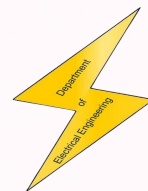


Department of Electrical Engineering

Indian Institute of Technology (Indian School of Mines) Dhanbad



VIBHAV



Vol.I, No.9

May, 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 'May' edition of the Monthly Newsletter of the Department of Electrical Engineering: "VIBHAV".

The past month had been a vibrating month for the department. A number faculties were engaged in organizing outreach activities. A brief report is presented in this edition. I invite you to go through this edition of our Monthly Newsletter. I also ask our students to actively participate in the improvement of the Monthly Newsletter. You are requested to forward your constructive comments to ee@iitism.ac.in for the betterment of the forthcoming editions of "VIBHAV".

Thank you all.

Best wishes.

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. Although 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 funded projects, consultancies, Doctoral, and postdoctoral programs, most of the research activities are being carried out in the department.

PUBLICATIONS

Journals

- A. Yadav, J. Patra, R. Verma, **N. Pal**, S. Samantray, B. b. Sahoo, P. Singh, R. S. Parihar, A. K. Panda, "Efficient Multi-Objective Approach using ABC Algorithm for Minimizing Generation Fuel Cost and Transmission Loss through FACTS Controllers Placement and Sizing," – *Iranian Journal of Science and Technology, Transactions of Electrical Engineering–Springer Nature*, pp. 1-23, May 2025.
- P. Bhukya, **K. N. Bhukya**, "An advanced approach for cloud enabled energy efficient ventilation control of multiple main fans in underground coal mines," *Computers and Electrical Engineering*, 124, 110330.
- V. Florinski, D. Balsara, D. Bhoriya, G.P. Zank, S. Biswas, S. Sharma, and

Sethupathy S, "An Anisotropic Plasma Model of the Heliospheric Interface," *The Astrophysical Journal*, vol. 985, no. 1, pp. 1-10, 2025.

WEBINAR

- A Two days Centenary Webinar on "Embracing Control Theory in Modern Real-World" has been conducted in the Department of Electrical Engineering, Indian Institute of Technology (ISM) Dhanbad, India on 28-29 May 2025. Coordinator: **Prof. Bhawana Singh** Co-coordinator: **Prof. Shyam A B**

OUTREACH ACTIVITIES

- **Prof. Nitai Pal** evaluated Ph.D. Thesis of Integral University, Lucknow, UP.
- **Prof. Nitai Pal** attended Board of Studies (BoS) meeting at KIET Group of Institutions, Delhi-NCR, Ghaziabad.
- **Prof. Nitai Pal** conducted Viva-voce exam as an external examiner of (i) BIT Sindri, Dhanbad, (ii) K. K. College of Engineering & Management, Dhanbad and (iii) Dumka Engineering College, Dumka under Jharkhand University of Technology (JUT), Ranchi.
- **Prof. Nitai Pal** reviewed SCIE Journal paper in Sadhana, Springer Nature.

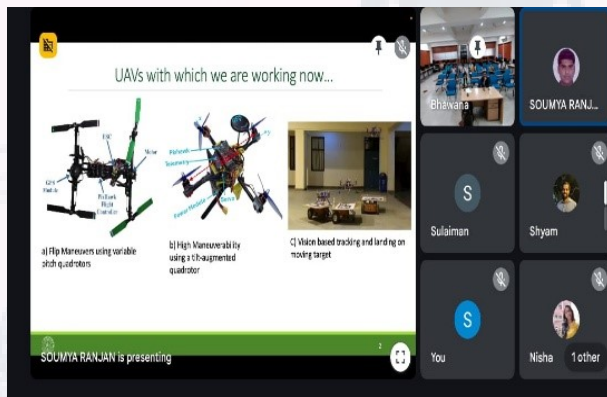
Two days Centenary Webinar on Embracing Control Theory in Modern Real-World

Prof. Bhawana Singh and Prof. Shyam A B organised Two days Centenary Webinar on Embracing Control Theory in Modern Real-World in the Department of Electrical Engineering, Indian Institute of Technology (ISM) Dhanbad, India on 28-29 May 2025.

There were four eminent speakers from IITs and IISc who discussed the modern control theory for real world applications through their detailed presentations. This webinar was a part of centenary celebration at IIT ISM Dhanbad marking its establishment as a 100-year-old institution. Control systems facilitate tasks that were previously reliant on human intervention, allowing for greater adaptability, consistent performance and optimized operation.

The theme of this webinar is dedicated to the practical applications of control theory in real world such as robotic systems, unmanned aerial vehicles, multi-agent systems. In this webinar lecture series, participants were M. Tech and PhD students from IIT ISM Dhanbad and others were research scholars and faculties from other institutions working in several research areas of Electrical Engineering. Prof. Leena Vachhani, Systems and Control, IIT Bombay discussed the motion planning and collision avoidance of mobile robots in unknown environments. The controller implementation along with the video excerpts of different experiments were discussed. Prof. Kiran Kumari, Electrical Engineering, IISc Ben-

galuru gave a lecture on applications of sliding mode control to aerial and ground robotics showcasing various experimental results. Prof. Soumya Ranjan Sahoo, Electrical Engineering, IIT Kanpur discussed control applications to Tilt Augmented Quadcopter with rigorous outdoor experiments. Prof. Shyam Kamal, Electrical Engineering, IIT BHU, Varanasi delivered a talk on application of sliding mode control for power converters. Participants learnt a lot from the detailed visualization of theoretical concepts through rigorous experimental results and gave feedback to host similar events in the future.





Prof. R. Sarathi, IIT Madras, Prof. Nilanjan Senroy, IIT Delhi, and Prof. Prabodh Bajpai, IIT Kanpur Interacted with the PhD students on 22/5/2025 to motivate them in various carrier prospects, publishing in good quality journals, developing specialized software/hardware skills.

Dr. Bikramaditya Chandan who had been working for doctoral research under the supervision of **Prof. K. C. Jana** is awarded with Ph.D. degree in Electrical Engineering in the month of May 2025.

Hearty Congratulations to him !

UPCOMING EVENTS

Executive Development Program (EDP) on “Electrical Safety and Precautionary Maintenance for Sustainable Mines” to be held during 28th July to 1st August 2025 at EDC, IIT(ISM) Dhanbad: CI- **Prof. Nitai Pal** and Co-CI- **Prof. P. K. Sadhu**.

🔗Link: <https://www.iitism.ac.in/seminar-1>

EDITORIAL TEAM

Editor-in-Chief : Prof. Sukanta Das
Associate Editors : Prof. Soumyabrata Barik & Prof. Shyam A. B.
Student Editor : Upasana Tharu

☎ +91-326-223-5287, 5443, 5024
 ✉ ee@iitism.ac.in
 📞 +91-326-229-6563