositions of a liquid or gas sample <b>(Abstract)</b>	Hirok Chaudhuri	Short-Term course on "Experimental Techniques for Material Characterization (ETMC-2015) held at NIT Durgapur, India <b>National)</b>	February 27 to March 3, 2015
<b>2014</b>			
Geochemical Precursor for Earthquake <b>(Abstract)</b>	Hirok Chaudhuri	International Conference on Decision Support Systems for Early Warning and Mitigation of Disaster held at NIT Durgapur, WB <b>(International)</b>	December 28-30, 2014
Nonlinear technique adopted in earthquake precursor study <b>(Abstract)</b>	Biva Sharma, Ritesh Kant Gupta, Kankana Seal, Samapan Bhadury, Ritwik Das , <b>Hirok Chaudhuri</b>	International Conference on Decision Support Systems for Early Warning and Mitigation of Disaster held at NIT Durgapur, WB <b>(International)</b>	December 28-30, 2014
Helium Crisis <b>(Abstract)</b>	Samapan Bhadury Ritwik Das, Kankana Seal, Biva Sharma, Ritesh Kant Gupta, <b>Hirok Chaudhuri</b>	International Conference on Decision Support Systems for Early Warning and Mitigation of Disaster held at NIT Durgapur, WB <b>(International)</b>	December 28-30, 2014
Geochemical Precursor for Earthquake <b>(Abstract)</b>	Kankana Seal Ritesh Kant Gupta, Ritwik Das, Biva Sharma, Samapan Bhadury, <b>Hirok Chaudhuri</b>	International Conference on Decision Support Systems for Early Warning and Mitigation of Disaster held at NIT Durgapur, WB <b>(International Conference)</b>	December 28-30, 2014
Analysis of earthquake precursors through FFT techniques <b>(Abstract)</b>	Ritesh Kant Gupta Ritwik Das, Kankana Seal, Biva Sharma, Samapan Bhadury, <b>Hirok Chaudhuri</b>	International Conference on Decision Support Systems for Early Warning and Mitigation of Disaster held at NIT Durgapur, WB <b>(International Conference)</b>	December 28-30, 2014
Analysis of earthquake through wavelet techniques <b>(Abstract)</b>	Ritwik Das	International Conference on Decision Support Systems for Early Warning and	December 28-30, 2014

	Ritesh Kant Gupta, Samapan Bhadury, Kankana Seal, Biva Sharma, <b>Hirok Chaudhuri</b>	Mitigation of Disaster held at NIT Durgapur, WB (International Conference)	
Exploring Geothermal Power at Bakreswar (Abstract)	Hirok Chaudhuri	Short-Term Course on "Recent Trends in Materials Science and Electronics (RTMSE – 2014) held at NIT Durgapur, India (National)	December 10 to 14, 2014
Essence of EMD & HHT in analyzing Seismo- geochemical precursory signal (Abstract)	Chiranjib Barman, <b>Hirok Chaudhuri</b> , Debasis Ghose, Bikash Sinha	Advances in Earthquake Science (AES III, 2014) held at ISR , Gandhinagar, Gujarat (International Conference)	January 4-6, 2014
<b>2013</b>			
Exploration of Earthquake Precursory Signals by Non-linear Techniques (Abstract)	Hirok Chaudhuri	8 <sup>th</sup> Conference on Nonlinear Systems and Dynamics held at Indore IIT, Indore (International Conference)	December 11- 14, 2013
Analysis of radon-222 time series data using Empirical Mode Decomposition based Hilbert Huang Transform (Abstract)	Chiranjib Barman, <b>Hirok Chaudhuri</b> , Debasis Ghose, Bikash Sinha	8 <sup>th</sup> Conference on Nonlinear Systems and Dynamics held at Indore IIT, Indore (International Conference)	December 11- 14, 2013
Nonlinear time series analysis of geochemical emissions using recurrence plots (Abstract)	Vramari Mitra, A.N. Sekar Iyengar, <b>Hirok Chaudhuri</b>	8 <sup>th</sup> Conference on Nonlinear Systems and Dynamics held at Indore IIT, Indore (International Conference)	December 11- 14, 2013
Geothermal Potential of Bakreswar-Tantloi hydrothermal system (Abstract)	<b>Hirok Chaudhuri</b> and Bikash Sinha	International Conference: "Geothermal Energy Initiative & Development - One day seminar on issues & challenges in geothermal energy" held at Pandit Deendayal Petroleum University, Gujarat (International Conference)	July 26, 2013.
Study of Geochemical Precursors for Earthquakes in Indian Geothermal fields (Abstract)	<b>Hirok Chaudhuri</b> , Chiranjib Barman, Debasis Ghose, Prasanta Sen and Bikash Sinha	7th Dresden Symposium "Hazards - Detection and Management" held at Dresden, Germany (International Conference)	March 3-8, 2013
An Overview of Helium and Radon Release at Bakreswar and TattaPani Geothermal Areas (Abstract)	<b>Hirok Chaudhuri</b> , Chiranjib Barman, Debasis Ghose, Prasanta Sen and Bikash Sinha	Advances in Earthquake Science (AES II, 2013) held at ISR , Gandhinagar, Gujarat (International Conference)	February 1-2, 2013
<b>2012</b>			
Radon and Helium Studies as Earthquake Precursors in the Context of Indian Scenario (Abstract)	<b>Hirok Chaudhuri</b> , Chiranjib Barman, Debasis Ghose, Prasanta Sen and Bikash Sinha	National Conference on Natural Hazards and Mitigation held at Eshan College, Mathura, UP (National Conference)	December 4 - 5, 2012
Data automation software to monitor continuous and on-line signals for earthquake precursors (Abstract)	Chiranjib Barman, <b>Hirok Chaudhuri</b> , Debasis Ghose, Prasanta Sen and Bikash Sinha	National Conference on Natural Hazards and Mitigation held at Eshan College, Mathura, UP (National Conference)	December 4 - 5, 2012
Seismo-geochemical algorithm for earthquake precursor	<b>Hirok Chaudhuri</b> , Chiranjib Barman,	49th annual convention of Indian Geophysical Union	October 29-31, 2012

<b>(Abstract)</b>	A. N. Sekar Iyengar, Debasis Ghose, Prasanta Sen and Bikash Sinha,	(IGU) held at PDPU Gandhinagar <b>(National Conference)</b>	
Detection of earthquake precursors by wavelet analysis of seismo-geochemical signals <b>(Abstract)</b>	Chiranjib Barman, <b>Hirok Chaudhuri</b> , A. N. Sekar Iyengar	National Conference on Nonlinear Systems and Dynamics held at IISER Pune <b>(National Conference)</b>	July 12-15, 2012.
Power Spectrum analysis of multi-parameter gas-geochemical precursory signals of the Pakistan earthquake recorded at thermal spring emanation at Tatta Pani, Jammu & Kashmir, India <b>(Abstract)</b>	<b>Hirok Chaudhuri</b> , Chiranjib Barman, A. N. Sekar Iyengar, Debasis Ghose, Rakesh K. Bhandari, Prasanta Sen and Bikash Sinha	International Conference on Complex Dynamical System and Applications (CDSA – II) held at Presidency College, Kolkata <b>(International Conference)</b>	January 9-11, 2012
<b>2011</b>			
Study of multi-parameter gas-geochemical precursor signals of a distant earthquake recorded simultaneously at two thermal springs in India <b>(Abstract)</b>	<b>H. Chaudhuri</b> , D. Ghose, R. K. Bhandari, P. Sen, and B. Sinha,	International Symposium on The 2001 Bhuj Earthquake and Advances in Earthquake Science (AES I, 2011) held at Institute of Seismological Research (ISR), Gandhinagar, Gujarat <b>(International Conference)</b>	January 22 – 27, 2011.
<b>2010</b>			
Pre-seismic geo-chemical signatures to distant earthquakes <b>(Abstract)</b>	<b>Hirok Chaudhuri</b> , Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha,	International Workshop on Earthquake Precursors held at National Geophysical Research Institute (NGRI), Hyderabad <b>(International Conference)</b>	November 25-27, 2010.
Time series analysis of the Helium-Radon precursors observed simultaneously at two thermal spring sites in India before the distant 6.3M China earthquake <b>(Abstract)</b>	<b>Hirok Chaudhuri</b> , A. N. Sekhar Iyengar, Waseem Bari, Naseer Iqbal, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen, and Bikash Sinha	International Workshop on Seismo-electromagnetics and Atmospheric Science (IWSE-AS) held at RBS Engineering College, Agra <b>(International Conference)</b>	November 16-18, 2010.
<b>2008</b>			
Earthquake Precursor Study Through Time Series Analysis of Thermal Spring Emanated Radon and Gamma Signal <b>(Abstract)</b>	<b>H Chaudhuri</b> , S. Mir, W. Bari, N. Iqbal, N. K. Das, D. Ghose, P. Sen	National level Conference on Earthquake Prediction: Recent Developments & Challenges held at Kashmir University, Srinagar <b>(National Conference)</b>	August 06-07, 2008.
Earthquake Precursors – Indian Initiatives <b>(Abstract)</b>	Nisith K. Das, Amitava Sur, <b>Hirok Chaudhuri</b> , Rakesh K. Bhandari, Prasanta Sen, Debasis Ghose and Bikash Sinha	National level Conference on Earthquake Prediction: Recent Developments & Challenges held at Kashmir University, Srinagar <b>(National Conference)</b>	August 06-07, 2008.
Earthquake precursor study through time series analysis of thermal spring emanated radon and gamma signal at Tatta Pani Site, Rajouri <b>(Abstract)</b>	S. Mir, <b>H. Chaudhuri</b> , W. Bari, N. Iqbal	National level Conference on Earthquake Prediction: Recent Developments & Challenges held at Kashmir University, Srinagar <b>(National Conference)</b>	August 06-07, 2008.
<b>2007</b>			



Observation of pre-seismic signals through monitoring of radon profile (Full paper published in the proceedings of National Symposium on Radiation Physics – 17)	<b>Hirok Chaudhuri</b> , Nisith K. Das, Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha,	National Symposium on Radiation Physics – 17 Saha Institute of Nuclear Physics, Kolkata (National Conference)	November 14-16, 2007
<b>2006</b>			
Probing Radon and Gamma for Detection of Precursory Signature to Earthquake (Full Paper published in the proceedings of National Symposium on Radiation Physics – 16)	Nisith K. Das, <b>Hirok Chaudhuri</b> , Rakesh K. Bhandari, Debasis Ghose, Prasanta Sen and Bikash Sinha	National Symposium on Radiation Physics – 16 held at Menakshi Women College, Chennai (National Conference)	January 18-20, 2006.

### Publication of Research Brochures and Instrumental Operating Manuals

- Geochemical Precursory Signals for Earthquake Prediction, 2010
- Earthquake Prediction : Gas Geochemical Approach, 2009
- Extraction of Helium from Natural Gas, 2008
- Operating Manual for PSA based Helium Plant for extraction of Helium from Natural Gas, 2008

### Coverage of Research Activities in News Media (Electronic Media and News Paper) to Popularize science and Technology

(Total number – 24)

1. News Channels	:	National - 2 Regional – 8 Local - 2
2. News Cover in the News Papers	:	National – 3 Regional – 5 Local - 4

#### Topic covered:

- Wastewater Treatment,
- Geochemical Precursors for Earthquakes
- Helium Crisis in India and its exploration technique
- Geothermal Power
- Science Museum

**Electronic Media** : DD Bangla (Prasar Bharati),  
E TV Bangla,  
Zee News,  
Channel 10,  
Tara News,  
Kolkata TV etc.

**News Papers** : The Times of India,  
The Telegraph,  
The Hindu,  
The Statesman,  
Deccan Chronicle,  
Sambad,  
Bartaman,  
Ekdin,  
Naya Prajanma,  
Eaisamai etc.

### Ph. D. degree awarded and on-going doctoral programme:

Name of Student	Year	Title of the Dissertation	Status (Completed /Ongoing)
Mr. Swarupananda Paramanik (Regular/Full Time Phd Student) Roll No.24CREW11001	Date of Joining 31/07/2024	Proposed Title: Investigation on radon profile in the environment of the Damodar river basin	On-going (jointly with Prof. R.N. Saha)

Reg No. Institute Scholar			
Mr. Rahul Rewani (Regular/Full Time Phd Student) Roll No.24PH1105 Reg No. Institute Scholar	Date of Joining 31/07/2024	Proosed Title: Investigation on Synthesis and characterization of High- Grade Geopolymer using Fly ash.	On-going
Miss Rupsa Biswas (Regular / Full Time Ph D Student) Roll No. 23CREW1101 Registration No. UGC Fellow	Date of joining 23/06/2023	Proposed Title: Microplastic: Transport and riddance through various bioremediation processes	On-going (jointly with Prof. Gopinath Haider)
Miss Rajalaxmi Nath (Regular / Full Time Ph D Student) Roll No. 21PH1105 Registration No. 23RPH057 Institute Scholar	Date of joining 21/10/2021	Title : Investigation on antibiotic pollutants at the Damodar river basin and the state-of-the-art development of nanomaterials for the degradation of antibiotics (Pre-registration talk has been given on 07.08.2023, Date of registration:07.08.2023	On-going
Miss Debapriya Nandi Professional Ph D student Roll No. 21PH1501 Registration No. 23RPH058	Date of joining 21/10/2021	Title : Investigation on climate science data using statistical physics and nonlinear analysis (Pre-registration talk has been given on 07.08.2023, Date of registration: 07.08.2023	On-going (jointly with Dr. Sayantari Ghosh)
Mrs. Ankita Dawn Professional Ph D student Roll No. 20PH1505 Registration No. 22RPH011	Date of joining: 10.10.2020	<b>Title</b> : Investigation on the environmental radioactivity profile of Asansol-Durgapur industrial zone and Bakreswar hot spring by experimental techniques and statistical approaches (Pre-registration talk has been given on 18.01.2022, Date of registration: 07.03.2022) Pre-submission talk has been given on 6 <sup>th</sup> Aug, 2024. Thesis submitted on 8 <sup>th</sup> November ,2024) <b>Thesis defended on</b>	On-going Thesis Submitted
Mr. Saroj Khutia (Regular / Full Time Ph D Student) Roll No. PH171105 Registration No. 19RPH002 Institute Scholar	Date of joining: 28.07.2017	<b>Title</b> : Investigation on physics of nonlinearity of earth system data (Pre-registration talk has been given on November 22, 2018, Date of registration: November 27, 2018 Pre-submission talk has been given on May 4, 2023. Thesis submitted on August 4, 2023) Thesis defended on 19 <sup>th</sup> September, 2024.	Completed
Mr. Chiranjit Maji (Regular / Full Time Ph D Student) Roll No. 15/PH/1102 Registration No. NITD/PhD/PH/2016/00755 UGC Fellow	Date of joining: 23. 02. 2015	<b>Title</b> : Study on geothermal activities by experimental techniques and nonlinear approaches Date of registration: July 04, 2016) (Pre-submission talk has been given on July 11, 2019) Thesis defended on 30.07.2020	Completed

