



SIDHARTH GAUTAM

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A motivated educator of Petroleum Engineering with a strong background in drilling engineering and technology, possessing excellent communication and technical skills developed through extensive research experience.

Work Experience

Assistant Professor, Petroleum Engineering

- Indian Institute of Technology (Indian School of Mines) Dhanbad [May 2026 - Present]
- Rajiv Gandhi Institute of Petroleum Technology, Jais [April 2023 – April 2026]
 - Course Taught:*
 - UG: Fundamentals of Mechanical Engineering; Computational Fluid Dynamics; Workshop Practices, Refrigeration and Air Conditioning, Well Test Analysis
 - PG: Instrumental Techniques for Oil and Gas Industry (PE544); Geothermal System Design (PE545)
 - Administrative Responsibility:*
 - Member (Institute Electric and Water Supply committee, Departmental Undergraduate Committee, Departmental Purchase Committee),
 - Convener (Departmental Undergraduate Committee), Co-convener (Sports Council)
- Presidency University, Bangalore [September 2022 – March 2023]
 - Course Taught:* Thermodynamics (PET2009); Health, Safety and Environment (PET308)

Research Experience

Principal Investigator / Rajiv Gandhi Institute of Petroleum Technology, Jais, India

- Fluid Invasion Modeling and Development of Synthetic Polymer-based Reservoir Drilling and Completion Fluid for High-pressure and High-temperature Wells – Funding Agency – RGIPT, Sanction Amount: ₹ 10,00,000
- Development of Synthetic Polymer-based Reservoir Drilling and Completion Fluid for High-pressure and High-temperature wells: Fluid Invasion Modeling and Mitigation – Funding Agency - ANRF, Sanction Amount: ₹ 27,55,164

Education

Ph.D. (Petroleum Engineering) / Indian Institute of Technology (ISM), Dhanbad, India

2016 – 2022 [Thesis Defense: 27/07/2022]

Thesis topic: Rheological Investigation and Development of High-Pressure and High-Temperature Drilling Fluid.

Supervisor: Prof. Chandan Guria

M. Tech. (Petroleum Engineering) / Indian Institute of Technology (ISM), Dhanbad, India

2014 – 2016, First Class, CGPA: 8.94

Relevant modules: Drilling and production engineering, workover and stimulation techniques, and reservoir engineering.

Thesis topic: Estimation of Shear rate of low yield fluid using rotational viscometer.

Supervisor: Prof. Chandan Guria

B. Tech. (Mechanical Engineering) / Magadh University, Bodh Gaya, India

2009 – 2013, First Class with Distinction, 77%

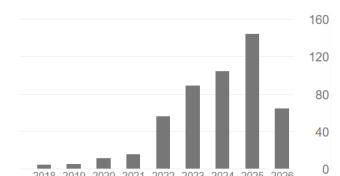
Relevant modules: Fluid mechanics, Heat and mass transfer, theory of machines, thermodynamics, manufacturing engineering, mechanics of solid, and machine design.

Research Metrics

(<https://scholar.google.co.in/citations?user=m5vJuaIAAAAJ>)

Total Publication : 12 [As First/Communicating author – 8]

Citation: 497 | h-index: 8 | i-10 index: 8



Industrial Outreach

- Institute of Drilling and Well Completion, Dehradun
- Institute of Reservoir Studies, Ahmedabad
- Institute of Production Engineering and Ocean Technology, Panvel
- Oil India Limited, Duliajan
- ONGC, Jorhat

Research Interest

Clay-free non-damaging drilling fluid, viscoelastic behavior of drilling fluid, nanotechnology, soft-sensor to predict downhole density, filtration loss, viscosity and frictional pressure drop, soft matter, complex fluid and polymer, process optimization, biomass and bioenergy, biodiesel-based drilling fluids and associated emulsifier, filtration loss and rheology modifier package, lost circulation materials.

Technical Skills

- **Instrumentation Proficiency:** Rheometer, Particle size analyzer, FT-IR spectrometer, Gel permeation chromatography, UV-Visible spectrophotometer, Mid FT-IR fuel analyzer, HPHT autoclave reactor, HPHT filter press, Dynamic filter press, Planetary ball mill, XPS, P-XRD etc.
- **Computer Proficiency:** MS Office, Adobe Suite
- **CAD software:** AutoCAD, CATIA
- CasaXPS, Design Expert, Origin, MATLAB
- **Coding language:** C++, FORTRAN 77, Python
- **Language Proficiency:** English, Hindi
- **Data Analytics:** Tableau, Microsoft Power BI
- **PE Software:** Ecrin, Fluent

Professional Activities

Reviewer: (ORCID: 0000-0002-1496-3559)

SPE Journal; ACS Omega; ACS Energy and Fuels; MDPI-Symmetry; Journal of Engineering Research and Applied Science

Awards/Recognitions

- Qualified GATE (India) in Mechanical Engineering in 2014 and 2016.
- IMTR Award 2022 (IIT, Dhanbad)
- SPE Technical Reviewer Award, 2023