NITAI PAL

Professor
Department of Electrical Engineering
Indian Institute of Technology (Indian School of Mines)
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Education:

Ph.D. (Engg.) 2007 – Department of Electrical Engineering, Jadavpur University, Kolkata.

Thesis Title: Radio-frequency Mirror Inverter for Induction Cooker and the Corresponding Choice of Pan Material.

M. Tech. 2000 – Specialization: Electrical Machines & Power System, Electrical Engineering, University of Calcutta, Calcutta.

Dissertation Title: Computer Aided Performance Analysis of a Series Capacitor Compensated Extra High Voltage Transmission Line for its Efficient Operation.

B. Tech. 1998 – Discipline: Electrical Engineering, University of Calcutta, Calcutta.

Project Title: Microprocessor Based Monitoring and Controlling of Constant Speed Drive of DC Shunt Motor.

Teaching Experience:

17/08/2023 – Till Date	**Professor**, Department of Electrical Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad – 826004, Jharkhand, India.
29/05/2011 – 16/08/2023	**Associate Professor**, Department of Electrical Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad – 826004, Jharkhand, India.
29/05/2008 – 28/05/2011	**Assistant Professor**, Department of Electrical Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad – 826004, Jharkhand, India.

11/05/2007 – 28/05/2008	**Sr. Lecturer (Re-designated Assistant Professor)**, Department of Electrical Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad – 826004, Jharkhand, India.
01/10/2006 – 10/05/2007	**Sr. Lecturer**, Department of Electrical Engineering, College of Engineering & Management, Kolaghat, Purba Medinipur, approved by AICTE, accreditated by NBA and affiliated to West Bengal University of Technology, West Bengal, India.
08/07/2002 – 30/09/2006	**Lecturer**, Department of Electrical Engineering, College of Engineering & Management, Kolaghat, Purba Medinipur, approved by AICTE, accreditated by NBA and affiliated to West Bengal University of Technology, West Bengal, India.
14/02/2000 – 07/07/2002	**Lecturer**, Department of Electrical Engineering, Asansol Engineering College, Asansol, Burdwan, West Bengal, India.

<u>R&D Projects Completed</u>: Three (03) Nos.

1. a) Project Title:	Simulation of high-frequency mirror inverter for energy efficient induction heated cooking oven using PSPICE.
b) Objective:	Simulation of mirror inverter circuit for energy efficient induction heated cooking oven.
c) Status:	Completed (w.e.f. 01 / 04 / 2008 to 31 / 03 / 2011).
d) Project Value:	Rs. 6,98,000/-
e) Sponsoring Agency:	University Grant Commission (UGC), New Delhi, India.
f) Working Experience:	Co-investigator of the Research Project.
2. a) Project Title:	Development of Hybrid Off-grid Power Supply System for Remote Areas.

b) Objective:	Development of the state-of-the-art setup of hybrid off-grid power supply system for demonstrating and functioning the energy management and load balancing in remote areas.
c) Status:	Completed (w.e.f. 01 / 04 / 2013 to 31 / 03 / 2016).
d) Project Value:	Rs. 6,61,000/-
e) Sponsoring Agency:	University Grant Commission (UGC), New Delhi, India.
f) Working Experience:	Principal Investigator (PI) of the Research Project.
3. a) Project Title:	Design and Development of PV-Wind, Energy Storage-based Hybrid Renewable Energy System with Proper Energy Management and Control (*as Co-PI*)
b) Sponsoring authority:	NPIU, Govt. of India (under "TEQIP Collaborative Research Scheme")
c) Amount Sanctioned:	Rs.12**.**45***** Lakh
d) Date of sanction:	18/06/2019
e) Current Status:	Completed on 31st March 2021 (at Govt Engineering College, Raipur)
f) Working Experience:	Co-investigator of the Research Project.
***** The entire sanctioned amount has been utilized by the PI of the Project, Dr. Ashiwani Yadav (Research Scholar of EE-Dept, IIT(ISM) Dhanbad under the supervision of Prof. Nitai Pal) at Govt. Engineering College, Raipur.	

R&D Projects Ongoing: Two (02) Nos.	
1. a) Project Title:	Deployment of Smart Portable Off-Grid Hybrid Combined Heat & Power Unit Based on Hybrid Energy (Solar and Biomass) for Micro Farming and Small Food Processing Industries Located in Rural Areas of Jharkhand.
b) Objective:	Development of the state-of-the-art setup of a hybrid energy system for micro farming and small food processing industries located in rural areas of Jharkhand.
c) Sponsoring authority:	JREDA, Ranchi
d) Amount Sanctioned:	Rs. 48.554 Lakh
e) Status:	Ongoing (w.e.f. 22.09.2023)
f) Working Experience:	Principal Investigator (PI) of the Research Project.
2. a) Project Title:	Dynamic Charging of EVs using Wireless Power Transfer (WPT) Technique
b) Objective:	Development of the state-of-the-art setup of wireless charging infrastructure for EVs in dynamic condition.
c) Sponsoring authority:	IIT (ISM) Dhanbad (Institute Fund)
d) Amount Sanctioned:	Rs.10.00 Lakh
e) Status:	Ongoing (w.e.f. 10.08.2021)
f) Working Experience:	Co-investigator of the Research Project.
Ph.D. Thesis Supervised:	**Sixteen (16) Nos. from IIT (ISM), Dhanbad**
1)	"Security Constraints based Economic Operation in Large-Scale PV Integrated Power Networks" – by Ms. Deepti Singh, (**Awarded in July' 2023**); Supervisor: Prof. Nitai Pal and External Supervisor: Prof. Sunil Kumar Sinha, Dept. of Electrical Engineering, KNIT Sultanpur, UP.