### Details of UG and PG students guided / Ongoing:

PG

M. Sc.

Type	Name with details	Completed/ Ongoing	Other guide if any	Thesis topic
M.Sc. in Physics	Raushan Kumar (Session 2024-2025)	On-Going	No	Green synthesis of Ag-doped TiO <sub>2</sub> using Neem leaf.
M.Sc. in Physics	Vishal Kumar (Session 2022-2024)	Completed	No	Synthesis and analysis of Ag-doped TiO <sub>2</sub> for removal of an antibiotic

				tetracycline by using photocatalysis method
M.Sc. in Physics	Ashish Nayak (Session 2022-2024)	Completed	No	Optimization of calcination temperature of TiO <sub>2</sub> for photocatalytic degradation of tetracycline antibiotic
M. Sc. in Physics	Mahe Taiba Hussain (Session 2021-2023)	Completed	No	Synthesis of Nd doped TiO <sub>2</sub> for the removal of antibiotic tetracycline by photocatalysis method
M. Sc. in Physics	Debajyoti Roy (Session 2021-2023)	On-going	No	Photocatalytic degradation of organics using TiO <sub>2</sub>
M. Sc. in Physics	Mr. Saikat Mandal of Physics Dept., NIT Durgapur (Session 2020-2022)	Completed	No	Time Series Analysis Using Nonlinear Methodology for Earthquake Precursor Signals, at Bakreswar, West Bengal, India
M. Sc. in Geothermal Energy Technology	Raj Ranjan Srivastava, Dedan Kimathi University of Science & Technology, Kenya	Completed	No	A study on potential direct use applications and power generation at Bakreswar geothermal field, India”
M. Sc. in Physics	Richardson Sorokhaibam of Physics Dept., NIT Durgapur (Session 2019-2021)	Completed	No	Study of TiO <sub>2</sub> nanomaterial for the photocatalytic degradation of organic pollutants in wastewater
M. Sc. in Physics	Miss Debadyuti Sinha of Physics Dept., Kazi Nazrul University (Session 2018-2020)	Completed	No	Monitoring of environmental radioactivity
M. Sc. in Physics	Miss Suvashree Mukherjee of Physics Dept., NIT Durgapur (Session 2017-2019)	Completed	No	Study on radon concentration in and around Durgapur
M. Sc. in Physics	Mr. Anant Sukla of Physics Dept., NIT Durgapur (Session 2017-2019)	Completed	No	Radon profile determination of Durgapur region
M. Sc. in Physics	Mr. Sanjeev Kumar of Physics Dept., NIT Durgapur (Session 2016-2018)	Completed	No	A theoretical study towards harnessing of geothermal power from low enthalpy geothermal region Bakreswar
M. Sc. in Env. Sci.	Miss. Armaya Sikdar of Dept. of Environmental Science, University of Calcutta (Session 2015-2017)	Completed	No	Feasibility study on geothermal power plant at Bakreswar hot spring site
M. Sc. in Physics	Mr. Anurag Gartia of Physics Dept., NIT Durgapur (Session 2015-2017)	Completed	No	Estimation of geothermal potential at Bakreswar geothermal area
M. Sc. in Physics	Mr. Soumya Mukherjee of Physics Dept., NIT Durgapur (Session 2014-2016)	Completed	No	Investigation on nonlinearity in Earthquake Precursory signal
M. Sc. in Physics (Summer Project)	Mr. Somen Adhikary (DST INSPIRE Scholar under SHE Programme) of Physics Dept., NIT Durgapur (Session 2014-2016)	Completed	No	Mud Volcano Gamma Burst: A Possible Precursor to Earthquake
M. Sc. in Physics (Summer Project)	Mr. Soumya Mukherjee (DST INSPIRE Scholar under SHE Programme) of Physics Dept., NIT Durgapur (Session 2014-2016)	Completed	No	Imprints of Gamma Dose Rate at Geothermal and Non-geothermal Provinces”
M. Sc. in Physics	Mr. Samapan Bhadury of Physics Dept., NIT Durgapur (Session 2013-2015)	Completed	No	Origin of Helium – 3 in the earth’s interior”
M. Sc. in Physics	Miss. Biva Sharma of Physics Dept., NIT Durgapur (Session 2013-2015)	Completed	No	Application of nonlinear techniques in geochemical and geophysical precursors for earthquakes
M. Sc. in Env. Sci.	Mr. Avilash Mishra of Env. Sci. Dept. Visva Bharati, Shantiniketan (Session 2011-2013)	Completed	Yes	Monitoring Earthquake Precursors by Geochemical Techniques
M. Sc. in Env. Sci.	Miss Priyanka Mahato of Env. Sci. Dept. Visva Bharati, Shantiniketan (Session 2011-2013)	Completed	Yes	Harnessing Geothermal Energy

#### M. Tech.

Type	Name with details	Completed/Ongoing	Other guide if any	Thesis topic
M. Tech.	Vikash Vaibhav of Mathematics Dept., NIT Durgapur (Session 2024 – 2025)	Ongoing	Dr. Anita Pal	Weather Forecast of Kolkata using LSTM model and Monte Carlo simulation.

M. Tech. in AMST	Himanshu Shekhar of Physics Dept., NIT Durgapur (Session 2020-2022)	Completed	No	Study on the effects of structural and morphological parameters on photocatalytic activity of titanium dioxide-based materials
M. Tech. in AMST	Mr. Abhishek U. Nimje of Physics Dept., NIT Durgapur (Session 2018-2020)	Completed	No.	Synthesis of silver Doped TiO <sub>2</sub> for photocatalytic degradation of organic pollutants
M. Tech. in AMST	Mr. Indradev kumar of Physics Dept., NIT Durgapur (Session 2017-2019)	Completed	No.	Synthesis of Nitrogen Doped TiO <sub>2</sub> for photocatalytic degradation of organic pollutants
M. Tech. in AMST	Mr. Suvendu Kumar Mahato of Physics Dept., NIT Durgapur (Session 2017-2019)	Completed	No.	Study of Phosphorous Doped TiO <sub>2</sub> Photo-catalytic degradation of toxic organic compounds for wastewater management
M. Tech. in AMST	Miss Prerana Shinde of Physics Dept., NIT Durgapur (Session 2017-2019)	Completed	No.	Electrokinetic Remediation of the Soil to Remove Excessive Chloride from Soil
M. Tech. in AMST	Mr. Kesav Kumar Jha of Physics Dept., NIT Durgapur (Session 2015-2017)	Completed	No.	Modeling of geothermal turbine in perspective of Bakreswar geothermal area
M. Tech. in AMST	Mr. Reshmikant of Physics Dept., NIT Durgapur (Session 2015-2017)	Completed	No.	Earthquake precursor study by geo-chemical approach and temporal variation of radon concentration with metrological parameter
M. Tech. in AMST	Mr. Ritesh Kant Gupta of Physics Dept., NIT Durgapur (Session 2014-2016)	Completed	No.	Application of geophysical and geochemical study in helium exploration at Bakreswar geothermal area”
M. Tech. in AMST	Mr. Ritwik Das of Physics Dept., NIT Durgapur (Session 2014-2016)	Completed	No.	“Geothermal Exploration at Bakreswar Geothermal Area”
M. Tech. in AMST	Miss Kankana Seal of Physics Dept., NIT Durgapur (Session 2013-2015)	Completed	No	Purification of hydrothermal helium through adsorption technique

#### Intern

Type	Name with details	Completed/Ongoing	Other guide if any	Thesis topic
Intern (Undergraduate)	Mahipal Singh (S.S Jain Subodh P.G(Auto) College, Jaipur) (2023)	Ongoing	No	Waste Water Treatment
Intern (Undergraduate)	Fozia yasmin (Salipur Autonomous College, Salipur) (2023)	Ongoing	No	Waste Water Treatment
Intern (Undergraduate)	Poulami Panja ( Culcutta University) (2024)	Completed	No	TiO <sub>2</sub> as photocatalyst and its theoretical study on optimization on calcination temperature.
Intern (Postgraduate)	Shiladitya Bhattacharyya (Post graduate in Physics from BIT Meshra) (2022)	Completed	No	Signature of Self Organized Criticality in terrestrial degassing of noble gases
Intern (Post graduate)	Raj Ranjan Srivastava, Dedan Kimathi University of Science & Technology, Kenya (2022)	Completed	No	Study for Geothermal Space Heating Application at Bakreswar, West Bengal, India
Intern (undergraduate)	Shoham De NIST International School, Bangkok, Thailand (2022)	Completed	No	Measurement of environmental Radon-222 concentration in Damodar Basin, West Bengal, India
Intern (undergraduate)	Shirsha Bhattacharyya (Amity Institute of Neuropsychology and Neurosciences, Amity University, Noida) (2022)	Completed	No	Non-linear Analysis of EEG Signals
B. Tech. (Summer Project)	Miss. Sanghita Pal, Department of MME, NIT Durgapur (Session 2016-2020)	Completed	No	Water pollution profile of Durgapur city.
B. Tech.	Miss Anandi Batabayal, Department of Biotechnology, NIT Durgapur (Session 2016-2020)	Completed	No	Empirical mode decomposition of ECG signals

(Summer Project)				
B. Tech. (Summer Project)	Mr. Pratay Sengupta, Department of Biotechnology, NIT Durgapur (Session 2016-2020)	Completed	No	Empirical mode decomposition of EEG signals
B. Tech. (Summer Project)	Mr. Nimagna Hazra Department of ECE, NIT Durgapur (Session 2016-2020)	Completed	No	Fast Fourier Transform of earth tides
B. Tech. (Summer Project)	Mr. Animesh Dutta Department of ECE, NIT Durgapur (Session 2016-2020)	Completed	No	Fast Fourier Transform of geophysical signals
B. Tech. (Summer Project)	Mr. Soukhin Das of Department of Electrical Engineering, NIT Durgapur (Session 2015-2019)	Completed	No	Simulation study for an automated and energy efficient electrical appliances for housing complex using proteus.
B. Tech. (Summer Project)	Mr. Soaham Ganguly of Department of Electrical Engineering, KIT, Bhubaneswar (Session 2015-2019)	Completed	No	Feasibility study of an automated and energy efficient electrical appliances applicable for housing complex using proteus simulation software
B. Tech. (Summer Project)	Meghla Maji, Department of ECE, NIT Durgapur (Session 2015-2019)	Completed	No	Multifractal detrended fluctuation analysis of geochemical data
B. Tech. (Summer Project)	Chayanika Porel, Department of ECE, NIT Durgapur (Session 2015-2019)	Completed	No	Multifractal detrended fluctuation analysis of geophysical data

### Worked as examiner of Ph D Thesis (External)

Name with details	Thesis topic
<b>Kumar Ashwani Kashyap</b> Registration No: Ph.D- 973/2019) <b>(External member of Ph D thesis Committee)</b>	Synthesis and characterization of modified CDS Nanoparticles for optoelectronic devices
Kelvyben Pradipkumar Dalsania (Roll No: 23RPH001) Pandit Deendayal Energy University <b>(External member of Ph D thesis Committee)</b>	Application of Integrated Geophysical Techniques for Groundwater Exploration in Conductive Zones of Gujarat, India
Mr. Bikash Sadhukhan, Dr. B. C. Roy Engineering College, Durgapur, MAKAUT, WB (2020-2021) <b>(External member of Ph D thesis Committee)</b>	Investigating the relationship between occurrences of earthquake and global temperature fluctuation
Debajyoti Saha of Saha Institute of Nuclear Physics, Kolkata, India (2018)	Investigation on complex dynamics and nonlinearity in the self and externally excited glow discharge plasma
Andrey V. Taskin of Far Eastern Federal University, Russia (2018)	Chemical-engineering Solutions for Integrated Processing of Industrial Ash and Slag Wastes

### Worked as the examiner of M. Tech. Thesis (External)

Name with details	Thesis topic
Mr. SAMRAT BANERJEE of Water Resources & Hydraulic Engineering, Jadavpur University, Kolkata (2018-2020)	A STUDY ON OCCURRENCE OF ARSENIC IN WEST BENGAL AND ITS REMOVAL TECHNOLOGIES
Ms. PRITHAGNI PAUL of Water Resources & Hydraulic Engineering, Jadavpur University, Kolkata (2018-2020)	STUDY AND ASSESMENT OF PACKAGED DRINKING WATER QUALITY AND EFFECTIVENESS OF DOMESTIC WATER PURIFIERS

### Worked as Trainer for (Scientific and Technical Staff)

- (A) Worked as a trainer for 15 days training courses on “Theory and Practical on Experimental techniques for round the clock, online and continuous monitoring of gas-geochemical precursory signals for seismic events”. The courses were conducted at Geochemical Monitoring Laboratory, Bakreswar Thermal Spring Site, Bakreswar, W. B., India during the period 2006 – 2014.

