



Indian Institute of
Technology Guwahati
SPE Student Chapter



Workshop on CCUS & Reservoir Simulation

« **A Simulation Workshop** »

May 14-16

Sponsored by



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Organized by **IIT Guwahati SPE Student Chapter**
in collaboration with
The Department of Chemical Engineering, IITG



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IIT Guwahati SPE
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Indian Institute of
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3-Day Workshop on CCUS & Reservoir Simulation: From Fundamentals to CMG Applications



About The Workshop

As the global race toward Net Zero intensifies, Carbon Capture, Utilization, and Storage (CCUS) has become a critical solution, with its success hinging on the power of advanced Simulation Technologies. This 3-day workshop bridges the gap between fundamental carbon management principles and high-fidelity predictive modeling. Participants will explore the entire technical landscape from CO₂ capture and fluid dynamics to the complexities of long-term geological sequestration—learning how computational tools de-risk storage sites and ensure long-term integrity.

Attendees will gain a robust technical toolkit, featuring dedicated hands-on sessions using CMG software to simulate CO₂ injection and storage behavior in saline aquifers. We bridge the gap between academic theory and field application, focusing on plume migration forecasting, lifecycle analysis, and cost-optimization strategies to transform climate goals into engineered realities.



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Meet Our Experts



Prof. Rajnish Kumar

Professor, Department of Chemical Engg
IIT Madras



Prof. Rajeev Upadhyay

Professor, Department of Petroleum Engg
IIT(ISM) Dhanbad



Prof. Saurabh Datta Gupta

Professor, Department of Applied Geophysics
IIT(ISM) Dhanbad



Mr. Rahul Bali

Independent Director and Sustainability Professional
Director APAC-SPE Methane Technical Section(MTS)



Mr. Harsh Sahani

Technical Specialist, Shell



Mr. Ranvijay Singh

Reservoir Simulation Engineer
Research Scholar, IIT(ISM) - Dhanbad



Prof. Anugrah Singh

Professor, Department of Chemical Engg
IIT Guwahati



Prof. Bishnupada Mandal

Professor, Department of Chemical Engg
IIT Guwahati



Dr. Sumit Kumar

Assistant Professor, Department of Chemical Engg
IIT Guwahati

Key Takeaways

- Understand the technical mechanisms of carbon capture and the complexities of long-term geological sequestration.
- Learn to use computational tools to predict chemical reactions and model fluid dynamics to ensure site safety.
- Gain practical experience using CMG software to simulate CO₂ injection and storage behavior in saline aquifers.
- Explore how high-fidelity predictive modeling and digital twins transform carbon management into scalable engineered realities.
- Analyze real-world lifecycle costs, plume migration patterns, and strategic optimization for field-scale deployment.



Registration Details

S. No.	Registrations Fee	Audience	Benefits
1.	1000/-	Students of IIT Guwahati	Workshop Kit & Certificate
2.	3000/-	Students from other Institutes (Including Lodging & Fooding)	
3.	5000/-	Faculty/ Post-Doc	
4.	10000/-	Industry Sponsored Candidates	

- Accommodation will be provided in IIT Guwahati Hostels **for Students**.
- Travel Reimbursements' will **not** be covered in registrations fee
- Dining arrangements for students in IITG Hostels



Registration Here



20% Discount on registration fee for group registration. If greater than or equal to 5 registration is made together



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Who Should Attend

This workshop is designed for engineers, geoscientists, energy transition professionals, and sustainability practitioners seeking to build expertise in decarbonization and carbon management. It is particularly valuable for researchers and postgraduate students working in reservoir engineering and chemical modeling who are involved in CO₂ storage assessment, injection optimization, and field-scale implementation using advanced simulation tools.

Contact Us

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For more Details visit our Website:

<https://www.speiitg.in/index.html>

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