2)	"Comprehensive Analysis of Voltage Sag Assessment, Data Analysis and Mitigation Strategies in Power Systems" – by Mr. Jagannath Patra (**Awarded in June' 2023**); Supervisor: Prof. Nitai Pal.
3)	"Artificial Intelligence and Blockchain Aided Smart Grid for Better Energy Management" – by Mr. Manish Kumar, (**Awarded in February' 2023**); Supervisor: Prof. Nitai Pal and External Supervisor: Prof. Mukesh Singh, Dept. of E&I, TIET, Patiala, Punjab.
4)	"Optimal Allocation of DG for Resilient Electrical Distribution Grid" – by Ms. Monika Yadav, (**Awarded in January' 2023**); Supervisor: Prof. Nitai Pal and External Supervisor: Dr. Devender Kumar Saini, Electrical Cluster, UPES, Dehradun.
5)	"Technical Investigation on the Performance of Solar Photovoltaic System for Remote Indian Regions" – by Mr. Nimish Kumar (**Awarded in September' 2022**); Supervisor: Prof. Nitai Pal.
6)	"Optimal Planning and Management of Renewable Integrated Hybrid Energy System" – by Mr. Ashiwani Yadav (**Awarded in June' 2022**); Supervisor: Prof. Nitai Pal.
7)	"Control Strategies for Standalone Distributed Energy Systems" – by Mr. Yaduvir Singh (**Awarded in April' 2022**); Supervisor: Prof. Nitai Pal.
8)	"Unit Sizing and Cost Analysis for Standalone Wind and Photovoltaic Hybrid Energy System" – by Mr. Faizan Arif Khan (**Awarded in April' 2022**); Supervisor: Prof. Nitai Pal and External Supervisor: Prof. Syed Hasan Saeed, Professor, Integral University, Lucknow.

9)	"Renewable Integrated Off-grid Sustainable Power Supply System for Remote Rural Areas" – by Mr. Pankaj Kumar (**Awarded in September' 2021**); Supervisor: Prof. Nitai Pal.
10)	"Design of Nonlinear Controller for the Improvement of Power System Stability" – by Mr. Asim Halder (**Awarded in July' 2021**); Supervisor: Prof. Nitai Pal and External Supervisor: Dr. Debasish Mondal, RCC Institute of Information Technology, Kolkata.
11)	"Sustainable Hybrid Off-grid Power Supply System for Remote Rural Area" – by Mr. Partha Sarothi Sikder (**Awarded in June' 2018**); Supervisor: Prof. Nitai Pal.
12)	"Energy Management and Control Strategies of Off-Grid Solar-Wind Hybrid Power Generation System" – by Mr. Himanshu Sharma (**Awarded in December' 2017**); Supervisor: Prof. Nitai Pal.
13)	"Design of an Energy Efficient Lighting System Using Solar Photovoltaic Cell" – by Ms. Nibedita Das (**Awarded in September' 2016**); Supervisor: Prof. Nitai Pal.
14)	"Communication and Emergency Lighting for Mines Under Disaster Conditions" – by Mr. S. Vamsi Krishna (**Awarded in November' 2015**); Supervisor: Prof. Nitai Pal.
15)	"Some Studies on High Frequency Resonant Inverter Based Induction Heater and the Choice of Secondary Metallic Objects" – by Mr. Atanu Bandyopadhyay (**Awarded in April' 2013)**; Supervisors: Prof. Nitai Pal and Prof. P. K. Sadhu.

16)	"Some Studies on Energy Efficient Induction Heater" – by Ms. Dola Sinha (**Awarded in February' 2013)**; Supervisors: Prof. Nitai Pal and Prof. P. K. Sadhu.

Patent Granted: 13 Nos. (*Indian*)

2026:

1. Patent No: **609253**, dated 12th November 2026 granted for "A Hybrid Renewable Energy Driven Bidirectional Wireless Charging System for Dynamic and Static Electric Vehicle", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Anik Goswami, Sonal Mishra, **Nitai Pal**, Arijit Baral, Anirban Ghoshal, and Kartick Chandra Jana.

2024:

2. Patent No: **522237**, dated 08th March 2024 granted for "Solar Induction Heating System using High Frequency Hybrid Resonant Inverter under ZSI Mode", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Avijit Chakraborty, Aniruddha Bhattacharjee, Pipul Roy, Pradip Kumar Sadhu, Niladri Das, and **Nitai Pal**.

2023:

3. Patent No: **470425**, dated 20th November 2023 granted for "Solar based Hybrid Heating System and Method with Constant Load Conditions for Low-Wattage Metallic Appliances", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Moumita Sadhu, Niladri Das, Meetarani Tripathy, Pradip Kumar Sadhu, **Nitai Pal**, and Utpal Goswami.
4. Patent No: **451268**, dated 13th September 2023 granted for "Solar based Hybrid Heating System and Method with Automatic Load Impedance Matching for Low-Wattage Metallic Appliances", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Kundan Kumar, Anik Goswami, Pradip Kumar Sadhu, Debabrata Roy, **Nitai Pal**, and M. K. Singh.
5. Patent No: **429901**, dated 25th April 2023 granted for "An Induction Curing System and Method for Roof Treatment with Asphalt Concrete to Cure a Crack-on Roof", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Kaushik Neogi, Atanu Banerjee, G. Panda, **N. Pal**, and K. C. Jana.

2022:

6. Patent No: **413988**, dated 08th December 2022 granted for "A High Frequency Hybrid Resonant Inverter with AC Input Source", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Ananyo Bhattacharya, Vivekananda Mukherjee, and **Nitai Pal**.
7. Patent No: **409320**, dated 19th October 2022 granted for "Contactless Emergency Lighting and Communication System with Axial Portability for Underground Mines", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: S. Vamsi Krishna, **Nitai Pal**, and Pradip Kumar Sadhu.
8. Patent No: **405442**, dated 31st August 2022 granted for "A Pacemaker Battery Recharger for Enhancing the Service Life", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Animesh Halder, **Nitai Pal**, Ankur Ganguly, Prabir Bhowmik, and Moumita Sadhu.
9. Patent No: **403045**, dated 4th August 2022 granted for "A System for Induction Heated Sterilization of Surgical Instruments and a Method for the Same", Patentee: Indian Institute

of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, **Nitai Pal**, Agamani Chakraborty, and Atanu Bandyopadhyay.

10. Patent No: **400850**, dated 5th July 2022 granted for "A Hybrid Particulate Matter (PM) Emission Control Device having Electrostatic Precipitator and High Frequency Induction Heating Coil for Diesel Engine and Method for the Same", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Kaushik Sit, Pradip Kumar Sadhu, Arijit Baral, Kallol Bhaumik, Moumita Chakraborty, Sudipta Chakraborty, and **Nitai Pal**.
11. Patent No: **393014**, dated 25th March 2022 granted for "A High Frequency Full Bridge Series Resonant Inverter with AC Input Source", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip K. Sadhu, Debabrata Roy, **Nitai Pal**, and Arijit Baral.