Total no. of courses arranged	:	5
Total no. of trained persons	:	7

(B) Worked as a trainer for 2 days training course on “Operation of PSA Helium Plant for extraction of helium from natural gas”. The course was conducted at Helium Pilot Plant, ONGC - GCS, Kuthalam, Tamilnadu, India during the year 2008.

Total no. of courses arranged	:	1
Total no. of trained persons	:	3

## Details of Teaching:

### Academic responsibilities:

Deliver lectures for the students of B. Tech (different branches), students of M. Tech. in Advance Material Science & Technology, students of M. Sc. in Physics in different theory subjects. Also teach B. Tech (different branches), students of M. Tech. in Advance Material Science & Technology, students of M. Sc. in Physics in sessional classes (Laboratory based classes). Moreover, prepare materials for tutorial class and also course material related to the subjects that are taught in the above mentioned UG and PG courses. Conduct remedial classes and other special classes for B. Tech, M. Tech and M. Sc. students to motivate the students towards higher study in science and engineering. Moreover, assist the Department in formation of new and modification of existing Theory and Sessional courses related with Physics Department. In addition to that prepare question papers for mid-semester, end semester examinations, class tests and checks and scrutinizes the answer script of the same as well as the sessional notebooks and laboratory report files of the above mentioned Laboratory classes. Invigilation duty of the examinations conducted by the institutes for UG/PG students are also performed.

**Development of teaching material:** Prepared the syllabus and course material for the course entitled Nonlinear Dynamics (PH3102) (under the syllabus of M. Sc. Physics). Prepared the syllabus and course material and Lab Manuals for the course entitled Computational lab (PH2051) (under the syllabus of M. Tech. in Advanced Material Science and Technology)

### (A) U.G. Theory:

Course (number and name)	Credits	Co-instructors (if any)	No. of student registered	Course evaluation
Engineering Physics (PHC01)	03	Yes	110-120	Yes
Physics of Semiconductor Devices (PHC331) (for students of ECE and CSE)	03	Yes	90-100	Yes

### (B) U.G. Lab:

Course	Credits	Co-instructors (if any)	No. of student registered	Course evaluation
Physics Laboratory	01	Yes	50-60	Yes
Semiconductor Devices Laboratory (for ECE)	02	Yes	40-50	Yes
Semiconductor Physics Laboratory (for CSE)	02	Yes	40-50	Yes

### (C) P.G. Theory:

Course	Credits	Co-instructors (if any)	No. of student registered	Course evaluation
Analog and Digital Electronics (2015-2018)	04	No	15-20	Yes
Numerical and Nonlinear Analysis (2016-2018)[PH3102]	03	Yes	15-20	Yes
X-Rays and Structural Studies (Elective) (2015-2018)	04	No	05-10	Yes
NUCLEAR PHYSICS AND PARTICLE PHYSICS (PH2103) for M. Sc. in Physics)	04	Yes	15-20	Yes
X-ray Diffraction & Structure of Materials (PH9030) for M. Tech in AMST)	03	Yes	10-15	Yes
STATISTICAL MECHANICS (PH3101) for M. Sc. in Physics)	03	No	02	Yes
	03	Yes	10-15	Yes
CONDENSED MATTER PHYSICS-III (PH9111) (for M. Sc. in Physics)	03	Yes	10-15	Yes

Optoelectronic Materials and Devices (PH9031) for M. Tech in AMST	04	Yes	02	Yes
CONDENSED MATTER PHYSICS II (PH2104)				
Integrated M.Sc in physics (programmed)	04		10-15	Yes
Material science for Engineering application [PH1002]				

**(D) P.G. Lab:**

Course	Credits	Co-instructors (if any)	No. of student registered	Course evaluation
General Physics Lab [PH1151]	04	Yes	15-20	Yes
Solid State Physics Lab [PH1152]	02	Yes	15-20	Yes
Advanced Condensed Matter Physics Lab [PH3153]	04	Yes	05-10	Yes
General Materials Science Lab [PH1051]	02	Yes	15-20	Yes
Nuclear Physics Lab [PH2152]	02	Yes	15-20	Yes
Computational Laboratory [PH2051]	02	Yes	15-20	Yes

**(E) PhD Coursework theory:**

Course	Credits	Co-instructors (if any)	No. of student registered	Course evaluation
Optoelectronic Materials and Devices	04	Yes	1-4	Yes
Condensed Matter Physics-II	04	No	1-4	Yes
X-Rays and Structural Studies (Elective)	03	Yes	1-4	Yes

**(F) LAB TAKEN TO CLASS /PROJECT BASED LEARNING FOR UG/PG STUDENTS**

Sl. No.	Topic
1	Water pollution profile of Durgapur city through fieldwork using field equipment.
2	Empirical mode decomposition of ECG signals using MATLAB
3	Empirical mode decomposition of EEG signals using MATLAB
4	Fat Fourier Transform of earth tides using MATLAB
5	Fat Fourier Transform of geophysical signals using MATLAB
6	Simulation study for an automated and energy efficient electrical appliances for housing complex using proteus.
7	Feasibility study of an automated and energy efficient electrical appliances applicable for housing complex using proteus simulation software
8	Multifractal detrended fluctuation analysis of geochemical data using MATLAB
9	Multifractal detrended fluctuation analysis of geophysical data using MATLAB
10	Radioactivity survey in and around Durgapur industrial zone using ionization chamber, GM counter

**Developing new courses, experiments, laboratory, facility in Physics Department, NIT Durgapur:**

- Developed facility for synthesis of material for membrane-based wastewater treatment in 2021
- Developed water geochemistry analysis lab in 2018
- Developed some new experiments in B. Tech. 3<sup>rd</sup> Sem Lab in 2018
- Developed the Environmental Radioactive Monitoring Facility Laboratory in 2017
- Introduced Nonlinear Analysis Computational Lab in the M. Tech. [AMST] Syllabus in 2015
- Introduced Nonlinear dynamics in the M. Sc. Physics Syllabus in 2015
- Developed seminar rooms with modern facilities at Physics Department in 2015
- Developed earthquake precursory signal analysis facility in 2014
- Developed Helium and Geothermal Research Facility in 2014

**Developing new facilities at NIT Durgapur for Academics, Research and Social Service:**

- Developed CoE – “Centre for Research on Environment and Water (CREW) in 2021
- Developed the Center for Digital Learning (CDL) for online teaching and learning facility for remote village students of the state of West Bengal in 2019
- Developed a Science Museum at NIT Durgapur for the education of remote village school students in 2018
- Major initiative in collaboration with BRICS Network University for water resources and pollution treatment in 2016
- Introduce a forum to popularize basic science and technology and mega-science projects among school and college students (in the city and remote villages) in 2016

## E-CONTENT AND E-BOOKS developed/authored

### Geothermal power and Helium Exploration

- **Geothermal Helium Earthquake Precursor Project at NIT Durgapur**  
<https://nitdgp.ac.in/p/geothermal-helium-earthquake-precursor>
- **World's first helium gas exploration plant coming up at Bakreswar**  
<https://www.thestatesman.com/bengal/worlds-first-helium-gas-exploration-plant-coming-bakreswar-1502919930.html>
- **Quantitative Approximation of Geothermal Potential of Bakreswar Geothermal Area in Eastern India**  
<https://www.intechopen.com/online-first/75432>  
<https://arxiv.org/ftp/arxiv/papers/2002/2002.03834.pdf>
- **Geothermal Potential of Bakreswar-Tantloi Geothermal Area, West Bengal-Jharkhand: A Promising Green Energy Resource**  
[https://www.academia.edu/24620251/Geothermal\\_Potential\\_of\\_Bakreswar\\_Tantloi\\_Geothermal\\_Area\\_West\\_Bengal\\_Jharkhand\\_A\\_Promising\\_Green\\_Energy\\_Resource?auto=download](https://www.academia.edu/24620251/Geothermal_Potential_of_Bakreswar_Tantloi_Geothermal_Area_West_Bengal_Jharkhand_A_Promising_Green_Energy_Resource?auto=download)
- **An attempt to develop geothermal power plant at Bakreswar hot spring site India**  
[https://www.mess-earth.org/files/WMESS2017\\_Book.pdf](https://www.mess-earth.org/files/WMESS2017_Book.pdf)
- **Study on geothermal potential of Bakreswar hot spring through geochemical investigations"**  
<https://pdpu.ac.in/downloads/4th%20International%20Conference%20Proceedings.pdf>
- **Helium from geothermal sources**  
<https://pdfcoffee.com/04-helium-from-geothermal-sources-pdf-free.html>  
<https://www.geothermal-energy.org/pdf/IGAstandard/WGC/2015/39007.pdf>
- **Hot spring to beat winter**  
<https://www.telegraphindia.com/west-bengal/hot-spring-to-beat-winter/cid/349023>

### Earthquake Precursory signal study

- **Earthquake precursor study by nonlinear and statistical analysis**  
[https://www.mess-earth.org/files/WMESS2017\\_Book.pdf](https://www.mess-earth.org/files/WMESS2017_Book.pdf)
- **Geochemical Monitoring Laboratory, at Bakreswar-Tantloi Geothermal Area, West Bengal & Jharkhand**  
[https://nitdgp.ac.in/uploads/userfiles/files/field\\_visit\\_report.pdf](https://nitdgp.ac.in/uploads/userfiles/files/field_visit_report.pdf)
- **Mallarpur Geothermal Area, Birbhum, West Bengal**  
[https://nitdgp.ac.in/uploads/userfiles/files/field\\_visit\\_report.pdf](https://nitdgp.ac.in/uploads/userfiles/files/field_visit_report.pdf)
- **Geochemical Monitoring Laboratory, Tatta Pani, J & K**  
[https://nitdgp.ac.in/uploads/userfiles/files/field\\_visit\\_report.pdf](https://nitdgp.ac.in/uploads/userfiles/files/field_visit_report.pdf)
- **Multifractal Detrended Fluctuation Analysis of Seismic Induced Radon-222 Time Series**  
[http://bhookampan.co.in/images/vol1/2014\\_4-Chiranjib-Barman.pdf](http://bhookampan.co.in/images/vol1/2014_4-Chiranjib-Barman.pdf)
- **Multi-parametric and Multi-station Facility for Earthquake Precursory Study**  
<http://www.ises.co.in/Bhookampan-Vol.2-issue3.pdf>  
[https://www.academia.edu/24621490/Multi\\_parametric\\_and\\_Multi\\_station\\_Facility\\_for\\_Earthquake\\_Precursory\\_Study](https://www.academia.edu/24621490/Multi_parametric_and_Multi_station_Facility_for_Earthquake_Precursory_Study)

### BRICS – Water resources and Pollution Treatment

- **BRICS Activity at NIT Durgapur**  
<https://nitdgp.ac.in/p/brics-1>
- **NIT Durgapur at BRICS Network University**  
<http://nu-brics.ru/university/36/>
- **Preliminary studies of surface water quality in Damodar River basin (West Bengal, India)**  
<https://core.ac.uk/download/pdf/286575869.pdf>
- **Water Pollution in Damodar River Basin—A Statistical Analysis**  
<https://www.springerprofessional.de/en/water-pollution-in-damodar-river-basin-a-statistical-analysis/19102724>
- **BRICS : Three pilot projects underway (Newspaper publication, The Statesman)**  
[https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010\\_s95uJLUoc-](https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010_s95uJLUoc-)



[rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K\\_BfSD8dpzztmM%252CZS8RT9Lx7\\_pIaM%252C&vet=1&usg=AI4\\_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE](https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010_s95uJLUoc-rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K_BfSD8dpzztmM%252CZS8RT9Lx7_pIaM%252C&vet=1&usg=AI4_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE)

- **Newspaper publication on BRICS Project (Eisamai)**  
[https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010\\_s95uJLUoc-rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K\\_BfSD8dpzztmM%252CZS8RT9Lx7\\_pIaM%252C&vet=1&usg=AI4\\_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE#imgrc=QmsURRY4uz36KM](https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010_s95uJLUoc-rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K_BfSD8dpzztmM%252CZS8RT9Lx7_pIaM%252C&vet=1&usg=AI4_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE#imgrc=QmsURRY4uz36KM)
- **Newspaper publication on water pollution (Bartaman)**  
[https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010\\_s95uJLUoc-rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K\\_BfSD8dpzztmM%252CZS8RT9Lx7\\_pIaM%252C&vet=1&usg=AI4\\_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE#imgrc=yYyBEPBN2rBjYM](https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010_s95uJLUoc-rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K_BfSD8dpzztmM%252CZS8RT9Lx7_pIaM%252C&vet=1&usg=AI4_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE#imgrc=yYyBEPBN2rBjYM)
- **Newspaper publication on groundwater recharge (Dainaik Jagaran)**  
[https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010\\_s95uJLUoc-rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K\\_BfSD8dpzztmM%252CZS8RT9Lx7\\_pIaM%252C&vet=1&usg=AI4\\_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE#imgrc=FqdQudxobGz3GM](https://www.google.com/search?q=The+Statesman+%2B+NIT+Durgapur+%2B+BRICS&biw=1920&bih=880&sxsrf=ALeKk010_s95uJLUoc-rHTn1hkt4pAnhCO:1628973819311&tbm=isch&source=iu&ictx=1&fir=K_BfSD8dpzztmM%252CZS8RT9Lx7_pIaM%252C&vet=1&usg=AI4_-kQCXANDR3lvXt6mY48ce6FOKYptEA&sa=X&ved=2ahUKEwjppOSusLHyAhXhwzGHTw9BtoQ9QF6BAgKEAE#imgrc=FqdQudxobGz3GM)

#### **Centre for Research on Environment and Water**

- **Centre for Research on Environment and Water (CREW) at NIT Durgapur**  
<https://nitdgp.ac.in/p/coe-crew>

#### **Rashtriya Avishkar Abhijan**

- **Rashtriya Avishkar Abhijan at NIT Durgapur and Science Museum**  
<https://nitdgp.ac.in/p/rashtriya-avishkar-abhijan-1>

