# Journal Publications

1. Sen S., **Ghosh*** S., 2026. Geomechanical characterization of the Jurassic Dunlin Group and implications for geological sequestration – Study from Northern Lights CO2 storage site, Norwegian continental shelf. ***Journal of Applied Geophysics*** 255(2026) 106564
2. Altaher Z.A., **Ghosh* S**. 2026. Geometrical, Topological, and Connectivity Assessment of Coal Seam Cleat Networks: An Example of Barakar Formation from the Tisra Mine, Jharia Coalfield, India. ***Turkish Journal of Earth Sciences***.
3. Altaher Z.A., **Ghosh S.**, Mukherjee M.K., 2026. Control of lineaments on the distribution of hazardous coal fire zones in Jharia coalfield, Eastern India. ***Natural Hazards*** 122 (326)
4. Altaher Z.A., Kumar V., **Ghosh S*.** 2026. Data-Driven Prediction of Natural Fracture Abundance in Coal: Insights from the Barakar Formation in the Indian Gondwana Basin. ***Journal of the Geological Society of India*** 102 (9) : 1234–1243. *https://doi.org/10.17491/jgsi.2026.174598*
5. Hocine B., Sen S., **Ghosh S.**, Baouche R., Chaouchi R., 2026. Tectonic stress state and geomechanical characterization of the Triassic and Devonian reservoirs in north Berkine Basin, Algeria – Framework for reservoir exploitation strategies. ***Episodes***. *https://doi.org/10.18814/epiiugs/2026/026007*
6. Mahata D.K., **Ghosh S.**, Nair P.V. **2026**. Gas hydrate-related pore pressure prediction in the frontier Bay of Bengal. ***Interpretation*** 15 (1), SA15-SA27
7. Sen S., **Ghosh S.**, Aydin H., Bozkurt C.N., Sukru M., 2026. Geomechanical modelling and critically stressed fracture analysis for geothermal resource management – A study from the Menderes metamorphic basement, Gediz Graben, Türkiye. ***Rock Mechanics and Rock Engineering***. *https://doi.org/10.1007/s00603-026-05507-x*
8. Kumar V., **Ghosh* S.**, Maiti S., 2026. Ensemble machine learning based horizontal permeability prediction and hydraulic flow unit characterization of the Hugin Sandstone. ***Petrophysics*** 67 (04), 760–780. *https://doi.org/10.30632/PJV67N4-2026a5*
9. Suman P., **Ghosh* S.**, Joshi D., 2026. Role of well configuration and CO2 injection on CBM production using geomechanically coupled flow simulations: An example of Jharia coalfield. ***International Journal of Oil, Gas and Coal Technology***.
10. Madam V.K., **Ghosh S.**, Balikram A., 2026. Prediction of critical drawdown pressures for the onset of sand production using conventional triaxial tests: A case study of Himmatnagar Sandstone. ***Petroleum & Petrochemical Engineering Journal***
11. **Ghosh S.**, Yang Z.Y., Li HH, Wu J.Y., 2025. Mechanical behavior assessment of a deep geological repository in the Kinmen Granite using Particle Flow Code. ***Geomechanics and Geoengineering: An International Journal***. *https://doi.org/10.1080/17486025.2025.2592661*
12. Farouk S., Sen S., **Ghosh S.**, Mandal P.P., 2025. In-situ stress state of the Shushan Basin, Western Desert, Egypt – Implications for developing tight Cretaceous and Paleozoic reservoirs. ***Arabian Journal for Science and Engineering***, 1-21. *https://doi.org/10.1007/s13369-025-10766-x*
13. Altaher Z.A., **Ghosh. S.**, Mukherjee M.K., Rajpoot A., 2025. The influence of mineralogy and geomechanical properties on the development of natural fractures in coal bearing strata and its implications: An example from Barakar Formation, Eastern India. ***International Journal of Earth Sciences*****,** *114***,** *1377–1396 (2025). https://doi.org/10.1007/s00531-025-02541-y*