2021:

12. Patent No: **359838**, dated 26th February 2021 granted for "Emission Control Device for Diesel Engine to Reduce the Particulate Matters in Exhaust Gases and the Method for the Same", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip K. Sadhu, **Nitai Pal**, and Atanu Bandyopadhyay.

2020:

13. Patent No: **341969**, dated 20th July 2020 granted for "A High Frequency Modified Half Bridge Resonant Inverter with AC Input Source", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Palash Pal, **Nitai Pal**, and Arijit Baral.

Patent Published / Applied: 08 Nos. (*Indian*)

1. Prof. Anik Goswami, Prof. Pradip Kumar Sadhu, Prof. Prabhat Chandra Ghosh, Ms. Phularenu Das, Prof. Anirban Ghoshal, Prof. Arijit Baral, **Prof. Nitai Pal**, Mrs. Paromita Sadhu, Ms. Chitrangee Singh, Mr. Sagar Bhushan, Mr. Amit Kumar Singh, Sonal Mishra, and Dr. Koushik Mondal, "A hybrid renewable energy driven bidirectional dynamic and static wireless fast charging system for variable ground clearance and misalignment protected electric vehicles", submitted to the Patent Office, Government of India, Application No. **202631039815**, dated 30/03/**2026**.
2. Dr. Sukanta Halder, Nilanjan Das, Sampad Barik, Uppalapati Sudheer Kumar, Krunal Bhuvir, Shubham Ramesh Bhosale, Sk Bittu, Prof. Pradip Kumar Sadhu, Sonal Mishra, and **Prof. Nitai Pal**, "High-Frequency Isolated Dual-Channel Gate Driver for Wide Bandgap Inverters with Programmable Dead-Band and Parasitic-On Protection", submitted to the Patent Office, Government of India, Application No. **202631039825**, dated 30/03/**2026.**
3. Prof. Pradip Kumar Sadhu, Prof. Shyam A B, Phularenu Das, **Prof. Nitai Pal**, Chitrangee Singh, Prof. Anik Goswami, Mrs. Paromita Sadhu, and Sonal Mishra, "Hybrid Green Energy based DC Power Propelled Smart Sailing Boat / Cruise Utilizing BIPV, FSPV & CPV for Freshwater of Polar Countries", submitted to the Patent Office, Government of India, Application No. **202631033350**, dated 19/03/**2026**.
4. Prof. Pradip Kumar Sadhu, Prof. Anik Goswami, Mrs. Paromita Sadhu, **Prof. Nitai Pal**, Prof. Anirban Ghoshal, Sagar Bhushan, Phularenu Das, Amit Kumar Singh, and Sonal

Mishra, “Hybrid Green Energy based AC Power Propelled Smart Sailing Boat / Cruise Utilizing BIPV & FSPV for Saline Water of Tropical Countries”, submitted to the Patent Office, Government of India, Application No. **202631032473**, dated 18/03/**2026**.

5. Prof. Pradip Kumar Sadhu, **Prof. Nitai Pal**, Prof. Anik Goswami, Mrs. Paromita Sadhu, Prof. Anirban Ghoshal, Sagar Bhushan, Phularenu Das, Prof. Anindya Sinha, Dr. Koushik Mondal, and Sonal Mishra, “An IOT Based Non-contact Solid State Lighting, Portable Battery Charging of Cap Lamps and Generating Alert System in Multi-seam and Sectoral Underground Mines”, submitted to the Patent Office, Government of India, Application No. **202531130467**, dated 23/12/**2025**.
6. Ashiwani Yadav, Ramesh Singh Parihar, Poorva Sharma, Dewashri Pansari, **Nitai Pal**, Faizan Arif Khan, and Rohit Kumar Verma, “A Process for a Hybrid Renewable Energy System”, Journal of Patent, Patent Office, Government of India, Journal No. 16/2024, publication date 19/04/**2024**, Application No. **202221059628**.
7. Dr. Debarati Dey Roy, Prof. Dr. Arijit Saha, Susmita Dhar Mukherjee, Promit Kumar Saha, Dr. Rituparna Mukherjee, Dr. Saikat Majumdar, Anirban Ghosal, and **Dr. Nitai Pal**, “Electrically Doped DNA and Iron Quantum Dot Spintronic Model” Journal of Patent, Patent Office, Government of India, Journal No. 10/2023, publication date 10/03/**2023**, Application No. **202331004023**.
8. Abhishek Dhar, Promit Kumar Saha, Saurabh Adhikari, Rituparna Mukherjee, Saikat Majumdar, Aritras Chakraborty, and **Nitai Pal**, “Implementing a Smartphone-Controlled Low-Cost Drone” Journal of Patent, Patent Office, Government of India, Journal No. 06/2023, publication date 10/02/**2023**, Application No. **202331007043**.

Paper / Book / Patent Published:	**1)** International Journal : 67 **2)** National Journal : 07 **3)** International Conference : 64 **4)** National Conference : 26 **5)** Book Published : 02 **6)** Book Chapter Published : 16 **7)** Patent Granted, Govt. of India : 13 **8)** Patent Applied, Govt. of India : 08 **9)** Ph.D. Awarded : 16 **10)** Total Citations : 3040 (Google Scholar) **11)** h-index : 29 (Google Scholar) **12)** i10-index : 63 (Google Scholar)

Reviewer of International Journal:	**1)** **IEEE** Transactions on Power Electronics **2)** **IET**-Generation Transmission & Distribution **3)** **IEEE** Sensors Journal **4)** **IEEE** Access **5)** **IET** Smart Grid **6)** Journal of Energy Storage, **Elsevier** **7)** Renewable Energy, **Elsevier** **8)** Energy, **Elsevier** **9)** Applied Energy, **Elsevier** **10)** Energy Reports, **Elsevier** **11)** Microsystem Technologies, **Springer Nature** **12)** Clean Energy **13)** Electric Power Components and Systems **14)** International Journal of Electrical Power and Energy Systems (**IJEPES-Elsevier**) **15)** Building and Environment (**BAE-Elsevier**) **16)** International Journal of Ambient Energy. **Taylor & Francis** **17)** Journal of Energy in Southern Africa **18)** International Transactions on Electrical Energy Systems **19)** Environment, Development and Sustainability (**ENVI**)

