Dr. KEKA OJHA

Professor (HG)
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Dr. Keka Ojha is Professor of Petroleum Engineering and Dean (Continuing Education Program) at the Indian Institute of Technology (Indian School of Mines), Dhanbad, India, and is internationally recognized for her contributions to enhanced oil recovery (chemical, gas, and microbial EOR), coalbed methane and shale gas reservoir engineering, CO_2 sequestration/Enhanced Coal Bed Methane, hydraulic fracturing fluids, and rock–fluid interactions in high-pressure high-temperature reservoirs. With more than two decades of academic and industry-engaged research experience, she has led and coordinated large-scale sponsored research programs funded by national agencies and oil and gas operators, translating fundamental research on surfactant- and nanoparticle-based systems, foam and gel technologies, and reservoir-scale transport and sorption phenomena into field-relevant solutions for enhanced oil/gas recovery. Dr. Ojha has provided technical advisory and consultancy support to major energy companies and government bodies on Coal Bed Methane (CBM) and shale prospect evaluation, EOR feasibility and optimization, High Pressure High temperature fluid validation, reservoir diagnostics, and CO_2 storage strategies, while also serving on national policy and expert committees related to energy development and sustainability. An accomplished academic leader and mentor, she has supervised 13 Ph.D. graduates and more than 40 postgraduate theses, authored 98 peer-reviewed journal articles and two books, holds a patent in reservoir chemical technologies, and has received several prestigious honors including the Society of Petroleum Engineers (SPE) Distinguished Achievement Award for Petroleum Engineering Faculty and the Regional Technical Award for Reservoir Description and Dynamics (South Asia & Pacific).

ACADEMIC QUALIFICATIONS

- **Ph.D.** (Chemical Engineering), I**ndian Institute of Technology, Kharagpur**, 2003.
- **M. Tech**. (Chemical Engineering), **Indian Institute of Technology, Kharagpur**, 1999.
- **B. Ch.E**. (Hons) (Chemical Engineering), **Jadavpur University, India,** 1997.

PROFESSIONAL EXPERIENCE:

- **Dean (Continuing Education Program)**, Indian Institute of Technology (ISM), Dhanbad — July 2025–Present.
- **Professor**, Department of Petroleum Engineering, Indian Institute of Technology (ISM), Dhanbad — June 2019–Present.
- **Head of the Department**, Department of Petroleum Engineering, Indian Institute of Technology (ISM), Dhanbad — 01 May 2022–30 June 2025.
- **Associate Dean (Academic)**, Indian Institute of Technology (ISM), Dhanbad — May 2019–April 2022.
- **Associate Professor**, Department of Petroleum Engineering, Indian Institute of Technology (ISM), Dhanbad — February 2010–June 2019.
- **On Deputation**, Institute of Reservoir Studies, Oil and Natural Gas Corporation (ONGC), Chandkheda, Ahmedabad May 2017 – May 2018 (Under ONGC–IIT(ISM) Collaborative Program).
- **Assistant Professor**, Department of Petroleum Engineering, Indian School of Mines, Dhanbad — February 2007–February 2010.
- **Lecturer**, Department of Petroleum Engineering, Indian School of Mines, Dhanbad — December 2004–February 2007.
- **Lecturer**, Department of Chemical Engineering, Heritage Institute of Technology, Kolkata — August 2004–December 2004.
- **Postdoctoral Fellow**, Department of Chemical and Biomolecular Engineering, University of Notre Dame, USA, July 2003–July 2004.