#### **Unnat Bharat Abhijan**

- **UBA (Unnat Bharat Abhijan) at NIT Durgapur**  
<https://nitdgp.ac.in/p/uba-1>

#### **Waste Management**

- **Bioeconomy of municipal solid waste (MSW) using gas fermentation**  
<https://www.sciencedirect.com/science/article/pii/B978044464321600015X>
- **Swachh Campus A manual for Swachhta Ranking of Higher Education Institutions**  
<http://www.mgncre.org/pdf/Swachh%20Campus%20Manual.pdf>

## ➤ **Invited Talk delivered**

- Invited talk at IISER Kolkata on 8<sup>th</sup> January, 2025  
**The future of renewable energy in the landscape of energy transition.**
- Invited talk as guest speaker at Kolkata on 27<sup>th</sup> December, 2024 ASSOCHAM 2nd Edition of Minerals and Mining Conclave 2024 & Business Excellence Awards.  
**Helium – A strategic Gas**
- Invited talk at Tilak Maidan, Durgapur, 23<sup>rd</sup> December, 2024, organized by Aradhona Welfare Society, Durgapur, West Bengal.  
**Water Pollution at Damodar River Basin**
- Invited talk at PM SHRI KENDRIYA VIDYALAYA ASANSOL On 27<sup>th</sup> November, 2024 -Eminent expert for Mentoring under STEM (Science, Technology, Engineering, and Mathematics)  
**Empowering students with 21st-century skills**  
**Water Pollution at Damodar River Basin**
- Invited talk at PM SHRI KENDRIYA VIDYALAYA ANDAL on 20<sup>th</sup> November, 2024.  
**Science and Literature**  
**Water for peace**
- Invited talk at The Annual BRICS NU Conference in Moscow at the Peoples' Friendship University of Russia (RUDN University) on October 18<sup>th</sup>, 2024  
**BRICS NUs activity in India**
- Invited talk at DST-IIT BOMBAY on 2<sup>nd</sup> August, 2024  
**Progress made in BRICS NUs activity**
- Invited talk at Amroknunjo (organised at Surenchandra Modern School, Durgaur, West Bengal) on 17<sup>th</sup> May, 2024  
**Rabindranath & Science.**
- Invited talk at the Institute of Engineers, Durgapur Local Center on 23<sup>rd</sup> March 2024 on  
**“Water for peace” Water Resources and water crisis – global scenario**
- Invited talk at Recent trend in biomathematics and dynamical system, bifurcation, chaos and numerical methods organised by department of mathematics Mahadevananda Mahavidyalaya Barrackpur, Kolkata -120, 7-13 th February, 2024  
**Investigation on ECG signals using EMD technique**
- Invited talk (online mode) at International Conference on 13<sup>th</sup> October 2023 on “the Cooperation and Integration of Industry, Education, Research, and Application (Nanchang)” organized by School of Water Resources and Environmental Engineering East China University of Technology, China.  
**Helium exploration in geothermal fields of India**
- Invited talk at Pandit Deendayal Energy University, Gandhinagar, Gujrat on 4<sup>th</sup> September, 2023 - CollabSci: Climate, Sustainability & Energy Symposium.  
**Global warming – Carbon footprint and possible mitigation**
- Invited talk at Vigyan Mancho DSP Hospital on 20<sup>th</sup> August, 2023  
**Radioisotopes and controlled radiation for sustainable agriculture, food security and safety and nuclear medicine**
- Invited talk at EARTHDATA Indexed IGEN ENERGATHON 2023 in online platform on 27<sup>th</sup> May, 2023.  
**Global warming – Carbon footprint and possible mitigation**
- Invited talk at Suri Book Fair on Literature and Science on 27<sup>th</sup> February, 2023.  
**Vigyan O Sahitya**
- Invited talk at Women’s College, Durgapur, University of Tyumen, Russia during January 19, 2023-February 5, 2023  
**Vigyan O Sahitya**
- Invited talk at Russian-Chinese educational program for the development and implementation of climate projects and work on the carbon markets developed by UT and Bejin Forestry University held on 24.03.2023 (Online)  
**Global warming – Carbon footprint and possible mitigation**
- Invited talk at University of Tyumen, Russia during January 19, 2023-February 5, 2023
  - **A study on water pollution scenario of the Damodar river basin, India: assessment of potential health risk using long-term database (1980–2019) and statistical analysis**
  - **Water pollution treatment using nano-technology**
  - **Physics of Earthquake Precursors**
  - **Impact of climate change on seismicity : a statistical approach**

- Invited talk at Regional Science Congress organised by Bankura University and West Bengal State Govt on January 8-9, 2023  
**Nano-technology in Water pollutiona remediation**
- Invited talk at Kashmir University Refresher Course held on December 14, 2022 (Online)  
**Water pollution, health hazard and possible remediation using nano-technology**
- Invited talk at Emerging Trends and Application of Green Technologies for Sustainable Development (Green Tech - 2022)”, November 9-10, 2022, organized by Haldia Institute of Technology, West Bengal, India.  
**A study on structural anisotropy and surface hydroxylation of nanorod units of triphase mesoporous TiO<sub>2</sub> for its application in photocatalytic degradation of organic pollutants in wastewater**
- Invited talk at "Climate change and disaster management" [Three days national conference cum training], 4 - 6 October, 2021, jointly organized by National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India and School of Law, Christ (Deemed to be University), Delhi, 4 - 6 October, 2021, (Virtual)  
**Climate change, water security and food nexus**
- Invited talk at International Conference - BRICS NUs: Water Resources and Pollution Treatment [WRPT-21] organised by NIT Durgapur, IIT Kanpur and BRICS ITG, July 6-8, 2021 (Virtual)  
**Synthesis of triphase mesoporous TiO<sub>2</sub> photocatalyst for degradation of organic pollutants in wastewater**
- Invited talk at Environmental Awareness Campaign 2021, organized by Srinkhala , Bahrain, June 30, 2021 (Virtual)  
**Water Resources and Pollution Treatment**
- Invited talk at Sabujer Avijan, Suri, Birbhum, February 19, 2021  
**Science and Literature**
- Invited talk at Webinar on Geothermal Energy: Geothermal as a green energy :5<sup>th</sup> International Geothermal Conference: Geothermal as a Green Energy, Organised by Pandit Deendayal Petroleum University, Gandhinagar, 21st January 2021 (Virtual)  
**Helium exploration in geothermal fields of India**
- Invited talk at one day Webinar, Organised by Brainware University, Kolkata, October 19, 2020 (Virtual)  
**Environmental Radioactivity and its applications for the benefit of mankind"**
- Invited talk at One week Faculty Development Programme on Facts and Facets of Environment- A post COVID 19 Perspective, Organised by JIS Engineering College, Kalyani, May 18-22, 2020 (Virtual)  
**Research in BRICS Countries relating to water resources and water crisis  
Research in BRICS Countries relating to water pollution treatment**
- Invited talk at International Conference “Sustainable Water Resources Management under Changed Climate” held at Jadavpur University, Kolkata, West Bengal (India), March 13-15, 2020  
**Synthesis of novel materials for degradation of phenolic compounds and antibiotics in water**
- Invited talk at 4<sup>th</sup> International Conference on Geothermal Energy : Harnessing & Hybridisation, held at Pandit Deendayal Petroleum University, Gandhinagar, 21st January, 2020  
**Study on geothermal potential of Bakreswar hot spring through geochemical investigations**
- Invited talk at East China University of Technology, Nanchang, China, November 02, 2019  
**Environmental Radioactivity and its applications for benefit of mankind**
- Invited talk at International Symposium on soil and ground water, 2019, October 26-28, 2019 , held at Shenzhen, China  
**Synthesis of Novel materials for degradation of phenolic compounds in industrial wastewater**
- Invited talk at International Conference on green technologies, circular economy and restoration of cultural heritage, November 08-29, 2019, held at RBS College Agra  
**Scenario on water crisis, water pollution and wastewater treatment in BRICS nations**
- Invited talk at International Conference ICCAES 2019, at IEM, Kolkata, September 21, 2019  
**Water Resources and Pollution Treatment in BRICS Nations**
- Invited talk at Book Fair, Suri, Birbhum on December 7, 2020  
**Water Resources and Pollution Treatment in BRICS Nations**
- Invited talk on 120<sup>th</sup> Foundation Day of Vivekananda Granthagar, at Suri, Birbhum, West Bengal, India on August 25, 2019
- Invited talk at Short Term Training Programmes (STTP) on Environmental crisis and sustainable development organized by Department of Chemistry, JIS Engineering College during September 2-7, 2019  
**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**

- Invited talk at National Workshop on Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity and Food Safety organized by School of Chemical Engineering, Biotechnology and Food Technology during August 30 -31, 2019, Haldia Institute of Technology, Haldia  
**Radioisotopes and controlled radiation for sustainable agriculture, food security and safety**
- Invited talk at Dumka Engineering College during August 7, 2019  
**Fundamentals of semiconductor Physics**
- Invited talk at Central Industrial Security Force Unit ISP, Burnpur, West Burdwan, India on “Water Conservation and Water Harvesting” organized by the Central Industrial Security Force on July 24, 2019  
**Water Resources and Pollution Treatment**
- Invited talk at SERB School on “Smart Energy Materials & Device” organized by the Applied Physics Department, IIT ISM, Dhanbad during April 29-May 3, 2019  
**Smart materials for energy harvesting**
- Invited talk at Five Days Workshop on “Recent Trends On Remediation of Contaminated Water Bodies and Soil” organized by Centre for Research on Environment and Water (CREW) held at NIT Durgapur, Durgapur, India during March 25-29, 2019  
**Comparison Study of Catalytic Activity of different morphology of TiO<sub>2</sub> Based Photocatalyst for Wastewater Treatment**
- Invited talk at Refresher Course organized by UGC-Human Resource Development Centre, The University of Burdwan, West Bengal, India on March 12, 2019  
**Remote Sensing & GIS**
- Invited talk organized by the School of Materials Science and Engineering, Anhui University of Technology, Maanshan City, Anhui, China on December 8, 2018,  
**Imprints of material science in membrane technology to find novel frontiers for integrated and sustainable technology solutions for organic wastewater treatment**
- Invited talk organized by the College of Environmental Science, Hohai University, Nanjing on December 6, 2018,  
**Novel frontiers for integrated and sustainable technology solutions for organic wastewater treatment**
- Invited talk organized by the State Key Laboratory of Nuclear Resources and Environment, East China University of Technology, Nanchang, China on December 3, 2018,  
**Imprints of material science in membrane technology to find novel frontiers for integrated and sustainable technology solutions for organic wastewater treatment**
- Invited talk in the inauguration programme of the “Triennial Conference”, organized by Pachim Banga Vijyan Mancha, Pachim Bardhaman District Committee on November 25, 2018  
**Physics of Earthquake Precursors**
- Invited talk at ASET colloquium organized by Tata Institute of Fundamental Research, Mumbai on November 16, 2018  
**Physics of Earthquake Precursors**
- Invited talk organized by Pachim Banga Vijyan Mancha, Pachim Bardhaman District Committee on June 05, 2018  
**Water Pollutions and its Possible Remediation**
- Invited talk organized by National Seminar on Mathematical and Theoretical Physics (NSMTP – 2018) held on February 10, 2018 at Calcutta Mathematical Society, Saltlake, Kolkata,  
**Imprints of material science in membrane technology to find novel frontiers for integrated and sustainable technology solutions for organic wastewater treatment**
- International Symposium on Gen Next initiatives for digital India organized by JIS Group and held at Hyatt Regency, Kolkata on February 23-24, 2017  
**Role of NIT Durgapur in the field of Education, Science & Innovation and Technology Transfer through collaboration with various Academic Institutes, Research Organisations and Industries of India, Russia and other countries**
- Brain Storming Session on Environmental Geotechnics sponsored by DST-SERB, Govt. of India held at Ronil Resort, Goa, during January 24-25, 2017  
**Exploration of Geothermal Power at Bakreswar hot spring site**
- International Workshop “Shallow, sub-surface investigation for resource exploration and seismic hazard assessment” held at ISR, Gandhinagar during January 19-20, 2017  
**Bakreswar-Tantloi Geothermal Area – A Promising Geothermal Resource for Power Generation**
- Platinum Jubilee Science Seminar held at Suri Vidya Sagar College, Suri, Birbhum on January 14-15, 2017  
**Energy**
- International Scientific Practical Conference “BRICS Water Forum” held at Higher School of Economics, Moscow, Russia, during September 29-30, 2016.