Membership of Professional Bodies:	**1)** Senior Member No. 92825051, IEEE, USA. **2)** Member IEEE Power Electronics Society (PELS), Member IEEE Power & Energy Society (PES), USA. **3)** Senior Member, No. INAE/Ind M/192, INAE, India. **4)** Fellowship No. F-1200719 IE(I), Fellow of the Institution of Engineers (India), Kolkata, India. **5)** Fellowship No. F-504039 (IETE), Fellow of the Institution of Electronics & Telecommunication Engineers, New Delhi, India. **6)** Membership No. SM 9875 (98), IIIE (Indian Institution of Industrial Engineering), Navi Mumbai, India. **7)** Membership No. 118510, IAENG (International Association of Engineers), Hong Kong. **8)** Membership No. 80337149, IACSIT (International Association of Computer Science and Information Technology), Singapore. **9)** Membership No. LM–74602, ISTE (Indian Society for Technical Education), New Delhi, India. **10)** Membership No. LM–31239, SSI (System Society of India), New Delhi, India. **11)** Membership No. IDES–5075, Association of Computer Electronics and Electrical Engineers, Institute of Doctors, Engineers and Scientists (IDES). **12)** Membership No. 20150713544, Institute of Advanced Engineering and Science (IAES). **13)** Chartered Engineer [India] from Institution of Engineers (India), Kolkata, India.

Participation in Academic Work of External Bodies:	**1)** External Expert for the review of UG syllabus of the Department of Electrical Engineering, NIT Agartala. **2)** External Member of Board of Studies (BoS) for the Department of Electrical Engineering, Tezpur University, Tezpur, Assam w.e.f. August 2025. **3)** External Member for the confidential work at OUAT, Bhubaneswar, Odisha. **4)** Confidential work at BIT, Mesra, Ranchi. **5)** Nominated as Adviser to the UPSC. **6)** External Examiner of Ph.D. Thesis, IIT Delhi. **7)** External Examiner of Ph.D. Thesis, MNIT, Jaipur. **8)** External Examiner of Ph.D. Thesis, NIT, Kurukshetra. **9)** External Examiner of Ph.D. Thesis, NIT, Mizoram. **10)** External Examiner of Ph.D. Thesis, NIT, Patna. **11)** External Examiner of Ph.D. Thesis, Jadavpur University, Kolkata. **12)** External Examiner of Ph.D. Thesis, Calcutta University, Kolkata. **13)** External Examiner of Ph.D. Thesis, UPES, Dehradun. **14)** Member of the Advisory Committee for the International Conference on Power, Environment, and Intelligent Systems (PEIS-2026) scheduled to be held at the Department of Electrical Engineering, GKCIET, Malda, WB during 03–04 April 2026. **15)** External Expert of the Doctoral Advisory Committee in Ph.D. program of the School of Electronics Engineering, Vellore Institute of Technology, Vellore w.e.f. October 2024. **16)** Expert in Screening Committee for patent filing application of the Department of Electrical Engineering, IIEST, Shibpur w.e.f. July 2024. **17)** Board of Studies (subject expert), Department of Electrical Engineering, Ghani Khan Choudhury Institute of Engineering and Technology, Malda w.e.f. April 2024. **18)** External Examiner of Ph.D. Thesis, CSIR-Central Salt & Marine Chemicals Research Institute, Gujarat at AcSIR. **19)** External Examiner of the Doctoral Committee, SRM IST, Ghaziabad, UP. **20)** External Examiner of Ph.D. Thesis, Integral University, Lucknow UP. **21)** Nominated as an expert member of the AICTE Expert Visit committee for conducting physical visit to AICTE approved Institutions/ Universities. **22)** External Member of the Research Advisory Committee (RAC) for the Ph.D. evaluations at Lovely Professional University, Punjab. **23)** Moderator of semester question papers of Swami Vivekananda University, WB. **24)** Reviewer of Fellowship and Research Grant (FRG) under UGC, New Delhi.

	25) Board of Studies (important stakeholder), EEE Department, KIET Group of Institutions, Delhi-NCR, Ghaziabad. **26)** Nominated in Capacity Building Program for Promoting Positive Mental Health, Resilience and Wellbeing in HEIs being organised under the aegis of Malaviya Mission Teacher Training Program (MMTTP), MoE, GoI. **27)** Confidential work at UPSC. **28)** Confidential work at BPSC, Patna, Bihar. **29)** Confidential work at JPSC, Ranchi, Jharkhand. **30)** External Examiner of M.Tech. Thesis, Jawaharlal Nehru University, New Delhi. **31)** External Examiner of Ph.D. Thesis, BIT Mesra, Ranchi, Jharkhand. **32)** External Examiner of Ph.D. Thesis, Siksha 'O' Anusandhan, Bhubaneswar, Odisha. **33)** External Paper Setter of Ph.D. (Engg.) Entrance Exam, Sharda University, Greater Noida, UP. **34)** External Examiner of BIT, Sindri, Dhanbad (both UG and PG Level). **35)** External Examiner of Dumka Engineering College, Dumka (PPP Model under JUT, Govt. of Jharkhand). **36)** External Examiner of KKCEM, Dhanbad (under JUT, Govt. of Jharkhand) **37)** Reviewer of the books for Higher Education: (i) Electrical and Electronics Measurements and Instrumentation–Tata McGraw Hill Education Private Limited; (ii) Electrical Machines–Tata McGraw-Hill Publishing Company Ltd; (iii) Electrical Machines–Universities Press India Pvt. Ltd.; (iv) Power Transmission & Distribution–Pearson India; (v) Electrical Machine Design–Pearson India; (vi) Electromagnetics–SAGE Publications India Pvt Ltd; (vii) Switchgear and Protection–Pearson India; (viii) Power Electronics–McGraw-Hill Education; (ix) Electrical Machines–Cambridge University Press India; (x) GATE-EE–Wiley India Pvt. Ltd.; (xi) Electrical Machines (Bhattacharya , 3e)–McGraw-Hill Education (India); (xii) Power Electronics –Cengage Learning.

