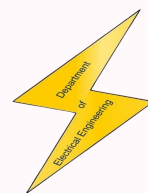


Department of Electrical Engineering

Indian Institute of Technology (Indian School of Mines) Dhanbad



VIBHAV



Vol.I, No.5

January, 2025

Monthly Newsletter

MESSAGE FROM HoD's DESK

By PROF. SUKANTA DAS



Dear All,

Hope you are doing well!

With a great pleasure, I hereby introduce the fifth edition of the Monthly Newsletter of the Department of Electrical Engineering: "VIBHAV".

This edition of the Newsletter primarily focuses to report the achievements of the department for the month of January-2025. The key highlight of this version is the individual achievement of our faculty members.

I invite you to go through this edition of our Monthly Newsletter. I also request our students to engage themselves actively for the betterment of the Monthly Newsletter. All of you are requested to forward your constructive comments at ee@iitism.ac.in. The Editorial Team is committed to publish much improved versions in the forthcoming editions of "VIBHAV".

Thank you all.

Best regards.

ABOUT THE DEPARTMENT

The Electrical Engineering department was established in the year 2005. The four-year B.Tech. program in Electrical Engineering was started in the academic session 2006-07. Though, the Department of Electrical Engineering is one of the latest of the existing departments of the Institute, the Electrical Engineering Section existed as a part of earlier Mining Machinery Engineering department from 1975. Apart from different B.Tech. programs, the department at present also offers M.Tech programs in Power System Engineering and Power Electronics & Electrical Drives. Through the Ph.D. and Post-Doctoral Programs majority of the research activities are being carried out in the department.

INDIVIDUAL ACHIEVEMENT

Prof. Arijit Baral is selected as a senior individual member of Indian National Academy of Engineering (INAE)

Hearty Congratulations for his achievement !



PATENTS

Patent no. 202531004108, Dated 17th Jan. 2025, "Compact Three-Phase Saturated Core Fault Current Limiter (SCFCL) for Grid-Connected DFIG Systems," **Kalyan Chatterjee** and Prashant Mani Tripathi filed to Indian Patent Office.

Patent no. 202531003225, Dated 24th Jan. 2025, "Hybrid Input Electric Vehicle Charging System," C. Verma, S. K. Sena and **A. Kumar** published to Indian Patent Office.

PUBLICATIONS

Journals

- B. Panda, S. Kumar and **A. Ghoshal**, "Implementation of SOLM as an Extended SVPWM for Variable Six Pulse DC-Bus Electrolytic Capacitor-less VSI Based Constant V/f Induction Motor Drive," accepted for publication in *IEEE Transactions on Power Electronics*, 2025. (Accepted)
- Sandeep Tripathi, Ashish Shrivastava, and **K. C. Jana**, "EO based fuzzy optimal controller for solar MPPT and battery charging circuit for EV charging application," *International Journal of Dynamics and Control*, vol. 13, no. 2, pp. 66, 2025.

OUTREACH ACTIVITIES

- **Prof. Nitai Pal** organized five days Executive Development Program (EDP), No. CONS 7304 E as consultant-in-charge (CI) on “Preventive Maintenance and Electrical Safety in Mines”, for CIL and its subsidiaries organized by the Department of Electrical Engineering, IIT (ISM), Dhanbad during 20th – 24th January 2025.
- **Prof. Nitai Pal** delivered expert lecture in five days Executive Development Program (EDP), No. CONS 7304 E as consultant-in-charge (CI) on “Preventive Maintenance and Electrical Safety in Mines”, for CIL and its subsidiaries organized by the Department of Electrical Engineering, IIT (ISM), Dhanbad during 20th – 24th January 2025.
- **Prof. Nitai Pal** delivered expert lecture in the EDP Course on “Refresher Training Program for CIL Executives”, organized by the Department of Management Studies & Industrial Engineering, IIT (ISM) Dhanbad during 16–30 January 2025.
- **Prof. Sukanta Halder** delivered an Expert Lecture on “A Deep Dive into EV Innovation: The Powertrain and Autonomous Driving”, in 10-day Faculty Development Programme (FDP) on “Microgrids and Distributed Energy Resources: Building Smart Grid Solutions”, organized by the Electronics & ICT Academy, NIT Warangal In Association With Department of Electrical Engineering, NIT Warangal, Sponsored by Ministry of Electronics and Information Technology (MeitY), GoI, December 2024.
- **Prof. Sukanta Halder** and **Prof. Soumyabrata Barik** delivered an Expert Lecture on “Handling of Power Electronics Circuitry Problems in Mines” in Executive development Program on “Preventive Maintenance and Electrical Safety in Mines (PMESM)” organized by IIT (ISM) Dhanbad from 20th – 24th January 2025.
- **Prof. Sukanta Halder** delivered an Expert Lecture on “Innovation in Motor Drives: Way forward in Electric Vehicle.”, in Faculty Development Program (FDP) on “Electric Vehicles and Energy Storage Systems: Recent Trends and Future Prospects” organized by NIT Patna in association with Electronics & ICT Academy from 27th Jan - 31st Jan 2025.
- **Prof. Sethupathy S** chaired a technical session in *International Conference on Next Generation Communication & Information Processing (IEEE INCIP 2025) Conference*, Manipal Institute of Technology, Bengaluru, India.
- **Prof. Anirban Ghoshal** has received an invitation to serve on Editorial Board of the *Sadhana (Electrical Sciences)* as Associate Editor for the period from 1 January 2025 to December 2027.



The EDP program “Preventive Maintenance and Electrical Safety in Mines” has been designed to keep in view the diverse aspects of electrical safety issues of the minors and preventive maintenance of machinery under operations in underground and open-cast mines. Besides the huge production, safety is the first and foremost choice for the miners as well as the preventive maintenance of machineries is the vaccine for Production. Also, the realization of vast potential of its applications in various dimensions of its functioning has been considered. So, the topic is quite relevant nowadays for sustainable mines to increase productivity efficiently and effectively with safety.

STUDENTS' CORNER

Dr. Nimesh Kumar Singh is awarded with the Ph.D. degree in Electrical Engineering in the month of Jan. 2025.

Hearty Congratulations to him!

UPCOMING EVENTS

First *IEEE International Conference on Smart and Sustainable Developments in Electrical Engineering (SSDEE)* from 28th Feb. to 2nd Mar. 2025.

🔗Link to Access: <https://people.iitism.ac.in/ssdee-2025/>

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