

DEPARTMENT OF ELECTRONICS ENGINEERING

IIT (ISM) Dhanbad



SPARK

MONTHLY
NEWS LETTER

JANUARY
2025



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From The HoD's Desk



Dear Readers,

We are here to update you about the overall progress and a few milestones achieved by the Department of Electronics Engineering in January 2025.

The month began with welcoming our new faculty member Dr. Ugrasen Singh to the department followed by a couple of invited talks by Prof. Saurav Prakash from IIT Madras on "Efficient and Robust Solutions for Machine Learning at the Edge" and by Prof. Sudhanshu S. Jamuar on enhancing research skills, focusing on topics like writing, referencing, and using IEEE resources. Additionally, Prof. Vikram Gadre from IIT Bombay and Prof. B. K. Das from IIT Madras had an interactive session with faculty members and students of our department.

Dr. Rajeev Kumar Ranjan has been appointed as the Editorial Board Member of the journal AEÜ - International Journal of Electronics and Communications. Dr. S. K. Raghuwanshi was elected as a "Fellow of IEI". Additionally Prof. S. K. Raghuwanshi has published his latest outcome in SPIE on "Optimizing Fiber-Optic Surface Plasmon Resonance-Based Sensors: An Exploration of Different Taper Profiles and Metal Choices for Enhanced Performance".

Please find the Newsletter for detailed updates and give your valuable feedback to fertilize us to be bigger and better.

Wish you all the best!

Prof. Ravi Kumar Gangwar
HoD, Department of Electronics Engineering,
IIT(ISM) Dhanbad

INVITED TALKS

Prof. **Saurav Prakash**, Assistant Professor, EE Department IIT Madras, has delivered a Research talk on the topic “Efficient and Robust Solutions for Machine Learning at the Edge”, on 22nd Jan 2025 at ECE Department of IIT (ISM) Dhanbad.

Thank you, Prof. Saurav Prakash, for visiting and giving your valuable time.



Prof. **Sudhanshu S. Jamuar** (Former Faculty: IIT Kanpur, IIT Delhi, HAL Lucknow, IIT(ISM) Dhanbad, IIIT Delhi, and Malaysia (UPM, UM and UNIMAP)) visited our department. The faculties of our department had fruitful conversation with Prof. Sudhanshu S. Jamuar and gained insights from his vast range of expertise. Moreover, Prof. Sudhanshu S. Jamuar delivered a talk on “Explore IEEE and Master Research Skills: Writing, Referencing, and More!”

The talk covered three main areas, **Introduction to IEEE** : Introduction about IEEE and benefits that students get after joining IEEE as student members. **Research Paper - Reading and Writing** : This will introduce the students regarding Reading and writing a research paper **Referencing and Citations** : Importance of referencing in technical writing, with an overview of citation styles and formats.

Thank you, Prof. Sudhanshu S. Jamuar , for visiting our department and giving your valuable time!

FACULTY VISIT

Prof. Vikram Gadre, a faculty member from the Electrical Engineering (EE) Department at IIT Bombay, engaged in an interaction with both faculty members and students at our department on January 11th, 2025.

It was a great opportunity for cross-departmental collaboration, exchanging ideas and professional development for both the faculty members and students.

Thank you Prof. Vikram Gadre for visiting us.



Professor B. K. Das, a faculty member from the department of Electrical Engineering of IIT Madras, visited our department at IIT(ISM) Dhanbad in January. This visit involved an inspiring interaction between Professor Das and the faculty members and students of our department at IIT(ISM) Dhanbad.