Administrative / Other Responsibilities:

1) Senate Member w.e.f. August 2023 till date.

2) Senate Nominee-1 of SPGC w.e.f. September 2023 to August 2025.

3) Chairman of Departmental Grievance Redressal Committee (DGRC) for the Students of the Department of Electrical Engineering w.e.f. February 2024 till date.

4) Convenor of the Department Space Committee, Department of Electrical Engineering w.e.f. August 2026 till date.

5) Chairman of the Committee for Inder Mohan Thapar Research (IMTR) Award for the Students of the Department of Electrical Engineering w.e.f. November 2023 till date.

6) Chairman of the Committee for the Best Ph.D. Thesis Award for Full-time Ph.D. Scholar of the Department of Electrical Engineering w.e.f. November 2026 till date.

7) Professor-in-charge, Skill Development Laboratory of the Department of Electrical Engg. From February 2026 till date.

8) Warden of Jasper Hostel w.e.f. July 2023 to June 2025.

9) DFSC Member (for Professor & Assoc. Prof.) w.e.f. May 2024 till date.

10) Member of DPGC of the Department w.e.f. July 2026 till date.

11) DPAC Member of the Department w.e.f. May 2022 till date.

12) Stock Holding Officer (Chairman) of the Department w.e.f. May 2018 to April 2025.

13) Principal Coordinator of Research and Development Centre for New and Renewable Energy in Jharkhand w.e.f. December 2023.

14) Institute Representative of JEE (Adv.) Exam.

15) Member of the committee for Improving students' employability in Government Polytechnics in Jharkhand w.e.f. January 2024.

16) Convener of DPGC of the Department w.e.f. October 2020 to October 2022.

17) Member of DUGC of the Department w.e.f. August 2018 to October 2020.

18) DFSC Member (for Asst. Prof.) w.e.f. December 2021 to March 2023.

19) Member of Academic Council w.e.f. January 2011 to January 2014.

20) Associate In-charge, Telephone Systems, Telecom Centre w.e.f. February 2012 to March 2017.

21) Member of DPAC & TAC of Telecom Centre w.e.f. February 2012 to March 2017.

22) Departmental coordinator of TEQIP-II Project w.e.f. April 2011 to March 2017.

23) Engaged in several administrative activities as allotted by HoD time to time.

24) Co-coordinator of Tech Fest "CONCETTO–2013".

25) Faculty Advisor for JRF of the Department w.e.f. September 2012 to December 2020.

26) Faculty In-charge of the Department.

27) Teacher in-charge, Electrical Engineering Society w.e.f. July 2011 to December 2021.

28) Treasurer, Electrical Engineering Society w.e.f. July 2009 to June 2011.

29) External member of DPAC & TAC in Central Workshop w.e.f. October 2013 to July 2018.

30) Member of "Stage Management & PA System" for Convocation w.e.f. 2008 to 2018.

31) Member of "Stage Preparation & Lighting Committee" of CONCETTO, IMC, III & BASANT.

32) Teacher Advisor for students (Anti-ragging squad member).

33) Chairperson and member of DSC from the Department till date.

34) External member of DSC from sister Department till date.

35) External member of DPAC and TAC in Centre of Renewable Energy.

36) Laboratory In-charge of Analog Electronics, Digital Electronics and Mine Electrical Tech. Labs.

37) Coordinator of Basics of Electrical Engineering (EEI101).

38) Member of the moderation board of M. Tech. (PSE).

39) Coordinator of 3-Yrs. M. Tech. (PEED), IIIF, New Delhi.

40) Chairman & member of some Departmental purchase files.

41) DRC member of the Department.

Courses Taught:	Basics of Electrical Engineering, Electrical Machines-I, Electrical Machines-II, Industrial Instrumentation, Advanced Machine Drives, Power Electronics, Applied Electrical Engineering, Circuit Theory, Field Theory, etc.
Research Interest:	Renewable integrated hybrid power system, Power Electronics applications, Application of high frequency converter, Wireless power transfer, Electric vehicles, Lighting and communication systems for mines etc.

M.Tech. Project Guidance:	• Several projects are supervised in different areas (80 Nos. Approx.)
B.Tech. Project Guidance:	• Several projects are supervised in different areas

Academic Awards / Scholarships:

- Recipient of 2nd best paper award for the paper (ID-28) entitled "A Novel Hybrid MPPT Approach for Tip Speed Ratio and Pitch angle control in Wind Energy Conversion System using Sea Lion – Puma Algorithm", – published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (ESDA2024) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
- Recipient of 2nd best paper award for the paper (ID-55) entitled "An accurate and explainable approach towards cardiac disease detection using bidirectional long short-term memory", – published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (ESDA2024) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
- Recipient of the National Scholarship Scheme of Government of India on the result of B.Sc. (Physics Honours), Part-II Exam held by Calcutta University in 1995, Ref. No. – ET/T/AW/NS/95/5041.
- Awarded a Prize named – "Jagindranath Barman Memorial' at the Annual Prize Distribution Ceremony, 1995, securing first position in Math (Pass) at C.U. Part-I Exam. among the students of B.Sc. Degree Course in the college Ramakrishna Mission Vidyamandira, Belur Math, Howrah, session 1992–95.
- Awarded a Medal named – "Somnath Banerjee Memorial" at the Annual Prize Distribution Ceremony, 1996, securing first class in Physics (Honours) at C.U. Part-II Exam. among the students of B.Sc. Degree Course in the college Ramakrishna Mission Vidyamandira, Belur Math, Howrah, session 1992–95.
- Recipient of the certificate from the 'Sishu Utsab Samiti", Kolaghat, securing 1st division along with 1st position among the students of 'Kola Union High School' in H.S. Exam–1992.

Abroad Visit for Attending International Conferences:

1) Dubai, UAE, during 16–18 November 2015.
2) Tokyo, Japan, during 15–17 March 2013.
3) Kowloon, Hong Kong during 14–16 March 2012.
4) Suntec City, Singapore during 26–28 February 2010.

Faculty Mobility Program: NHPC Visit; dated: 12–22 July 2022.