Theory Courses taught in undergraduate and postgraduate levels:

1. Elements of Petroleum Reservoir Engineering
2. Applied Reservoir Engineering and Management
3. Oil & Gas Field Development and Planning
4. Integrated Reservoir Management
5. Reservoir Modeling and Simulation
6. Unconventional Hydrocarbon Resources (Coalbed Methane, Shale oil/gas and Gas Hydrate)
7. Well-flow Performance

AWARDS AND HONORS:

- Recipient of the **2025 Regional Technical Award- Reservoir Description and Dynamics** for South Asia and the Pacific Region.
- **SPE Distinguished Achievement Award** for Petroleum Engineering Faculty, for South Asia and the Pacific Region, 2019.
- Member, working group, framing of Safety Aspect, Ministry of Petroleum and Natural Gas (2022), Govt. of India
- Member, ERPRC Expert committee (Enhanced Recovery Policy), Ministry of Petroleum and Natural Gas, 2023, Govt. of India
- Member, review committee, Review of Coalbed Methane policy, Infrastructure, marketing and regularity issues, Ministry of Petroleum and Natural Gas, 2021, Govt. of India.
- Member, Expert Committee (Chemical Engineering), Odisha Public Service Commission-India, 2025.
- Best paper presenter International Oil and Gas Chemistry, Chemicals and Additives Conference (IOGCA), 2024, New Delhi, September 26-27, 2024.
- Excellent paper award in International Conference on Chemistry and Chemical Process (ICCCP) 2011 conference during 28-29 May 2011, Bangkok, Thailand.
- The best paper awards in PETROTECH 2009, the Asia's largest oil & Gas conference and Exhibition.
- SPE travel grant award, SPE, USA, 2012
- Awarded National Merit Scholarship, Govt. of India 1987-1990
- Awarded JRF Scholarship, 1997-1998
- Awarded SRF Scholarship, 1999-2003
- Life Member, Editorial Board, Mining, Geological and Metallurgical Institute (MGMI), India
- Member, review committee, Dept. of Ocean Technology, Indian Institute of Technology, Madras, April 2025
- Springer nature Best Women Researcher-IIT(ISM) Award, 2025

INSTITUTIONAL LEADERSHIP AND SERVICE CONTRIBUTIONS:

Institutional Responsibilities

- Dean (Continuing Education Programme)**,** Indian Institute of Technology (ISM), Dhanbad (*2025-Present*).
- Head, Department of Petroleum Engineering**,** Indian Institute of Technology (ISM), Dhanbad (*May 2022–June 2025*).
- Associate Dean (Academic – Undergraduate Programs)**,** Indian Institute of Technology (ISM), Dhanbad (*2019–2024*).
- Chairperson, Internal Complaints Committee (ICC) **(*2018–2023*).**
- Founding Chairperson**,** *Sanakar Crèche*, Indian Institute of Technology (ISM), Dhanbad.

- Warden, Ruby Hostel**,** Indian Institute of Technology (ISM), Dhanbad (*2006–2010*).
- Member**,** Central Library Committee, Indian Institute of Technology (ISM), Dhanbad.
- Member**,** Senate, Indian Institute of Technology (ISM), Dhanbad.
- Chief Hostel Warden**,** Indian Institute of Technology (ISM), Dhanbad.
- Departmental Coordinator**,** Technical Education Quality Improvement Programme-II (TEQIP-II)**,** Indian Institute of Technology (ISM), Dhanbad. TEQIP project is a World Bank-assisted project (2010–2017) aimed at scaling up PG education, strengthening research, and enhancing teaching quality in 200+ Indian engineering institutions.
- Coordinator**,** Review Committee, Technical Education Quality Improvement Programme-II (TEQIP-II)**,** Indian Institute of Technology (ISM), Dhanbad.

Departmental Responsibilities

- **Coordinator**, Stock Verification Committee, Department of Petroleum Engineering.
- **Coordinator**, Departmental Budget Committee, Department of Petroleum Engineering.
- **Coordinator**, Junior Research Fellowship (JRF) activities.
- **Member**, Moderation Board, Department of Petroleum Engineering.
- **Member**, Departmental Purchase Advisory Committee (DPAC).
- **Member**, Departmental Academic Committee (DAC).
- **Member**, Departmental Faculty Selection Committee (DFSC).
- **Member**, Departmental Undergraduate Committee (DUGC).
- **Member**, Departmental Space Committee, Department of Petroleum Engineering.
- **Laboratory In-Charge**, Reservoir Engineering Laboratory.
- **Laboratory In-Charge**, Coalbed Methane (CBM) Laboratory.
- **Laboratory In-Charge**, Reservoir Simulation Laboratory (*2006–2016*)