ACHIEVEMENTS



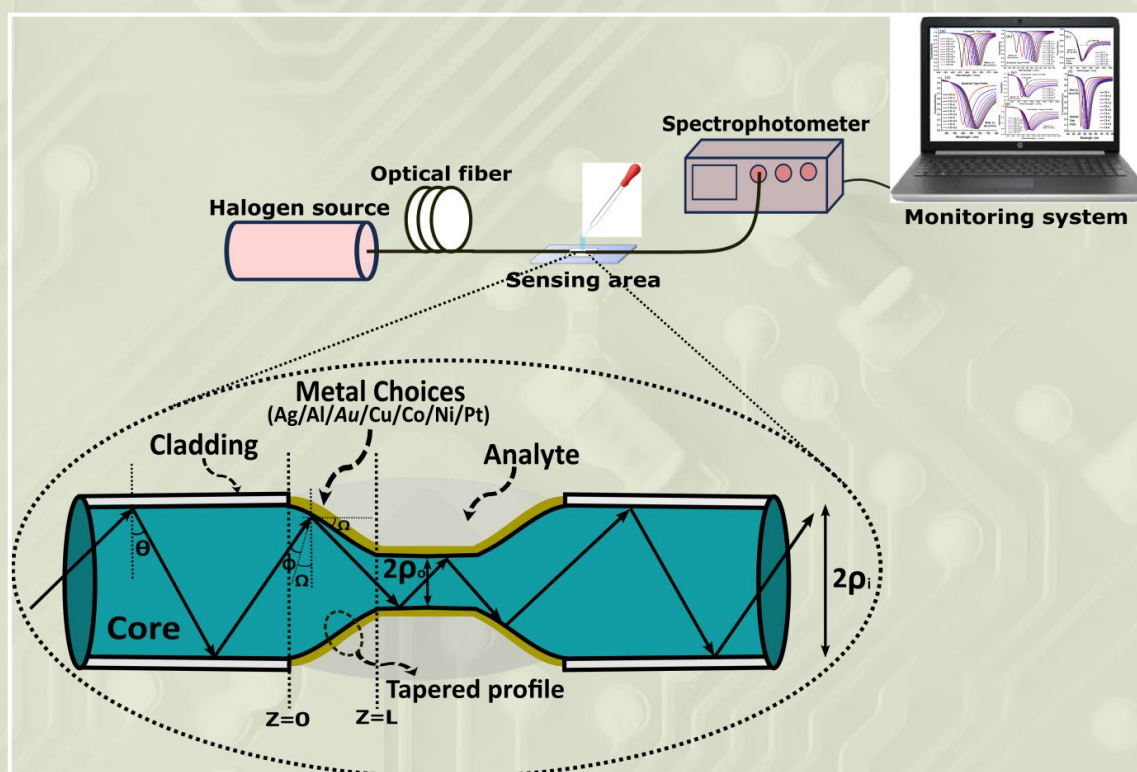
Dr. Rajeev Kumar Ranjan has been appointed as the Editorial Board Member of the journal AEÜ - International Journal of Electronics and Communications.

Dr. S. K. Raghuwanshi was elected as "Fellow of IEI" on January 2025.



PUBLICATION

Prof. S. K. Raghuwanshi, co-authored a paper titled "Optimizing Fiber-Optic Surface Plasmon Resonance-Based Sensors: An Exploration of Different Taper Profiles and Metal Choices for Enhanced Performance," in Optical Engineering (SPIE). This study explores how different fiber taper profiles and metal coatings impact the performance of surface plasmon resonance (SPR) sensors, which are widely used for highly sensitive detection applications. The findings show that sensor performance can be significantly enhanced by optimizing the taper ratio and metal selection, with gold and copper showing the best results for specific sensing needs. Additionally, observed that modifying the taper profile shifts the sensing range, making the sensor more adaptable for various real-time bio-sensing applications. [doi](#)



DR.UGRASEN SINGH

Assistant Professor

Dr. Ugrasen Singh has recently joined the Department of Electronics at IIT (ISM) Dhanbad as an Assistant Professor. Before this, he served as a Postdoc Researcher at the Department of Information and Communication Engineering at Aalto University Helsinki Finland. Dr. Ugrasen Singh received his PhD in Wireless Communication from IIT Delhi in August 2022 and M.Tech in Communication and Signal Processing from IIT Indore in June 2018. His research focuses on the design and analysis Of Wireless Communication Systems. He has been working on Space Modulation Techniques (SMT), Reconfigurable Intelligent Surface (RIS), Non-Orthogonal Multiple Access (NOMA), Orthogonal Frequency Division Multiplexing (OFDM), Ultra-Reliable and Low-Latency Communication (URLLC), And Physical Layer Security.

Welcome



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[Google Scholar Profile](#)



OPPORTUNITY

Applications are invited for admission to Ph.D. Programme Full Time and Part Time Ph.D under "**Visvesvaraya Ph.D. Scheme**" Phase II-2024 sponsored by MEITY for Monsoon Semester-2025 in the Department of Electronics Engineering and Department of Computer Science and Engineering at IIT(ISM) Dhanbad.

Important Dates:

Last date for receipt of application form - 20/02/2025 (Full-time) & 20/02/2025 (part-time)

Date of intimation to shortlisted candidates for interview - 20/02/2025

Date and time of interview - 26/02/2025

Application form, Guidelines, Terms & Conditions for full-time are available at IIT(ISM) Dhanbad [website](#)

UPCOMING EVENT

Legacy that Inspires the Future

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OF TECHNOLOGY
INDIAN SCHOOL OF MINES
DHANBAD

24th February to 7th March, 2025 at
IIT (ISM) Dhanbad

- Enhance your research expertise with our comprehensive refresher course tailored for faculty members working/interested in Electronic Devices and Materials Physics.
- This course covers fundamental concepts and engineering steps from the atom to the device level technology, including simulation, fabrication and characterization techniques.
- The participants will gain insights into thin film growth, device fabrication, electrical/optical/material/thermal characterization, and DFT/MD simulations.
- This course will help in getting a deeper understanding of material to device physics and advanced data analysis.