Conference Attended:

- Participated in two days 2nd International Conference on "Future-Ready Hospitals: Strategic Adoption of Industry 4.0 Technologies with vision Viksit Bharat@2047 (ICFRH-2026)", organized by the Department of Management Studies & Industrial Engineering, IIT (ISM), Dhanbad during February 27–28, 2026.
- Participated in three days International Conference on "Trends and Advances in Reforming Green Energy Technologies (TARGETs–2026)", organized by the Department of Physics, IIT (ISM) Dhanbad during February 13–15, 2026.
- Participated in two days National Conference on "Net Zero Emission Technologies for Sustainable Development- Challenges and Opportunities (N0ET–2026)", organized by the Department of Chemical Engineering, IIT(ISM) Dhanbad during February 10–11, 2026.
- Participated in two days International Conference on "Innovations in Fluid Power: Shaping the Future of Mobile and Industrial Machinery (IFP 2026)", organized by the Department of Mechanical Engineering, IIT (ISM), Dhanbad during January 24–25, 2026.
- Participated in three days 2nd IEEE International Conference on "Electrical, Electronics, Communication and Computers (ELEXCOM'25)", organized by the Department of Electronics Engineering, IIT (ISM), Dhanbad during December 20–22, 2025.
- Participated in two days National Conference on "Technological Advancements in Waste Management: Challenges and Opportunities (TAWMCO–2025)", organized by the Department of Environmental Science and Engineering, IIT (ISM), Dhanbad during December 05–06, 2025.
- Participated in two days International Conference on "Interdisciplinary Approach in Chemical and Biological Sciences (IACBS-2025)" in collaboration with the Indian Photobiology Society (IPS) organized by the Department of Chemistry and Chemical Biology, IIT (ISM), Dhanbad during December 01–02, 2025.
- Participated in two days International Conference on "Digital Intelligence for Green Mining and Industrial Networks – DIGMIN 2025", organized by the Department of Mining Engineering, IIT (ISM), Dhanbad during 12–13 September 2025.
- Participated in three days International Conference on "Mine Ventilation and Environment for Green Mining (MVEGM-2024)", organized by the Department of Mining Engineering, IIT (ISM), Dhanbad held at Puri, Odisha during 20–22 December 2024.

• Act as a session chair in the 7th International Conference on Energy Systems, Drives and Automations (ESDA2024) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
• Participated in three days national conference on "Emerging Trends in Earth Sciences: Geohazards and Resource Management (ETES-2024)", organized by the Department of Applied Geophysics, IIT (ISM), Dhanbad during 27–29 September 2024.
• Participated in two days PAN–IIT 6th International Conference on "Financial Markets & Corporate Finance (ICFMCF–2024)", organized by the Department of Management Studies and Industrial Engineering, IIT (ISM), Dhanbad during 06–07 July 2024.
• Participated in three days National Conference on "Modeling, Analysis and Simulation (MAS–2024)", organized by the Department of Mathematics and Computing, IIT (ISM), Dhanbad during 28–30 June 2024.
• Participated in two days International Conference on "Sustainable Development and Management Practices (ICSDMP–2024)", organized by the Department of Management Studies and Industrial Engineering, IIT (ISM), Dhanbad during 09–10 February 2024.
• Participated in three days International Conference on "Advances in Spectroscopic Techniques and Materials (ASTM-2024)", organized by the Department of Physics, IIT (ISM), Dhanbad during 18–20 January 2024.
• Participated as session chair in two days 6th International Conference on "Energy Systems, Drives and Automations (ESDA2023)", organized by the Applied Computer Technology, Kolkata during 30–31 December 2023.
• Participated in three days International Conference on "Safe, Smart and Sustainable Mining (3SM)", organized by the Department of Mining Engineering, IIT (ISM), Dhanbad at Margao, Goa during 16–18 December 2023.
• Participated in two days National Conference on Technological Advancements in Waste Management: Challenges and Opportunities–2023 (TAWMCO – 2023)", organized by the Department of Environmental Science and Engineering, IIT (ISM), Dhanbad during 04–05 December 2023.
• Participated in three days 5th International Conference on Recent Advances in Information Technology (RAIT-2023) organized by the Department of Computer Science and Engineering, IIT (ISM), Dhanbad during 03–05 March 2023.
• Participated in three days 4th International Conference on Recent Advances in Information Technology (RAIT-2018) organized by the Department of Computer Science and Engineering, IIT (ISM), Dhanbad during 15–17 March 2018.
• Participated in two days 3rd National Conference on Mining Equipment: New Technologies, Challenges and Applications (MENTCA 2018) organized by the Department of Mining Machinery Engineering, IIT (ISM), Dhanbad during 09–10 February 2018.

- Participated in 4th International Conference on Power, Control and Embedded System (ICPCES-2017), organized by MNNIT, Allahabad during 09–11, March 2017.
- Participated in two days National Conference on Recent Advances in Science and Engineering (RASE-2016) organized by Faculty Development Centre, Indian School of Mines, Dhanbad during 28–29 March 2016.
- Participated in three days 3rd International Conference on Recent Advances in Information Technology (RAIT-2016) organized by the Department of Computer Science and Engineering, Indian School of Mines, Dhanbad during 03–05 March 2016.
- Participated in three days 2nd International Conference & Exhibition on "Industrial Engineering-2015" Dubai, UAE during 16–18 November 2015.
- Participated in two days National Conference on Mining Equipment: New Technologies, Challenges and Applications (MENTCA 2015) organized by the Department of Mining Machinery Engineering, Indian School of Mines, Dhanbad during 09–10 October 2015.
- Participated in three days 2nd International Conference on Engineering & Applied Science" (ICEAS 2013), at Tokyo, Japan, during 15–17 March 2013.
- Participated in three days International MultiConference of Engineers and Computer Scientist (IMECS 2012), at The Royal Garden, 69 Mody Road, Tsimshatsui, Kowloon, Hong Kong during 14–16 March 2012.
- Participated in three days National Seminar on "Mining Equipment – New Technologies Challenges and their Application (MENTCA–2012) organized by Department of Mechanical Engineering & Mining Machinery Engineering, Indian School of Mines, Dhanbad – 826004, Jharkhand during 19–21 January 2012.
- Participated in two days National Seminar on "Frontiers in Electronics, Communication, Instrumentation and Information Technology (FECIT–2011) organized by Department of Electronics Engineering, Indian School of Mines, Dhanbad – 826004, Jharkhand during 03–04 November 2011.
- National Conference cum Workshop on "Geological and Technological Facets of CBM, Shale Gas, Energy Resources and CO2 Sequestrain (CSECS2010)" organized by Department of Applied Geology, Indian School of Mines, Dhanbad-826004 dated 19–20 November 2010.
- National Seminar on "Drills & Drilling – An Update" (D & DU – 2010) organized by Department of Mechanical Engineering & Mining Machinery Engineering, Indian School of Mines, Dhanbad – 826004, Jharkhand dated 23–24 September 2010.
- "International Conference on Computer and Automation Engineering" (ICCAE 2010) organized by IACSIT, Sichuan University and IEEE, Computational Intelligence Society, held in Suntec City, Singapore dated 26–28 February 2010.
- International Conference on Mine Ventilation" (9th IMVC) organized by Indian School of Mines, Dhanbad – 826004, Jharkhand held in New Delhi, India dated 10–13 November 2009.

