



भारतीयप्रौद्योगिकीसंस्थान (भारतीयखनिविद्यापीठ), धनबाद Indian Institute of Technology (Indian School of Mines), Dhanbad

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PRESS-RELEASE

IIT (ISM) Dhanbad Hosts National Workshop on Indigenous Technologies for Critical Minerals Exploration and Smart Mining

The Indian Institute of Technology (Indian School of Mines) Dhanbad, organized a one-day national workshop under the **ANRF–PAIR Category B Project** on “*Development of Innovative and Cutting-Edge Indigenous Technologies for Critical Minerals Exploration and Smart/Sustainable Mining.*”

The project is led by **Prof. Dheeraj Kumar, Deputy Director, IIT(ISM) Dhanbad (Project Director)** with **Prof. Ejaz Ahmad as Coordinator**, in collaboration with spoke partners — **NIT Durgapur, NIT Jamshedpur, Patna University, MMMUT Gorakhpur, and Vinoba Bhave University, Hazaribagh** — to build indigenous technology packages for India’s mining and mineral sector.

More than **150 faculty members** from hub and spoke institutions participated in the workshop. The event featured **Prof. Raja V. Ramani, Emeritus Professor, Pennsylvania State University, USA**, as the **Chief Guest**, who highlighted the urgency of advancing homegrown technologies in critical minerals exploration and smart mining. He stressed that such innovations are essential for **clean energy transitions, electric mobility, electronics manufacturing, and defense applications**, noting that India’s leadership in this area is crucial for **resource security and Atmanirbhar Bharat**.

Delivering the presidential address (In Online Mode), **Prof. Sukumar Mishra, Director, IIT(ISM) Dhanbad**, emphasized the importance of collaborative research for delivering **end-to-end technology solutions** to meet national and global needs. In his welcome remarks, **Prof. Dheeraj Kumar** reiterated IIT(ISM)’s commitment to pioneering innovation in mining technologies, while **Prof. Parthsarathi Das, Dean (R&D), IIT(ISM)**, underlined the role of **institutional partnerships** in driving impactful outcomes.

A **special roundtable discussion** among Co-PIs from spoke institutes focused on strategies for **collaborative research, infrastructure sharing, faculty and student mobility, and industry engagement**, setting the roadmap for future actions.

The **ANRF–PAIR programme** is a flagship initiative that enhances research capacity across India through its **hub-and-spoke model**. By centering on **critical minerals and sustainable mining**, the project at IIT(ISM) Dhanbad addresses a matter of **national strategic importance**. These minerals underpin technologies of the future — from renewable energy systems to advanced manufacturing — and the project aims to deliver **complete indigenous technology packages** that will strengthen **India’s global competitiveness and resource independence**.

Rajni Singh
Dean (Corporate Communications)