**Degradation of Phenolic Compounds in Wastewater under Solar Radiation through Advanced Oxidation Process using Hetero-Structured TiO<sub>2</sub> Nanotubes.**

- The National Children Science Congress Orientation Programme for Teachers of NVS Patna Region held at Jawahar Navodaya Vidyalaya, Sector-2A, Bidhannagar, Durgapur-713212 on April 08, 2016  
**Energy and Disaster Management**
- Renewable Energy Materials and Technology in Academia and Industry held at Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand during March 01-02, 2016  
**India's Geothermal Power Programme–Scientific and Technical aspects and future plan**
- Celebration of National Science Day, 2016 at NIT Durgapur on February 28, 2016  
**Scientific discoveries, the driving engine of Human Civilization**
- Science Seminar at Suri Sabujer Avijan, Suri Birbhum, West Bengal, India on December 27, 2015  
**Radiation Physics in Cancer Management**
- Earthquake Hazard: Basic Approaches, Field Investigations and Modeling held at Sri Mata Vaishno Devi University, Katra, J&K during November 10 to 16, 2015  
**Research on Earthquake Precursory Signals at Tatta Pani Hot Spring Site, J&K**
- International Conference: 8<sup>th</sup> Dresden Symposium-Hazard Detection and Management held at Dresden University of Technology and SARAD GmbH, Germany during August 31, 2015 to September 04, 2015  
**Non-linearity in Earthquake Precursory Signals**
- Sub-committee meeting on Geothermal Energy held at Geological Survey of India, Northern Region, Lucknow during July 09-11, 2015  
**Geothermal Scenario of Bakreswar-Tantloi Geothermal Area**
- Discussion meeting on collaborative Project between NIT Durgapur and NIT Srinagar held at NIT Srinagar during July 07-08, 2015  
**Helium & Geothermal Power and Earthquake Precursory Signals**
- Celebration of World Environmental Day, 2015 held at Bidhanagar, Durgapur and arranged by Paschim Banga Bigyan Mancho on June 05, 2015  
**Disturbing the Earth**
- National Training Programme on Advances in New and Renewable Energy Materials and Technology held at Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand during March 23 to 27, 2015  
**Exploration of Helium and Geothermal Power**
- National Training Programme on Advances in New and Renewable Energy Materials and Technology held at Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand during March 23 to 27, 2015  
**Nuclear Renaissance in India**
- Short-Term course on “Experimental Techniques for Material Characterization (ETMC–2015) held at NIT Durgapur during February 27 to March 3, 2015  
**Measurement techniques of lighter and heavier compositions of a liquid or gas sample**
- International Conference on Decision Support Systems for Early Warning and Mitigation of Disaster held at NIT Durgapur, WB during December 28-30, 2014  
**Geochemical Precursor for Earthquake**
- Short-Term Course on “Recent Trends in Materials Science and Electronics (RTMSE – 2014) held at NIT Durgapur during December 10 to 14, 2014  
**Exploring Geothermal Power at Bakreswar**
- P N Ghosh Memorial Lecture held at Midnapore College, Midnapore, WB during February 8, 2014  
**Bakreswar Hot Spring – An Incredible Site for Cultivation of Science and Religion**
- One day seminar in nonlinear dynamics held at Saha Institute of Nuclear Physics during February 6, 2014  
**Exploring Seismo-Geochemical Signals**
- 8<sup>th</sup> Conference on Nonlinear Systems and Dynamics held at Indore IIT, Indore during December 11- 14, 2013  
**Exploration of Earthquake Precursory Signals by Non-linear Techniques**
- Geothermal Energy Initiative & Development – One day seminar on issues & challenges in geothermal energy” held at Pandit Deendayal Petroleum University, Gandhinagar, Gujarat on July 26, 2013.  
**Geothermal Potential of Bakreswar-Tantloi hydrothermal system**
- National Institute of Technology (NIT Sikkim), Ravangla, Sikkim, on April 18, 2013  
**Geochemical and geophysical approaches in Earthquake Prediction**

- International Conference: 7<sup>th</sup> Dresden Symposium “Hazards – Detection and Management” held at Dresden University of Technology, Dresden, Germany during March 3-8, 2013  
**Study of Geochemical Precursors for Earthquakes in Indian Geothermal fields**
- Natural Hazards and Mitigation held at Eshan College, Mathura, UP, India during 4 – 5 December, 2012.  
**Radon and Helium Studies as Earthquake Precursors in the Context of Indian Scenario**
- DST, Govt. of India – “SERC Scholl on Seismo-Electromagnetics” held at RBS Engineering College, Agra during February 6-26, 2012.  
**Use of <sup>222</sup>Rn as earthquake precursors**
- Seminar on ‘Energy Efficiency in Industry’ organized by Bharat Chamber of Commerce, Kolkata, November 4, 2011.  
**Geothermal Energy – Saving the Earth with Clean Energy**
- Earth Science Department, IISER, Kolkata, (Mohanpur Campus), India on May 19, 2011.  
**Terrestrial Helium – A tool for Earthquake Prediction**
- Advance Science and Technology Awareness Seminar (ASTAS) held at Suri Vidyasagar College, Suri, Birbhum, W.B., India, April, 30, 2011.  
**Birbhum – Inspiring Helium Research**
- Institute of Seismological Research (ISR), Gandhinagar, Gujarat, India on April 19, 2010.  
**Multistation and Multiparametric approach to detect earthquake precursors – Geo-chemical Technique**
- Variable Energy Cyclotron Centre (VECC), Kolkata, India on August 28, 2009.  
**Experimental Investigations on Seismogenic Geo-chemical and Geo-physical Perturbations**
- ISRO sponsored one day seminar One day seminar on Space Physics and Earthquake Science held at Suri, Birbhum, W.B., on May 18, 2007.  
**Earthquake Monitoring**

➤ **International Conference/Seminars/Short Term Courses/  
Summer Schools/Winter Schools organized:**

From	To	Name of the course	Sponsored / Self-Financed
January 15, 2025	January 15, 2025	One day outreach programme for the undergraduate and postgraduate students of NIT Durgapur to explore the job opportunity at the Department of Atomic Energy, Govt. of India by Dr. Gopal Mukherjee, Senior Scientific Office, VECC, DAE, Govt. of India <b>(Worked as Coordinator)</b>	VECC, DAE, Govt. of India
November 4, 2022	November 4, 2022	One-day conclave on "Science, Philosophy and Education <b>(Worked as Coordinator)</b>	NIT Durgapur
September 20, 2022	September 20, 2022	Physics Talk - "Centenary of the Saha Ionization Equation" by Prof. Sushanta Dattagupta, INSA Honorary Professor at NIT Durgapur <b>(Worked as Coordinator)</b>	NIT Durgapur
August 27, 2022	August 27, 2022	Promotion of Green Technology on Rural Road Construction <b>(Worked as Coordinator)</b>	BitChem
July 1, 2022	July 1, 2022	Academic Lecture by Prof. Sushanta Dattagupta, a renowned physicist, INSA Senior Scientist <b>(Worked as Coordinator)</b>	Physics Department, NIT Durgapur
February 22, 2022	February 28, 2022	Vigyan Sarvatra Pujyate held at NIT Durgapur <b>(Worked as Coordinator)</b>	DST

October 7, 2021.	October 7, 2021.	Physics Talk by Prof. Sabyasachi Bhattacharya, Former Director and Director, TCG Crest (Worked as Coordinator)	Physics Department, NIT Durgapur
September 4, 2021	September 4, 2021	Indian Physics Association (IPA) Colloquium [Virtual meeting] (Worked as Coordinator)	Indian Physics Association (IPA)
August 7, 2021	August 7, 2021	Seminar on "Prof. M. S. Sinha Colloquium 2021 : Talk by Prof. Satyanarayana Bheesette [Virtual meeting] (Worked as Coordinator)	M S Sinha Colloquium Fund, NIT Durgapur
June 6, 2021	June 8, 2021	International conference- BRICS Network University: Water Resources and Pollution Treatment [Virtual meeting] (Worked as Chairperson)	Supported by NIT Durgapur, IIT Kanpur and BRICS ITG
March 13, 2020	March 15, 2020	International conference on "Sustainable Water Resources Management under Changed Climate" held at Jadavpur University, Kolkata (Worked as Coordinator)	Rusa fund, Jadavpur University, TEQIP III fund, NIT Durgapur
February 27, 2020	February 28, 2020	Science Exhibition in connection to celebrating 'National Science Day 2020' at NIT Durgapur (Worked as Coordinator)	Science Museum Fund, NIT Durgapur
February 10, 2020	February 10, 2020	Seminar on "Prof. M. S. Sinha Colloquium" by Dr. Debiprasad Duari (Worked as Coordinator)	M S Sinha Colloquium Fund, NIT Durgapur
January 6, 2020	January 10, 2020	Women Empowerment in India: Challenging Obstacles and Creating Opportunities	TEQIP III fund, NIT Durgapur
December 5, 2019	December 5, 2019	One day out-reach programme by Prof. Sushanta Dutta Gupta (Worked as Coordinator)	DOC, Physics, NITDGP
November 5, 2019	November 8, 2019	Engineering Model Competition Meet & Expo in India International Science Festival (IISF 2019) (Worked as National Coordinator)	DST Vigyan Prashar
October 17, 2019	October 17, 2019	One day out-reach programme by Prof. A. N. S. Iyengar and Dr. J. R. Kayal (Worked as Coordinator)	DOC, Physics, NITDGP
October 01, 2019	October 01, 2019	Seminar talk on "Numbers: How to handle data" by Prof. P. K. Joshi from HBCSE-TIFR (Worked as Coordinator)	DOC, Physics, NITDGP
September 22, 2019	September 22, 2019	One day workshop on Participatory Rural Appraisal Techniques and Gram Panchayat Development Plan under UBA (Worked as Co-Coordinator)	MHRD, UBA
September 2, 2019	September 2, 2019	One day workshop on Industry Institute Interaction under TEQIP-III Amitranjan Dasgupta, Excutive Director, ISP, SAIL, Burnpur (Worked as Coordinator)	TEQIP-III, NIT Durgapur
July 25, 2019	July 25, 2019	One day Orientation Workshop for Higher Educational Institutess/Colleges/Universities of West Bengal & Sikkim (Worked as Co-Coordinator)	MHRD, UBA

March 25, 2019	March 29, 2019	Five Days Workshop on “Recent Trends On Remediation of Contaminated Water Bodies and Soil” (Worked as Coordinator)	TEQIP III and BRICS
February 28, 2019	February 28, 2019	Celebration of National Science Day 2019- Perspective of Women in Science: Exploration and Experience (Worked as Coordinator)	Sponsored by NIT Durgapur
February 02, 2019	February 02, 2019	Seminar Prof. M. S. Sinha Colloquium held at NIT Durgapur (Worked as Coordinator)	Funded by Family members of Late Prof. M. S. Sinha & NIT Durgapur
February 01, 2019	February 01, 2019	Seminar Talk on Nuclear Physics (Particle Hunter’s Guide) by Prof. Nabakumar Mondal (Worked as Coordinator)	Sponsored by NIT Durgapur
February 01, 2019	February 01, 2019	Teacher Training Workshop (Worked as Coordinator)	Funded by Rashtriya Avishkar Abhiyan
December 19, 2018	December 19, 2018	One day Workshop on “BRICS Water Sensor Project” (Worked as Coordinator)	Sponsored by NIT Durgapur
November 11, 2018	November 11, 2018	Celebration of National Education day 2018 (Worked as Coordinator)	Funded by Rashtriya Avishkar Abhiyan
November 11, 2018	November 11, 2018	Inauguration of APC Ray Science Museum at NIT Durgapur (Worked as Coordinator)	Funded by Rashtriya Avishkar Abhiyan
November 03, 2018	November 03, 2018	Science Fair 2018 ( <b>Worked as Coordinator</b> )	Funded by Rashtriya Avishkar Abhiyan
February 28, 2018	February 28, 2018	Celebration of National Science Day 2018 ( <b>Worked as Coordinator</b> )	Sponsored by NIT Durgapur
February 23, 2018	February 23, 2018	Celebration of Matribhasa Divas ( <b>Worked as Coordinator</b> )	Sponsored by NIT Durgapur
February 05, 2018	February 05, 2018	Seminar Prof. M. S. Sinha Colloquium held at NIT Durgapur ( <b>Worked as Coordinator</b> )	Funded by Family members of Late Prof. M. S. Sinha & NIT Durgapur
March 15, 2017	March 17, 2017	<b>International Conference</b> 2 <sup>nd</sup> International Conference on Emerging Materials: Characterization & Application (EMCA-2017) ( <b>Worked as Publication Chair</b> )	CoE, Advanced Materials and the Department of Physics at NIT Durgapur
February 03, 2017	February 03, 2017	Seminar Prof. M. S. Sinha Colloquium held at NIT Durgapur ( <b>Worked as Coordinator</b> )	Funded by Family members of Late Prof. M. S. Sinha & NIT Durgapur
September 12, 2016	September 16, 2016	<b>Short term course</b> GIAN program on “Complex Networks: Structure and Nonlinear Dynamics” held at NIT Durgapur ( <b>Worked as Coordinator</b> )	GIAN Programme, MHRD, Govt. of India
July 11, 2016	July 15, 2016	<b>Short term course</b> Nonlinear Dynamics, Chaos and Applications (NDCA-2016) held at NIT Durgapur ( <b>Worked as Co-convener</b> )	TEQIP – II, Govt. of India
March 04, 2016	March 04, 2016	Seminar Prof. M. S. Sinha Colloquium held at NIT Durgapur ( <b>Worked as Coordinator</b> )	Funded by Family members of Late Prof. M. S. Sinha & NIT Durgapur
February 15, 2016	February 17, 2016	<b>International Conference</b> International Conference on Complex Dynamical Systems and Applications (CDSA-2016) held at NIT Durgapur	ICTP, TEQIP-II, IPR, SERB



		<b>(Worked as Member of Organizing Committee)</b>	
February 27, 2015	March 03, 2015	<b>Short term course</b> Short-Term course on “Experimental Techniques for Material Characterization (ETMC–2015)” held at NIT Durgapur <b>(Worked as Coordinator)</b>	Self-Financed
January 30, 2015	January 30, 2015	<b>Seminar</b> Prof. M. S. Sinha Colloquium held at NIT Durgapur <b>(Worked as Coordinator)</b>	Funded by Family members of Late Prof. M. S. Sinha
January 18, 2015	January 18, 2015	<b>Workshop</b> One day Workshop on Helium and Geothermal Exploration and Earthquake Precursors Study held at Helium Laboratory, Bakreswar, W.B <b>(Worked as Coordinator)</b>	Center of Excellence (TEQIP-II) Govt. of India
December 04, 2014	December 06, 2014	<b>International Conference</b> First International Conference on “Emerging Materials: Characterization & Application (EMCA-2014)” held at CGCRI, Kolkata <b>(Worked as Member of the organizing committee)</b>	Center of Excellence (TEQIP) Govt. of India
October 29, 2014	October 29, 2014	<b>Industry-Institute-Interaction</b> Industry-Institute-Interaction Programme on “Equipment Chronicle – Bench to Palmtop” held at NIT Durgapur <b>(Worked as Coordinator)</b>	TEQIP – II, Govt. of India
March 10, 2012	March 10, 2012	<b>Seminar</b> “One day seminar on Geochemical Precursors for Earthquakes” held at Geochemical Monitoring Laboratory, Bakreswar, W.B <b>(Worked as Co-convener)</b>	SINP/VECC, Kolkata Govt. of India
April 30, 2011	April 30, 2011	<b>Seminar</b> Advance Science and Technology Awareness Seminar (ASTAS) held at Suri Vidyasagar College, Suri, Birbhum, India <b>(Worked as Co-convener)</b>	SINP/VECC, Kolkata Govt. of India
August 6, 2008	August 7, 2008	<b>National level Conference</b> National level Conference on Earthquake Prediction: Recent Developments & Challenges held at Kashmir University, Srinagar <b>(Worked as Member of the organizing committee)</b>	DST, Govt. of India
May 18, 2007	May 18, 2007	<b>Seminar</b> One day seminar on Space Physics and Earthquake Science held at DRDA Hall, Suri, Birbhum <b>(Co-Convener)</b>	ISRO, Govt. of India
November 24, 2006	November 25, 2006	<b>Seminar</b> National Seminar on “Recent Development in Disaster Management: Indian Perspective” held at Suri Vidyasagar College, Suri, Birbhum, <b>(Member of the organizing Committee)</b>	DST Govt. of WB