- National Seminar on "Crushing Screening & Conveying" (CS&C–2008) organized by Department of Mechanical Engineering & Mining Machinery Engineering, Indian School of Mines University, Dhanbad – 826004, Jharkhand dated 11–12 September 2008.
- International Conference on "Modelling and Simulation (MS–07)", organized by the Department of Applied Physics, University of Calcutta in association with AMSE held at The Circle, VIP Road, Kolkata dated 03–05 December 2007.
- International Conference on "Emerging Trends in Electrical Engineering (ETEE–2007)" organized by Electrical Engineering Department, Jadavpur University, Kolkata held at Science City, Kolkata dated 12–14 January 2007.
- National Seminar on "Condition Monitoring Overview & Advanced Techniques" (COMOAT–2006), organized by Mechanical Engineering & Mining Machinery Engineering Department, Indian School of Mines, Dhanbad dated 15–16 September 2006.
- National Seminar on "Intelligent Tools in Electrical System" (ITES-2006) organized under CAS – Programme, UGC, Govt. of India by Electrical Engineering Department of Jadavpur University in collaboration with Power Engineering Chapter of IEEE Calcutta Section on 22nd March 2006.
- 28th Annual Convention and Exhibition of IEEE India Council (EPIC IEEE ACE 2002) organized by IEEE Calcutta Section held at Science City, Kolkata, India dated 20–21 December 2002.
- International Conference on "Control Instrumentation and Information Communication" (CIIC-2001) organized by The Department of Applied Physics, University of Calcutta held at Science City, Kolkata, India dated 13–15 December 2001.

Guest / Expert Speaker:

- Delivered an expert lecture in the International Conference on Power, Environment, and Intelligent Systems (PEIS-2026), organized by the Department of Electrical Engineering, Ghani Khan Choudhury Institute of Engineering & Technology, Malda, West Bengal, India during 03–04 April 2026.
- Delivered an expert lecture in 2nd National Level FDP on "Recent Trends in Electrical and Electronics & Communication Technology", organized by Tripura University (A Central University), Tripura held on 10th November 2025.
- Delivered lecture as Keynote Speaker for FDP on IPR and the 7th International Conference on Energy Systems, Drives and Automations (ESDA2024) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.

• Delivered an expert lecture on 28th December 2024 in the EDP Course on "Refresher Training Program for CIL Executives", organized by the Department of Management Studies & Industrial Engineering, IIT (ISM) Dhanbad during 16–29 December 2024.
• Delivered an expert lecture in the International Conference on "Sustainable Transition for Future-Ready Jharkhand: Global Perspectives & Learnings for Climate Resilient Growth" organized by the Task Force-Sustainable Just Transition, Government of Jharkhand in collaboration with the Centre for Environment and Energy Development (CEED), United Nations Development Program (UNDP) and World Resources Institute (WRI) India, held on 15th February 2024.
• Delivered an expert lecture in FDP on "Unveiling the Research Process: Methodology, Problem Identification, and Simulation-Based Hardware Implementation" organized by Government Engineering College, Raipur, Chhattisgarh, held on 31st July 2023.
• Delivered an invited lecture in FDP on "Modern Technologies in Electrical Engineering" organized by Dr. B. C. Roy Polytechnic, Durgapur, held on 15th February 2023.
• Delivered an invited lecture in FDP on "Renewable Energy Technologies for Sustainable Development" organized by Dr. B. C. Roy Polytechnic, Durgapur, held on 19th June 2021.
• Delivered an expert lecture in workshop on "Electrical Safety in Mines and Substations", organized by BCCL, Koyla Bhawan, Koyla Nagar, Dhanbad, held on 20th February 2019.
• Delivered an expert lecture in one-week short term course on "Recent Trends in Intelligent Systems Design (RTISD-2019)" sponsored by TEQIP-III organized by Department of Electrical Engineering, NIT, Durgapur, WB, held on 12th January 2019.
• Delivered an expert lecture in short term course on "Machine Vibration & Diagnostic Maintenance" (Topic - Condition Based Maintenance of Electrical Equipment, dated – 08/01/09), organized by Department of Mechanical Engineering & Mining Machinery Engineering, Indian School of Mines University, Dhanbad–826004, Jharkhand held on 05 – 09 January 2009.
• Delivered an expert lecture in short term course on "Environment and Health Hazards and Ecological Challenges – Role of Engineers" on the occasion of 41st Annual General Meeting of the Institution of Engineers (India), Asansol Local Centre held on 02nd November 2008 at Burnpur Club, Asansol, W.B.