Application Procedure:

1

- Register at <https://mmc.ugc.ac.in> and create an account.

2

- Login and click on "Apply for other Programmes"
- Click on **Apply For Drop Down Menu** and Select **"Refresher Course"**
- Click on **"Centre & Programme Date"** and Select **"Indian School of Mines, Dhanbad (24/02/2025-07/03/2025)"**.
- Fill in other details, upload the NOC duly signed by your **Head of Institution** and submit the application form.

Let's start your learning journey right!

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An Online Interdisciplinary Refresher Course on Atom to Device Understanding of Emerging Semiconductor Technology

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Dr. Daniel Abou-Ras
Department of Structure
and Dynamics of Energy
Materials,
Helmholtz-Zentrum Berlin



Prof. S. S. K. Iyer
Department of Electrical
Engineering,
IIT Kanpur



Prof. Eran Edri
Department of Chemical
Engineering,
Ben-Gurion University of
the Negev, Israel



Prof. Saurabh Lodha
Department of
Electrical Engineering,
IIT Bombay



Prof. Kausik Majumdar
Department of Electrical
Communication Engineering
IISc, Bangalore



Prof. Nihar Ranjan Mohapatra
Department of Electrical
Engineering,
IIT Gandhinagar



Dr. Sushil Kumar
Chief Scientist & Professor
(AcSIR)
CSIR-NPL, New Delhi



Prof. Nilesh Prakash Gurao
Department of Materials
Science & Engineering
IIT Kanpur



Prof. Anil Kottantharayil
Department of Electrical
Engineering,
IIT Bombay



Prof. Pradeep R. Nair
Department of Electrical
Engineering,
IIT Bombay

Salient Features:

- Application/Registration is free of cost.
- Mode of delivery : Online
- Duration: 2 weeks, 12 working days, 72 contact hours
- Assessment: MCQ-based examination for Certificate upon successful completion
- Eligibility: Faculty members from UGC-recognized universities and colleges.

Registration Deadline:
February 22, 2025

For more details, contact to our coordinators

Coordinators:-

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Mark your calendar for our upcoming workshop on the Phased Array Antenna System from 15th to 19th February 2025. Kindly register and grab your seat asap!

[FORM LINK](#)

Key-note Speakers / Resource Persons

- **Prof. Satish Kumar Sharma**
Professor, San Diego State University, San Diego, CA, USA.
- **Prof. Gabriel M. Rebeiz**
Professor, UC San Diego, Franklin Antonio Hall 9500 Gilman Drive, MC 0407, La Jolla, CA 92093, USA.
- **Prof. Gourab Banerjee**
Professor, Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore 560012, India
- **Prof. S. P. Singh**
Professor (Retd.), Department of Electronics Engineering, IIT(BHU), Varanasi, U.P. India.
- **Dr. A. K. Singh**
Dr Raja Ramanna DRDO Distinguished Fellow & Former Director, DLRL Hyderabad.
- **Dr. Milind B. Mahajan**
Group Director, Antenna System Group, Space Application Centre (ISRO), Ambawadi Vistar P.O., Ahmedabad-380015, Gujarat, India
- **Dr. Prashant Vasietha**
Scientist 'G' and HEAD DEST & Project Director, Defense Laboratory, Ratanada Palace, Jodhpur-342011
- **Dr. V. S. Gangwar**
Scientist F, LRDE DRDO Bangalore, 560093
- **Dr. Prashant Kumar Mishra**
Scientist F, RCI DRDO Hyderabad
- **Mr. Virendra Kumar**
Scientist F, LRDE DRDO, Bangalore, 560093
- **Dr. Nikesh Kumar Sahu**
Senior Engineer, RF Design Company: Amphenol Omnicomnect India Pvt Ltd, Chennai.
- **Dr. Jayprakash Thakur**
Principal Engineer, Antenna Design & Wireless System Integration Architect Intel Technology, Bangalore.
- **Mr. Marwin Coutinho**
Senior Manager, Rohde & Schwarz, Hyderabad
- **Prof. Ravi Kumar Gangwar**
Professor, Department of Electronics Engineering, IIT(ISM) Dhanbad, Jharkhand.



Patron
Prof. Sukumar Mishra
Director, IIT(ISM) Dhanbad

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**Phased Array Antenna Systems:
A Revolutionary Technology for
Modern Communication and
Defence Application**
15th-19th February, 2025



Organized by

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Mr. Bappa Ghosh (Junior Technician)

Mr. Vaibhav (Junior Technician)



Find out more

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