September 11, 2006	September 13, 2006	<b>International Conference</b> International Conference on “Brain Storming Session on Geochemical Precursor Signal related to Seismic Event” held at Saha Institute of Nuclear Physics, Kolkata, India <b>(Member of Local the organizing Committee)</b>	DST, Govt. of India
December 19, 2005	December 19, 2005	<b>Seminar</b> One day seminar on Earthquake Precursor using Radiation Monitoring held at Suri Vidyasagar College, Suri, Birbhum <b>(Co-Convener)</b>	SINP/VECC, Kolkata Govt. of India

➤ **Seminars/ Conference/Workshop/Short Term Courses/  
Summer Schools/ Winter school attended**

From	To	Institute/ Industry	Sponsored By	Name of the course
9 November, 2022	10 November, 2022	Haldia Institute of Technology, West Bengal, India.	Haldia Institute of Technology, West Bengal, India.	“Emerging Trends and Application of Green Technologies for Sustainable Development (Green Tech - 2022)”
November 4, 2022	November 4, 2022	NIT Durgapur	NIT Durgapur	One-day conclave on "Science, Philosophy and Education (Worked as Coordinator, Sponsored by : NIT Durgapur)
September 20, 2022	September 20, 2022	NIT Durgapur	NIT Durgapur	Physics Talk - "Centenary of the Saha Ionization Equation” by Prof. Sushanta Dattagupta, INSA Honorary Professor at NIT Durgapur
August 27, 2022	August 27, 2022	NIT Durgapur	BitChem	Promotion of Green Technology on Rural Road Construction
July 1, 2022	July 1, 2022	NIT Durgapur	NIT Durgapur	Academic Lecture by Prof. Sushanta Dattagupta, a renowned physicist, INSA Senior Scientist
4 October, 2021	6 October, 2021	National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India and School of Law, Christ (Deemed to be University), Delhi (Online mode)	Ministry of Home Affairs, Govt. of India	National Conference Climate change and disaster management" [Three days national conference cum training],
July 6, 2021	July 8, 2021	NIT Durgapur (Virtual)	NIT Durgapur, IIT Kanpur and BRICS ITG	International Conference International Conference - BRICS NUs: Water Resources and Pollution Treatment [WRPT-21]
January 21, 2021	January 21, 2021	Pandit Deendayal Petroleum University, Gandhinagar	Pandit Deendayal Petroleum	5th International Geothermal Conference: Geothermal as a Green Energy

			University, Gandhinagar	
March 13, 2020	March 15, 2020	Jadavpur University, Kolkata	RASA Fund, Jadavpur University, TEQIP-III, NIT Durgapur	International Conference “Sustainable Water Resources Management under Changed Climate” organized by the School of Water Resources Engineering,
January 21, 2020	January 21, 2020	Pandit Deendayal Petroleum University, Gandhinagar, India	Pandit Deendayal Petroleum University, Gandhinagar, India	International Conference 4th International Geothermal Conference 2020
November 28, 2019	November 28- 29, 2019	RBS College Agra,	DST	International Conference International Conference on green technologies, circular economy and restoration of cultural heritage,
October 26, 2019	October 28, 2019	Chinese Society of Environmental Sciences	Chinese Society of Environmental Sciences	International Conference 6th International Symposium on Soil and Groundwater (SG-2019) at Shenzhen, China
September 21, 2019	September 21, 2019	IEM, Kolkata	IEM, Kolkata	International Conference International Conference ICCAES 2019
August 30, 2019	August 31, 2019	Haldia Institute of Technology,	BRNS, DAE	National Workshop on Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity and Food Safety
May 14, 2019	May 14, 2019	NIT Durgapur	TEQIP III	One day workshop on Intellectual Property Rights (IPR 2019)
April 16, 2019	April 16, 2019	NIT Durgapur	NIT Durgapur & IEST, Shibpur	One day workshop on “History of Science: Paradigms and Dimensions”
April 29, 2019	May 3, 2019	IIT-ISM Dhanbad	SERB	SERB School on “Smart Energy Materials & Device”
March 25, 2019	March 29, 2019	NIT Durgapur	TEQIP III and several industry	Workshop on Recent Trends on Remediation of Contaminated Water Bodies and Soil
March 12, 2019	March 12, 2019	UGC-HRD Centre, The University of Burdwan	The University of Burdwan	Workshop on Remote Sensing & GIS
December 8, 2018	December 8, 2018	Anhui University of Technology, China	Anhui University of Technology, China	Discussion meeting : NITD,India-AUT, China, possible collaboration
December 3, 2018	December 3, 2018	East China University of Technology	East China University of Technology	Discussion meeting : NITD,India-ECUT, China, possible collaboration
December 03, 2018	December 09, 2018	Hohai University, China	Hohai University, China	Workshop for BRICS Water Resources and Pollution Treatment
November 25, 2018	November 25, 2018	Pachim Banga Vijyan Mancha, Pachim Bardhaman Disctric Committee	Pachim Banga Vijyan Mancha, Pachim Bardhaman	Triennial Conference

			Disctric Committee	
November 16, 2018	November 16, 2018	Tata Institute of Fundamental Research	TIFR	ASET colloquium
November 15, 2018	November 15, 2018	Mahatma Gandhi National Council of Rural Education, Hyderabad	MHRD	National Consultative Workshop on PG Diploma in Environmental Hygiene, Water and Solid Waste Management
July 4, 2018	July 9, 2018	Stellenbosch University, South Africa,	BRICS Forum	3 rd Annual Conference of BRICS Network University
February 10, 2018	February 10, 2018	Calcutta Mathematical Society, Kolkata, India	Calcutta Mathematical Society, Kolkata, India	National Seminar on Mathematical and Theoretical Physics (NSMTP – 2018)
September 11, 2017	September 15, 2017	Institute: Czech Soil Science Society, International Association for Engineering Geology & the Environment at Prague	LAMA Energy Group	International Conference World Multidisciplinary Earth Sciences Symposium- WMESS 2017
June 21, 2017	June 21, 2017	Institute: Russian Academy of Science, Moscow, Russia	DST-RFBR	International Conference International Scientific Conference RFBR-DST 10 years of cooperation in supporting Indian –Russian research advancing the future of scientific partnership
June 17, 2017	June 27, 2017	Governor Office, Novosibirsk, Russia	Governor Office, Novosibirsk, Russia	International Conference Technoprom 2017
June 05, 2017	June 05, 2017	Pachim Banga Vijyan Mancha, Pachim Bardhaman District Committee	Pachim Banga Vijyan Mancha, Pachim Bardhaman District Committee	Workshop
March 24, 2017	March 24, 2017	NIT Durgapur	NIT Durgapur	Workshop Faculty Development Programme on Pedagogy under TEQIP-II
February 23, 2017	February 24, 2017	JIS Group along with Bengal Chamber of Commerce and Industry, Kolkata, India	JIS Group along with Bengal Chamber of Commerce and Industry	International Symposium International Symposium on Gen Next Initiatives for Digital India
February 3, 2017	February 3, 2017	Institute: Physics Department, NIT Durgapur, India	Family members of Late Prof. M. S. Sinha	Seminar : Prof. M. S. Sinha Colloquium 2017
January 24, 2017	January 25, 2017	Ronil Resort at Goa, India organized by IIT Bombay	SERB and DST, Govt. of India	Workshop Brainstorming session on Environmental Geotechnics
January 14, 2017	January 14, 2017	Institute: Suri Vidyasagar College, Suri, Birbhum, West Bengal, India	Suri Vidyasagar College, Suri, Birbhum, West Bengal, India	Seminar Platinum Jubilee Science Seminar

January 19, 2017	January 20, 2017	Institute: Institute of Seismological Research, Gandhinagar, India	Institute of Seismological Research, Gandhinagar, India, DST, Govt. of Gujarat	International Workshop International Workshop on shallow surface investigations for resource exploration and seismic hazard assessment
September 27, 2016	October 2, 2016	Institute: Higher School of Economics, Moscow, Russia	BRICS Water Forum	International Conference International Scientific Practical Conference-BRICS Water Forum
July 11, 2016	July 16, 2016	Institute: Nonlinear Dynamics, Chaos and Applications (NDCA-2016) held at NIT Durgapur	TEQIP – II, Govt. of India	Short Term Course : Nonlinear Dynamics, Chaos and Applications
March 04, 2016	March 04, 2016	Institute: Physics Department, NIT Durgapur	Family members of Late Prof. M. S. Sinha	Seminar : Prof. M. S. Sinha Colloquium 2016
March 01, 2016	March 02, 2016	Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand	ONGC	Short Term Course : Renewable Energy Materials and Technology in Academia and Industry
February 15, 2016	February 17, 2016	Institute: NIT Durgapur	ICTP, TEQIP-II, IPR, SERB	International Conference: International Conference on Complex Dynamical Systems and Applications (CDSA-2016)
December 08, 2015	December 18, 2015	Institute: NIT Durgapur	MHRD	Workshop: Two-Week ISTE STTP on Engineering Physics under the National Mission on Education through ICT.
November 12, 2015	November 14, 2015	Institute: Sri Mata Vaishno Devi University, Katra, J&K & IISER, Kolkata	SERC	Workshop: Earthquake Hazard: Basic Approaches, Field Investigations and Modeling
August 31, 2015	September 04, 2015	Institute: Dresden University of Technology, Dresden, Germany	Dresden University of Technology & SARAD GmbH, Germany	International Conference: 7 <sup>th</sup> Dresden Symposium Hazard - Detection and Management
July 09, 2015	July 11, 2015	Geological Survey of India, Northern Region, Lucknow	GSI and MNRE	Workshop: Sub-committee meeting on Geothermal Energy
March 23, 2015	March 27, 2015	Institute: Department of Applied Physics, Indian School of Mines, Dhanbad, Jharkhand	MNRE, Govt. of India	Short Term Course : National Training Programme on Advances in New and Renewable Energy Materials and Technology
February 27, 2015	March 03, 2015	Institute: Physics Department, NIT Durgapur	Self-Financed	Short Term Course : Experimental Techniques for Material Characterization (ETMC–2015)
January 30, 2015	January 30, 2015	Institute: Physics Department, NIT Durgapur	Family members of Late Prof. M. S. Sinha	Seminar : Prof. M. S. Sinha Colloquium 2015

January 18, 2015	January 18, 2015	Institute: Physics Department, NIT Durgapur	Center of Excellence (TEQIP-II) Govt. of India	Workshop : One day Workshop on Helium and Geothermal Exploration and Earthquake Precursors Study held at Helium Laboratory, Bakreswar, W.B
December 28, 2014	December 30, 2014	Institute: Civil Engineering Department, NIT Durgapur	TEQIP-II Govt. of India	Conference : International Conference on Decision Support Systems for Early Warning and Mitigation of Disaster
December 10, 2014	December 14, 2014	Institute: Physics Department, NIT Durgapur	Self-Financed	Short-Term Course : Recent Trends in Materials Science and Electronics (RTMSE – 2014)
December 04, 2014	December 06, 2014	Institute: Physics Department, NIT Durgapur	TEQIP-II Govt. of India	Conference : First International Conference on “Emerging Materials: Characterization & Application
October 29, 2014	October 29, 2014	Institute: Institute and Industry Physics Department, NIT Durgapur & AnaSys Solutions, Kolkata	TEQIP – II, Govt. of India	Seminar & Instrumental Training : Industry-Institute- Interaction Programme on “Equipment Chronicle – Bench to Palmtop”
October 14, 2014	October 14, 2014	Institute: Bose Institute, Kolkata, India	Bose Institute, Kolkata, India and NIT Durgapur, India	International Conference International Conference” Rabindranath Tagore, Natural Sciences and Philosophy”
February 8, 2014	February 8, 2014	Institute: Midnapore College, Midnapore	Midnapore College Alumni	Seminar : P N Ghosh Memorial Lecture
February 6, 2014	February 6, 2014	Institute: Saha Institute of Nuclear Physics, Kolkata	DAE, Govt. of India	Seminar : One day seminar in nonlinear dynamics
December 11, 2013	December 14, 2013	Institute: Indore IIT, Indore	DST, DAE, SERB, Govt. of India	International Conference : 8th Conference on Nonlinear Systems and Dynamics
October 24, 2013	October 24, 2013	Industry : AnaSys Solutions, Kolkata	AnaSys Solutions, Kolkata	Instrumental Training: Partner in Productivity Seminar
September 26, 2013.	September 26, 2013.	Industry: Centre of Excellence, Agilent Technologies, Bengaluru,	Agilent Technologies	Instrumental Training: Market Specific ICPMS Workshop
July 26, 2013.	July 26, 2013.	Institute: Pandit Deendayal Petroleum University, Gujarat	Govt. of Gujarat	International Conference: “Geothermal Energy Initiative & Development - One day seminar on issues & challenges in geothermal energy”
March 3, 2013	March 8, 2013	Institute & Industry: Dresden University of Technology, Germany & SARAD, GmbH, Germany	Dresden University of Technology, Germany	International Conference : 7th Dresden Symposium "Hazards - Detection and Management"