Refresher Course / Workshop Attended:

- Visited Teesta-V Power Station, Sigtam, Sikkim, NHPC Ltd., dated: 12–22 July 2022.
- Two days' workshop on "Smart Grid and Cyber Security" organized by CPRI, Bangalore, dated 05–06 January 2017.
- "Entrepreneurship Development Programme for Faculties" held at Science & Technology Entrepreneurs' Park, IIT Kharagpur, dated 26th March 2009 to 04th April 2009.
- National Workshop on "High Voltage Engineering and its relevance to Modern Power System" (NWHE-2006) organized by Electrical Engineering Department, Bengal Engineering and Science University, Shibpur, dated 26–28 October 2006.
- Workshop programme on "LaTex – an Introduction" organized by Department of Computer Science & Engineering and Information Technology, College of Engineering & Management, Kolaghat, Purba Medinipur, dated 18–19 July 2006.
- "Advanced Computational Techniques in Electrical Engineering" held at Electrical Engineering Department, Jadavpur University, Kolkata in collaboration with Power Engineering Chapter, IEEE Calcutta Section, dated 03–08 July 2006.
- "Recent Advances in Power System Under Deregulated Environment" held at College of Engineering & Management, Kolaghat, approved by AICTE and affiliated to West Bengal University of Technology and accredited by NBA, dated 05–16 July 2004.
- "Recent Advances in Power Engineering" held at Jadavpur University, Kolkata, dated 26th May 2003 to 14th June 2003.
- "Frontier of Measurement and Instrumentation" held at IIT–KGP, West Medinipur, dated 05–17 May 2002.

EDP Organized:

- Program Coordinator **(PC)** of the **EDP** course titled "Mine Electrical Drives Technology and Safety Challenges (No: OCEP 0128 E)", dated 17–21 August 2026, Clients: CIL & it's Subsidiaries, SECL, HCL, NALCO etc. (Value: Rs. **7,67,000/-**).
- Program Coordinator **(PC)** of the **EDP** course titled "Electrical Safety and Smart Maintenance for Sustainable Mines (No: OCEP 0067 E)", dated 05–09 January 2026, Clients: CIL & it's Subsidiaries, NALCO etc. (Value: Rs. **12,39,000/-**).
- Consultant In-charge (**CI**) of the **EDP** course titled "Electrical Safety and Precautionary Maintenance for Sustainable Mines (No: CONS 7520 E)", dated 04–08 August 2025, Clients: CIL & it's Subsidiaries, SAIL etc. (Value: Rs. **28,32,000/-**).

- Consultant In-charge (**CI**) of the **EDP** course titled "Preventive Maintenance and Electrical Safety in Mines (No: CONS 7304 E)", dated 20–24 January 2025, Clients: CIL & it's Subsidiaries (Value: Rs. **31,50,000/-**).
- Consultant In-charge (**CI**) of the **EDP** course titled "Electrical Safety in Sustainable Mines: Challenges and Mitigation (No: EDP/7212/2023-24)", dated 22–26 July 2024, Clients: CIL & it's Subsidiaries (Value: Rs. **19,20,000/-**).

Consultancy Organized:

- Co-Consultant In-charge (**Co-CI**) of the **Consultancy** Project titled "Environmental and Social Impact Assessment (ESIA) Studies at Maithon, Komar, Panchet, Tilaiya and Barhi for Development of Renewable Energy Projects within DVC Command Area (No: CONS 7704 C)" for 01 (one) year w.e.f. fund receipt date, Clients: Damodar Valley Corporation, Kolkata (Value: Rs. **76,70,000/-**).
- Consultant In-charge (**CI**) in **Consultancy** Project titled "Recent Challenges and Mitigation Thereof on Electrical Safety in Mines (No: EDP/0002/18-19)", dated 22–26 June 2018; (Value: Rs. **6,80,000/-**).
- Consultant In-charge (**CI**) in **Consultancy** Project titled "Electrical Safety and Protection in Mines (No: CONS/3671/17-18)", dated 17–21 December 2017; (Value: Rs. **8,22,478/-**).
- Consultant In-charge (**CI**) in **Consultancy** Project titled "Electrical Safety in Mines & Future Prospects (No: CONS/3546/17-18)", dated 19–22 June 2017; (Value: Rs. **9,79,611/-**).
- Co-consultant In-charge (**Co-CI**) in **Consultancy** Project titled "Electrical Safety in Mines (No: CONS/3389/2016-17)", dated 26–30 December 2016; (Value: Rs. **3,99,983/-**).
- Co-consultant In-charge (**Co-CI**) in **Consultancy** Project titled "Advanced Electrical Power Technology (No: CONS/2839/2015-16)", dated 12–17 July 2015; (Value: Rs.**2,26,000/-**).
- Consultant In-charge (**CI**) in **Consultancy** Project titled "Advanced Power Electronics and Power Quality (No: CONS/2840/2015-16)", dated 05–10 July 2015; (Value: Rs.**2,18,000/-**).
- Consultant In-charge (**CI**) in **Consultancy** Project titled "Application of Power Electronics (No: CONS/2715/14-15)", dated 29th December 2014 to 03rd January 2015; (Value: Rs. **1,64,000/-**).
- Consultant In-charge (**CI**) in **Consultancy** Project titled "Application of Power Electronics in Renewable Energy (No: CONS/2518/13-14)", dated 07–11 July 2014; (Value: Rs.**1,48,500/-**).
- Consultant In-charge (**CI**) in **Consultancy** Project titled "Application of Power Electronics in Renewable Energy (No: CONS/2512/13-14)", dated 30th June to 04th July 2014; (Value: Rs.**1,22,000/-**).
- Co-consultant In-charge (**Co-CI**) in **Consultancy** Project titled "Advanced Power Electronics and Drives (No: CONS/2403/13-14)", dated 30th December 2013 to 04th January 2014; (Value: Rs.**1,79,000/-**).

FDP Organized:

- **Co-coordinator** in Faculty Development Program (**FDP**) on Innovation & Entrepreneurship (No: ORAC 0176) vide Sanction Letter No. M/129/2025/MIC, dated 27th February 2025, sponsored by All India Council of Technical Education (AICTE), MoE, Govt. of India during 24th to 28th March 2025 held at IIT (ISM) Dhanbad; (Value: Rs. **3,50,000/-**).

- **Member Coordinator** in Innovation, Design and Entrepreneurship (**IDE**) Boot Camp for School Teachers of Jharkhand (No: ORAC 0127) under AICTE, & MoE Innovation Cell, Govt. of India during 29th to 30th November 2024 held at IIT(ISM) Dhanbad; (Value: Rs.**15,00,000/-**).

Conference Organized:

- **Member Coordinator and Chairperson** of Technical Session in the 01st IEEE International Conference on Smart and Sustainable Developments in Electrical Engineering (SSDEE-2025) organized by the Department of Electrical Engineering, IIT (ISM) Dhanbad during February 28 to March 02, 2025.