



भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद Indian Institute of Technology (Indian School of Mines), Dhanbad

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PRESS-RELEASE

IIT (ISM) Dhanbad hosts national workshop to accelerate microwave photonics research, enabling breakthroughs in radar systems, sensing technologies, and next-gen wireless networks

The Department of Electronics Engineering at the Indian Institute of Technology (ISM) Dhanbad conducted a three-day national workshop on “*Emerging Trends in Microwave Photonics Technology*” from April 15 to 17, 2026. Sponsored by the Anusandhan National Research Foundation under the Department of Science and Technology (DST), Government of India, along with ARUP, the workshop was organized in a hybrid mode to promote knowledge exchange and collaboration in cutting-edge domains such as radar systems, wireless communication, and advanced signal processing.

The primary objective of the workshop was to equip researchers, scholars, and students with both theoretical insights and practical expertise in the rapidly evolving field of microwave photonics. The program aimed to bridge the gap between fundamental research and real-world applications, particularly in the context of next-generation communication technologies, including 5G and 6G infrastructure. Through focused deliberations, participants explored emerging areas such as photonic integrated circuits, phased-array radar systems, and high-frequency sensing technologies.

A major highlight of the workshop was the extensive hands-on training imparted to participants. Scholars received practical exposure to optical system design and simulation using OptiSystem software and participated in live opto-electronics demonstrations. Specialized technical sessions also covered deposition systems for advanced material fabrication and characterization techniques for Fiber Bragg Grating (FBG) devices—key enablers in modern microwave photonics applications.

The workshop witnessed active participation from a diverse group of attendees, including research scholars, faculty members, and industry professionals from premier institutions such as IISc Bangalore, CSIR-CSIO Chandigarh, CSIR-CGCRI, DRDO, and several IITs and NITs. The event also reflected a strong commitment to inclusivity, with significant participation from women researchers and scholars representing varied academic backgrounds across the country.

Industry leader Keysight Technologies further enriched the workshop through practical demonstrations, effectively aligning academic research with industrial requirements.

The workshop was coordinated by Prof. Sanjeev Kumar Raghuvanshi and was seamlessly managed by the organizing team comprising Junior and Senior Research Fellows, including Tirbhuwan Narayan Yadav, Paritosh Shukla, and Ritik Sharma.

The program concluded with a formal valedictory session, during which participation certificates were distributed, marking a significant step toward strengthening India’s capabilities in advanced photonics and communication technologies.

Rajni Singh
Dean (Corporate Communications)