			& SARAD, GmbH, Germany	
December 4, 2012	December 5, 2012	Institute : Eshan College, Mathura, UP	DST, MoES Govt. of India	National Conference : National Conference on Natural Hazards and Mitigation
November 17-2012	November 21, 2012	Industry : SARAD GmbH, Dresden, Germany	SARAD GmbH, Dresden, Germany	Instrumental Training: Brain storming session on “Monitoring of Hydrological and Geophysical Parameters through EPOS-DACM System”
November 11, 2012.	November 16, 2012.	Industry : Saphymo GmbH, Frankfurt, Germany	Saphymo GmbH, Frankfurt, Germany	Instrumental Training: Training Course on gamma dose rate monitoring using “Gamma Tracer”
October 29, 2012	October 31, 2012	Institute: Pandit Deendayal Petroleum University, Gujarat	Indian Geophysical Union	National Conference : 49th annual convention of Indian Geophysical Union
July 12, 2012	July 15, 2012	Institute : IISER Pune	DST, SERB, MHRD Govt. of India	National Conference : National Conference on Nonlinear Systems and Dynamics
June 16, 2012	June 18, 2012	Industry : ALGADE, France (held at Bakreswar Seismogeochemical Monitoring Laboratory)	ALGADE, France & MoES Project, VECC, Kolkata	Instrumental Training: Short term Training Course on “Soil Radon Monitoring through BARASOL MC2 Probe”
June 10, 2012	June 14, 2012	Institute & Industry: HNB Garhwal University, Teheri, Garhwal, Uttarakhand & SARAD, GmbH, Germany, Algade, France, Deridge, USA	International Geohazard Research Society, DST, MoES, Govt. of India	International Conference: Third International Geo-Hazards Research Symposium
March 10, 2012	March 10, 2012	Institute: Helium Laboratory, Bakreswar, Birbhum	MoES, Govt. of India	Seminar: “One day seminar on Geochemical Precursors for Earthquakes”
February 6, 2012	February 26, 2012	Institute: RBS Engineering College, Agra	DST, Govt. of India	SERC Scholl “SERC Scholl on Seismo-Electromagnetics”
January 9, 2012	January 11, 2012	Institute: Presidency College, Kolkata	DST, Govt. of India	International Conference : International Conference on Complex Dynamical System and Applications
November 4, 2011	November 4, 2011	Industry: Bharat Chamber of Commerce, Kolkata	Bharat Chamber of Commerce, Kolkata	Seminar: Seminar on ‘Energy Efficiency in Industry’
August 30, 2011	August 30, 2011	Industry: Bharat Chamber of Commerce, Kolkata	Bharat Chamber of Commerce, Kolkata	Seminar: Interactive Session with Dr. Shailesh Nayak, Secretary, Ministry of Earth Sciences, Government of India”
May 19, 2011	May 19, 2011	Institute: Earth Science Department, IISER,	IISER, Kolkata	Seminar: Geochemical and geophysical approaches in Earthquake Prediction

		Kolkata, (Mohanpur Campus)		
April 30, 2011	April 30, 2011	Institute: Suri Vidyasagar College, Suri, Birbhum,	SINP/VECC, Kolkata Govt. of India	Seminar: Advance Science and Technology Awareness Seminar (ASTAS)
January 22, 2011	January 27, 2011	Institute: Institute of Seismological Research (ISR), Gandhinagar, Gujarat	MoES, DST Govt. of India	International Conference: International Symposium on The 2001 Bhuj Earthquake and Advances in Earthquake Science (AES I, 2011)
November 25, 2010	November 27, 2010	Institute: National Geophysical Research Institute (NGRI), Hyderabad	MoES, Govt. of India	Workshop: International Workshop on Earthquake Precursors
November 16, 2010	November 18, 2010	Institute: RBS Engineering College, Agra	DST, MoES Govt. of India	Workshop: International Workshop on Seimo-electromagnetics and Atmospheric Science
January 06, 2010	January 06, 2010	Saha Institute of Nuclear Physics, Kolkata	SINP, Kolkata Govt. of India	Seminar: Brain storming session on Nonlinear Phenomena
August 6, 2008	August 7, 2008	Institute: Physics Department, Kashmir University, Srinagar	DST, Govt. of India	Conference: National level Conference on Earthquake Prediction: Recent Developments & Challenges
January 19, 2008	January 28, 2008	Industry: Adsorption Research Inc., USA at ONGC Kuthalam GCS, Tamilnadu	ONGC	Industrial Training: “Extraction & Purification of Helium from Natural Gas via PLC based Pressure Swing Adsorption Technique”
November 14, 2007	November 16, 2007	Institute: Saha Institute of Nuclear Physics, Kolkata	DAE, Govt. of India & NSRP	Conference: National Symposium on Radiation Physics – 17
May 18, 2007	May 18, 2007	Institute: Center for Space Physics, Kolkata	ISRO, Govt. of India	Seminar: One day seminar on Space Physics and Earthquake Science
November 24, 2006	November 25, 2006	Institute: Suri Vidyasagar College, Suri, Birbhum,	DST Govt. of WB	Conference: National Seminar on “Recent Development in Disaster Management: Indian Perspective
November 20, 2006	November 22, 2006	Institute: RBS Engineering College, Agra	DST, Govt. of India	Workshop: International Workshop on Electromagnetic Studies Related to Earthquakes & Volcanoes
September 11, 2006	September 13, 2006	Institute: Saha Institute of Nuclear Physics, Kolkata,	DST, Govt. of India	Conference: Brain Storming Session on Geochemical Precursor Signal related to Seismic Event
July 16, 2006	July 19, 2006	Industry: Genitron Instruments GmbH, Frankfurt, Germany	Genitron Instruments GmbH, Frankfurt, Germany	Industrial Training: Short term Training Course on “Radiation Monitoring through Alpha - GUARD Radon Monitor and Its Accessories”
		Institute:	DAE,	Conference:



January 18, 2006.	January 20, 2006.	Menakshi Women College, Chennai	Govt. of India & NSRP	National Symposium on Radiation Physics – 16
December 19, 2005	December 19, 2005	Institute: Suri Vidyasagar College, Suri, Birbhum	SINP/VECC, Kolkata Govt. of India	Seminar: One day seminar on Earthquake Precursor using Radiation Monitoring
December 13, 2005	December 16, 2005	Institute: Saha Institute of Nuclear Physics, Kolkata	DST, DAE Govt. of India	Workshop: International Workshop on Models of Earthquake: Physics Approaches
January 22, 2003.	January 24, 2003.	Institute: Variable Energy Cyclotron Centre, Kolkata	DAE Govt. of India & Vacuum Society	Workshop: Workshop on Vacuum Technology and Its Application in Cryogenics

#### ❖ Academic and research activities related meeting attended

From	To	Place of visit	Purpose
May 31, 2019	May 31, 2019	NIT Durgapur	Screening of the eligible candidates for MACP during the year 2019
March 6, 2019	March 6, 2019	IIT Delhi	UBA RCI meeting to discuss the roles & responsibilities of RCIs under UBA
December 03, 2018	December 09, 2018	Hohai University, China	To have in-depth discussion and exchanges on the issues of BRICS water resources and pollution treatment
December 03, 2018	December 04, 2018	East China University of Technology, China	To discuss on the project frame and give lecture on the organic waste water treatment in aquatic system
November 12, 2018	November 12, 2018	Shastri Bhawan, New Delhi, India	National Coordination Committee meeting of BRICS NUs
June 26, 2017	June 26, 2017	Office of the Counsellor S&T, Embassy of India in Moscow	To explore the possibilities of collaboration in research and education between NIT Durgapur and Russian Universities
June 26, 2017	June 26, 2017	Office of the Counsellor S&T, Embassy of India in Moscow	To explore the possibilities of collaboration in research and education between NIT Durgapur and Russian Universities
June 26, 2017	June 26, 2017	Schmidt Institute of Physics of the Earth, Moscow	To initiate collaboration in the field of geoscience
June 25, 2017	June 25, 2017	Far Eastern Federal University, Rusky Island, Russia	To finalise the Project Proposal to be submitted jointly in the field of metal extraction from fly ash and preparation of documents relating to MoU
June 24, 2017	June 24, 2017	ITMO University, St. Petersburg, Russia	To initiate collaboration in the field of communication electronics and photonics
June 20, 2017	June 20, 2017	Tomsk Polytechnic University (TPU), Tomsk, Russia	To discuss the modalities of double degree programme in Water Resource and Pollution Treatment between NIT Durgapur, India and Tomsk Polytechnic University, Russia and preparation of documents relating to MoU
June 19, 2017	June 19, 2017	Budker Institute of Nuclear Physics, SB RAS, Novosibirsk, Russia	To initiate collaboration in the field of Nuclear Physics, High Energy Physics and Accelerator Physics
June 19, 2017	June 19, 2017	Trofimuk Institute of Petroleum Geology and Geophysics (IPGG SB RAS), Novosibirsk, Russia (a institute under Siberian branch of Russian Academy of Science)	To initiate collaboration in the field of geoscience and preparation of documents relating to MoU
June 19, 2017	June 19, 2017	Siberian State University of Geosystems and Technologies, Novosibirsk, Russia	To initiate collaboration in the field of geoscience
May 26, 2017	May 29, 2017	NIT Surathkal, Karnataka, India	To conduct the NIMCET 2017 at the NIT Surathkal Center
March 09, 2017	March 09, 2017	Office of Paschim Banga Serva Sikhsha Mission, Govt. of West Bengal, Bikash Bhvan, Kolkata	State level Steering Committee meeting for Rastriya Abhiskar Abhiyan

December 8, 2016	December 8, 2016	DVC headquarter , Ultadanga, Kolkata	Discussion meeting with the Member Technical at DVC headquarter , Ultadanga, Kolkata related with research project
July 20, 2016	July 20, 2016	Shastri Bhawan, New Delhi, India	National Coordination Committee meeting
June 17, 2016	June 17, 2016	DBT, GCO Complex, New Delhi, India related with research project	Discussion meeting with Secretary DBT
April 8, 2016	April 8, 2016	Jawahar Navodaya Vidyalaya, Durgapur	Discussion meeting as a resource person in the programme of 24 th National Children's Science Congress, 2016
October 19, 2015	October 19, 2015	Birbhum Indoor Stadium, Suri, Birbhum	To attend as a resource person the felicitation ceremony of the President of India
August 23, 2015	August 24, 2015	Bakreswar-Tantloi Geothermal Area	Field visit and discussion meeting with the scientific and research team of GSI
July 01, 2015	July 09, 2015	NIT Srinagar, Srinagar, J&K, India and Kashmir University, J&K, India	Discussion meeting towards exploration of possible research collaboration
May 27, 2015	May 27, 2015	Bakreswar Helium Laboratory	Visit of Chairman, BOG at Bakreswar Laboratory
December 02, 2014	December 05, 2014	Geochemical Monitoring Laboratory, TattaPani, J&K	Research activities and administration related activities
November 17, 2014	November 19, 2014	VECC Kolkata	Academic discussion with Chairman BOG

### Administrative/ Institute Support work: Members and coordinators of different committees

Section/office/ Institute level committee	From	To	Position held	Responsibilities
Institute level committee at NIT Durgapur	April 10, 2023	Till date	Member of the Committee to address the grievances (financial loss) of employee	To address the grievance (financial loss) of the employee
Institute level committee at NIT Durgapur	January 25, 2023	Till date	Member of the Committee to review the cases of pending increment of employee	To review the cases of pending increment of employee
Institute level committee at NIT Durgapur	April 13, 2022	Till date	Coordinator	To execute the activities related to Center for Digital Learning – NITD Pathshala i.e., online teaching of underprivileged school students from rural Bengal (A flagship programme of NIT Durgapur for service to the society)
Institute level committee at NIT Durgapur	February 16, 2022	Till date	Coordinator, Purchase Committee, CDL	To execute the purchase related activities of Center for Digital Learning
Institute level committee at NIT Durgapur	August 26, 2021	Till date	Coordinator	To execute the activities related to Center for Digital Learning – NITD Pathshala
Institute level committee at NIT Durgapur		Till date	Joint-Coordinator	To execute the activities related to Center for Research on Environment and Water
Department level	June 20, 2020	Till date	Ph D Coordinator, Center for Research on Environment and Water (CREW)	To execute the Ph D student admission related activities of Center for Research on Environment and Water (CREW) (A flagship programme of NIT Durgapur under HEFA project).
Institute level committee at NIT Durgapur	August 26, 2021	Till date	Joint-Coordinator	To execute the activities related to Center for Digital Learning
Institute level committee at NIT Durgapur	February 24, 2020	Till date	Convener	Launching of one interdisciplinary open elective course on History of Science & Technology for B. Tech students
Institute level committee at NIT Durgapur	February 17, 2020	Till date	Coordinator	Conducting Interdisciplinary seminar Lectures
Department Level	October 21, 2019	Till date	Convener, Departmental Purchase Committee, CREW (Center activities)	To execute the purchase related activities (Chemicals and Equipment) of Center for Research on Environment and Water (CREW)

