



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

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## **PRESS-RELEASE**

### **IIT (ISM) Dhanbad Faculty Wins Recognition at National Carbon Capture Hackathon**

IIT (ISM) Dhanbad proudly announces that **Prof. Arunkumar Samanta**, Department of Chemical Engineering, has been adjudged **2nd Runner-Up** in the “**Hackathon on Carbon Capture Technology – 2025**”, organized by **Central Mine Planning & Design Institute Limited (CMPDI), Ranchi**, a subsidiary of **Coal India Limited**, under the **Ministry of Coal, Government of India**. The Hackathon was held from **June 23 to 25, 2025**, and the **felicitatation ceremony** took place in **Mumbai on September 4, 2025**.

Prof. Samanta’s research proposal was selected under **Problem Statement–1: Direct Air Capture (DAC) of Greenhouse Gases (GHGs)**. His work presents an innovative approach for the **direct removal of CO<sub>2</sub> from ambient air**, leveraging **cost-effective sorbents and modular system design** for scalable deployment.

With over **27 years of teaching and research experience**, Prof. Samanta has made notable contributions in the areas of **Carbon Capture, Utilization and Storage (CCUS)**, **gas purification**, and **clean coal technologies**. He has authored numerous research papers, supervised several doctoral and postgraduate scholars, and holds **multiple patents** related to **hydrogen production and CO<sub>2</sub> capture systems**.

Prof. Samanta has also played a key role in several national projects and leads research initiatives at the **Naresh Vashisht Centre for Hydrogen and Carbon Capture, Utilization and Storage Technologies** at IIT (ISM). His recognition at this national platform highlights the institute’s growing contributions towards **innovations in clean energy and sustainable technologies**.

Rajni Singh

**Dean (Corporate Communications)**