Institute level committee at NIT Durgapur	July 25, 2019	Till date	Member of 'SMART Campus'	To execute the activities related SMART Campus' To look after the rainwater water harvesting project
Institute level committee at NIT Durgapur	July 22, 2019	July 22, 2019	Member of the Interview Committee	Selection of Office Assistant for UBA Project.
Institute level committee at NIT Durgapur	July 18, 2018	Till date	Coordinator APC Ray Science Museum	To execute the activities related Science Museum
Institute level committee at NIT Durgapur	July 16, 2019	July 16, 2019	Member of the Interview Committee	To select Ph. D. students for CREW
Institute level committee at NIT Durgapur	July 16, 2019	Till date	Member of the Screening Committee	Scrutinizing the applications for promotion of Officers and non-officers
Institute level committee at NIT Durgapur	July 03, 2019	February 27, 2021	Member of selection committee of Office Assistance under UBA	Selection of one Office Assistance for the coordination of UBA activities
Section level committee at NIT Durgapur	July 02, 2019	July 16, 2021	UG Coordinator	To act as the coordinator for the UG courses related with the Physics Department.
Institute level committee at NIT Durgapur	June 19, 2019	February 27, 2021	Co-Coordinator of UBA	To perform the activities related to UBA
Institute level committee at NIT Durgapur	May 27, 2019	Till date	Member of the Tendering Process Committee	To monitor and assist in tendering process for Security Service, Scavenging & Cleaning Service, Manpower Supply, Multi-Utility Vehicles, Guest House Outsourcing etc.
Institute level committee at NIT Durgapur		Till date	Mentor for B. Tech Students	Mentoring of the B. Tech students
Global level committee at India	October 12, 2018	Till date	Member of the BRICS (Brazil-Russia-India-China-South Africa) Network University International Thematic Group (BRICS NU ITG) : Water Resources and Pollution Treatment.	To focus the Indian contribution at BRICS ITG and to explore collaboration
Nantional level committee at India	October 12, 2018	Till date	SPoC (Single Point of Contact) at NIT Durgapur	Coordination of BRICS Network University Activities
Institute level committee at NIT Durgapur	December 07, 2018	Till date	Member and Joint Cordinator of 'Centre for Research on Environment and Water (CREW)'	Academic and administrative activities
Departmental Level	February 1, 2018	Till date	Convenor, Departmental Purchase Committee, Physics Dept.	To execute the purchase related activities (Chemicals and Equipment) of Physics Dept.
Institute level committee at NIT Durgapur	September 30, 2016 & June 20, 2017 & June 25, 2018	Till date	Member of Coordination Committee (NCC) of BRICS Network University Programme at NIT Durgapur	To perform the research activities and administrative job related to BRICS Network University at NIT Durgapur
Institute level committee for CoE at JIS College of Engineering	July 20, 2017	Till date	Advisor of the CoE at JIS College of Engineering	To advice the committee of CoE at JIS College of Engineering for implementation of Research and academic activities with Russian Universities
State level committee for RAA at West Bengal	March 03, 2017	Till date	Member of the State level Steering committee of "Rashtriya Avishkar Abhiyan (RAA)" at West Bengal	To advice the committee for implementation of "Rashtriya Avishkar Abhiyan (RAA)" at West Bengal

National level committee	June 20, 2017	Till date	Member from NIT Durgapur of National Coordination Committee (NCC) of BRICS Network University Programme	To perform the research activities and administrative job related to BRICS Network University
Institute level committee at NIT Durgapur	November 21, 2016 and June 15, 2016	Till date	Member for process of MACP consideration for employees	To scrutinize the applications form and to recommend the eligible candidates
Institute level committee at NIT Durgapur	May 12, 2016	Till date	Member for Screening Committee for the post of secretary at the office of the Director.	To scrutinize the applications form and to recommend the eligible candidates
Section level committee at NIT Durgapur	August 21, 2015	Till date	Convener of "IT Infrastructure Committee" at Physics Dept.	To put forward information/document to upload/modify in Institute's website. The same has to be collected and verified by the other faculty and staff members and Research students, M. tech. students, M. Sc. students under Physics department.
Section level committee at NIT Durgapur	June 29, 2015	June 29, 2017	UG Coordinator	To act as the coordinator for the UG courses related with the Physics Department.
Institute level committee at NIT Durgapur	June 09, 2015	Till date	Nodal Officer of "Rashtriya Avishkar Abhiyan (RAA)" at NIT Durgapur	To take initiatives to encourage science, mathematics through alternative strategies in schools by mentoring teachers and students of the schools and motivating students to participate in different science & maths competitions held across the globe. To make systematic improvements in the school systems by development of resource materials and use of latest technology in classrooms and laboratories.
Section level committee at NIT Durgapur	April 6, 2015	Till date	Faculty representative (Physics Dept.) for TPSW, NIT Durgapur	To keep in contact with the Placement Cell of the Institute about job opportunity for M. Tech and M. Sc. students of Physics Department and to provide information and make necessary arrangement of interviews for the students in discussion with the personalities from academia and industries.
Section level committee at NIT Durgapur	March 25, 2015	Till date	Coordinator of "Facility for Sensor Research" at Physics Dept.	To monitor the scientific, technical and academic progress of the project and deal with the financial and administrative aspect of the project related with Physics Department.
Section level committee at NIT Durgapur	January 7, 2015	Till date	Coordinator of "Prof. M. S. Sinha Colloquium" at Physics Dept.	To take initiative to communicate with eminent scientists in the field of Nuclear Physics, Cosmic ray and inviting them at NIT Durgapur and arrangement of academic talk in the Dept. of Physics every year.
Institute level committee at NIT Durgapur	November 24, 2014	November 25, 2014	Member of the Selection Committee for the recruitment of project staff related to "Helium and Geothermal Project" at NIT Durgapur	To act as expert for the selection committee
Institute level committee at NIT Durgapur	June 23, 2014	May 31, 2016	Project Manager of "Helium and Geothermal Project" at NIT Durgapur	To monitor the progress of the project, implementation of project related scientific, academic activities and research activities, solely responsible for execution of various administrative works, budget estimation, purchase & financial jobs to smoothly run the field at Bakreswar WB, Tantloi, Jharkhand, Tatta Pani, J&K and Baratang, A&N and NIT Durgapur in consultation with the Project Monitoring Committee. Working as a reporting officer of all the project staff and JRF stationed at the aforesaid laboratories.
Institute level committee at ONGC & SINP/VECC	January, 2007	January, 2008	Coordinator of "PSA Helium Plant at ONGC Gas field", Kuthalam, Tamilnadu. [A collaborative R & D Project of ONGC, DST and DAE (SINP & VECC)].	To develop PSA Helium Plant and to coordinate the operation of the R & D activities with scientists and engineers from ONGC, DST and DAE. Solely responsible for smooth running of the plant after its successful installation and commission.

### Membership of Professional Bodies:

Name of Professional Bodies	Grade of membership
BRICS ITG: Water Resources and Pollution Treatment	Member
The Society of Earth Scientists	Fellow
Indian Society of Earthquake Science (ISES), India	Life time membership
National Society for Radiation Physics (NSRP), India (Kolkata Chapter)	Life time membership
International Geo-hazard Research Society (Indian Chapter)	Life time membership
RadonLeaders.Org	Life time membership

### Session Chairman in Conference / Seminar

- Acted as the Chairperson of " Nanotechnology for Sustainable Environment (NTSE – 2024) organized by School of Chemical Engineering, Biotechnology & Food Technology, Haldia Institute of Technology on 26th September, 2024.
- Acted as the Chairperson of "Climate change and disaster management" [Three days national conference cum training], jointly organized by National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India and School of Law, Christ (Deemed to be University), Delhi, 4 - 6 October, 2021, (Virtual)
- Acted as the Chairperson of the International Conference - BRICS NUs: Water Resources and Pollution Treatment [WRPT-21], organized jointly NIT Durgapur, IIT Kanpur and BRIC ITG during by July 6-8, 2021
- Invited as Chief Guest in the Inauguration Session of Workshop on Remote Sensing & GIS organized by UGC-Human Resource Development Centre, The University of Burdwan, West Bengal during March 12-18, 2019
- Invited as Chief Guest in the Inauguration Session of Workshop on Remote Sensing & GIS organized by UGC-Human Resource Development Centre, The University of Burdwan, West Bengal during March 12-18, 2019
- Invited as a Publication chair in the 2nd International Conference on Emerging Materials: Characterization & Application (EMCA-2017) organized by Department of Physics, NIT Durgapur during March 12- 17, 2017
- Invited as a session chair in the Conferences National Conference on Natural Hazards and Mitigation held at Eshan College, Mathura, UP, India during 4 - 5 December, 2012.

### Worked as Reviewer in reputed international journals

- Solicited peer reviews for scientific journal: "Physica A: Statistical Mechanics and its Applications"
- Solicited peer reviews for scientific journal: "Current Scien"
- Solicited peer reviews for scientific journal: "Arabian Journal of Geosciences"
- Solicited peer reviews for scientific journal: "Nonlinear Processes in Geophysics"
- Solicited peer reviews for scientific journal: "Journal of Environmental Radioactivity"
- Solicited peer reviews for scientific journal: "Radiation Measurements"
- Solicited peer reviews for scientific journal: "International Scholars Journals"

### Outreach Activities Supporting Social and Educational Endeavors

Work done	From	To
Initiated the Center of Digital Learning for online school education for remote village students	August 26, 2021	Operating Till date
Organised Science Exhibition in connection to celebrating 'National Science Day 2020' at NIT Durgapur	February 27, 2020	February 28, 2020
Initiated Center for Research on Environment and Water (CREW) at NIT Durgapur for dedicated research and consultancy work on Environmental Protection of the industrial city Durgapur , West Bengal	January 28, 2020	Operating Till date
Organised Women Empowerment in India: Challenging Obstacles and Creating Opportunities at NIT Durgapur	January 6, 2020	January 10, 2020
Organised Engineering Model Competition Meet & Expo in India International Science Festival (IISF 2019)	November 5, 2019	November 8, 2019
Organised One day workshop on Participatory Rural Appraisal Techniques and Gram Panchayat Development Plan under UBA at NIT Durgapur	September 22, 2019	September 22, 2019
Organised One day Orientation Workshop for Higher Educational Institutess/Colleges/Universities of West Bengal & Sikkim for Development of Gram Panchayet and Rural technology development through Unnat Bharat Abhiyan 2.0 at NIT Durgapur	July 25, 2019	July 25, 2019
Organised Celebration of National Science Day 2019- Perspective of Women in Science: Exploration and Experience at NIT Durgapur	February 28, 2019	February 28, 2019
Organised School Teacher Training Workshop at NIT Durgapur	February 1, 2019	February 1, 2019
Celebration of National Education day 2018	November 11, 2018	November 11, 2018
Developed APC Ray Science Museum	November 11, 2018	Operating Till date

Developed module with teaching learning materials for mathematics, physics, chemistry and biology for school level through Rastriya Aviskar Abhiyan	09.03.2018	08.03.2019
Organized Science Fair 2018 for school students	November 03, 2018	November 03, 2018
Celebration of National Science Day for NITD students	February 28, 2018	February 28, 2018
Celebration of Matribhasa Divas for NITD students	February 23, 2018	February 23, 2018
Organised Advance Science and Technology Awareness Seminar (ASTAS) held at Suri Vidyasagar College, Suri, Birbhum, India (Worked as Co-convener)	April 30, 2011	April 30, 2011
Organised One day seminar on Space Physics and Earthquake Science held at DRDA Hall, Suri, Birbhum	May 18, 2007	May 18, 2007

### Visited abroad for Research and Academic purposes:

Institute/ Organization	Purpose	Dates	
		From	To
University of Tyumen, Russia	Teaching and Research in the Institute of Chemistry, Institute of Earth Science, Institute of Physics, Institute of Advanced Studies, Institute of X-Bio	January 15, 2023	February 9, 2023
East China University of Technology, Nanchang, China	To attend BRICS Project Meeting and to deliver invited talk at ECUT, China	October 29, 2019	November 3, 2019
Chinese Society of Environmental Sciences, Shenzhen, China	To deliver invited talk at 6th International Symposium on Soil and Groundwater (SG-2019)	October 26, 2019	October 28, 2019
Anhui University of Technology, Manshan, China	To deliver invited talk at Anhui University of Technology, China	December 8, 2018	December 8, 2018
East China University of Technology, Nanchang, China	To attend BRICS Project Meeting and to deliver invited talk at ECUT, China	December 3, 2018	December 4, 2018
Hohai University, Nanjing, China	To deliver invited talk at BRICS Water Workshop at Hohai University, China	December 5, 2018	December 9, 2018
Stellenbosch University, South Africa,	To deliver invited talk at BRICS Workshop Stellenbosch University, South Africa,	July 4, 2018	July 9, 2018
Czech Soil Science Society, International Association for Engineering Geology & the Environment at Prague, Czech Republic	To deliver invited talk at World Multidisciplinary Earth Sciences Symposium-WMESS 2017at Prague	September 11, 2017	September 15, 2017
Governor Office, Novosibirsk, Russia	To attend International Conference Technoprom 2017	June 17, 2017	June 27, 2017
Higher School of Economics, Moscow, Russia	To deliver talk at International Scientific Practical Conference-BRICS Water Forum	September 27, 2016	October 2, 2016
Dresden University of Technology & SARAD GmbH, Germany	To deliver talk at 8th Dresden Symposium Hazard - Detection and Management	August 31, 2015	September 4, 2015
Dresden University of Technology & SARAD GmbH, Germany	To deliver talk at 7th Dresden Symposium "Hazards - Detection and Management"	March 3, 2013	March 8, 2013
Saphymo GmbH, Frankfurt, Germany	To attend Training Course on gamma dose rate monitoring using "Gamma Tracer"	November 11, 2012	November 16, 2012
Genitron Instruments GmbH, Frankfurt, Germany	To attend Short term Training Course on "Radiation Monitoring through Alpha - GUARD Radon Monitor and Its Accessories"	July 16, 2006	July 19, 2006

**LANGUAGES KNOWN** : English, Bengali and Hindi

**EXTRA CURRICULAR ACTIVITIES** : Photography, Instrumental Music, Reading of books and articles on popular science and literature

### Name and address of two References:

1 <sup>st</sup> Referee		2 <sup>nd</sup> Referee	
Name			
Position			
Address			
e-Mail			

Phone No.			
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**DECLARATION**

“I hereby declare that the statements made by me in / above form are true, complete and correct to best of my knowledge and belief.”

Place: Durgapur.

Date: February 6, 2025

Signature of Applicant



(HIROK CHAUDHURI)