14. Farouk S., Sen S., Sarhan M.A., Fathy M., Fagelnour M., El-Kahtany K., **Ghosh S.**, 2025. Formation evaluation and geomechanical modeling of the Middle Jurassic Lower Safa reservoir of the Shushan Basin, Western Desert, Egypt – Implications for reservoir development and completion optimization. ***Petroleum Geoscience,*** *31(4): petgeo2025-004. https://doi.org/10.1144/petgeo2025-004*
15. Mandal PP., Aljuaydi HAS., Sarmadivaleh M., Rezaee R., **Ghosh S.**, 2025. Impact of in-situ stress perturbation and weak overburden on wellbore stability: Pluto gas field, Northwest Shelf, Australia. ***Interpretation,*** *14(1), SA1-SA18. https://doi.org/10.1190/INT-2024-0158.1*
16. **Ghosh S.**, Kumar S., Chakravarty A., Hooker J., 2025. Analysis of slope failure using finite element method: A case study of the Dehradun region, India. ***Journal of the Geological Society of India,*** *101 (7), 1013–1019. https://doi.org/10.17491/jgsi/2025/174199*
17. Kumar V., **Ghosh S.**, 2025. An amalgamation of Clustering and Random Forest algorithms for P-wave velocity log prediction: A Volve field case study. ***Interpretation****, 13(3), T547-T560. https://doi.org/10.1190/INT-2024-0106.1*
18. Jape N., Datchanamurti, **Ghosh S.**, 2025. A Brief Review of Wellbore Stability in Coal Beds: Technological Improvements and Challenges. ***Petroleum & Petrochemical Engineering Journal,*** *9(1), 1-8*

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20. Kumar V., **Ghosh S.**, 2024. Estimation of vertical permeability of Hugin sandstone from petrophysical well logs using ensemble methods – An enhanced machine learning approach. ***Arabian Journal for Science and Engineering****, 50, 4943-4961. https://doi.org/10.1007/s13369-024-09446-z*
21. Sharma SK., Rani A., Bakhariya H., Kumar R., Tomar D., **Ghosh S.**, 2024. The Role of IoT in Optimizing Operations in the Oil & Gas Sector: A Review. ***Transactions of the Indian National Academy of Engineering*** *(9), 293-312. https://doi.org/10.1007/s41403-024-00464-9*
22. Taghichian A., Hashemolhosseini H., **Ghosh S**., Zaman M., Baghbanan A., Alireza E., 2023. Optimal core trip velocity ranges for major US shale plays. ***International Journal of Petroleum Science and Technology***, *17(1), 13-59*
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24. Aghaei H., Penkov G.M., Solomoichenko D.A., Toorajipour A., Petrakov D.G., Jafarpour H., **Ghosh S**., 2023. Density-dependent relationship between changes in ultrasonic wave velocities, effective stress, and petrophysical-elastic properties of sandstone. ***Ultrasonics****, 132 (2023), 106985. https://doi.org/10.1016/j.ultras.2023.106985*
25. **Ghosh S.**, Kumar S., Khare S.K., Pandey S.K., 2022. Stability assessment of Siwalik rock slopes – A case study from Dehradun area, Uttarakhand, India. ***Journal of the Geological Society of India,*** *98 (2022), 1737–1744*
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28. Aghaei H., **Ghosh S**., Behrgani K., 2020. Example of applied outcrop analysis and its significance as an analogue for surrounding giant gas-fields; case study of Kuh-e-Surmeh region, southwestern Iran; ***Ore and Energy Resource Geology***, *5, 100010*
29. Milad B., **Ghosh S**., Slatt R.M., Marfurt K.J., and Fahes, M., 2020. Practical Aspects of Upscaling Geocellular Geological Models for Reservoir Fluid Flow Simulations: A Case Study in Integrating Geology, Geophysics, and Petroleum Engineering Multiscale Data from the Hunton Group; ***Energies***, *13 (7). https://doi.org/10.3390/en13071604*
30. **Ghosh S.**, Busetti S., and Slatt R.M., 2019. Analysis and prediction of stimulated reservoir volumes through hydraulic fracturing: Examples from western Arkoma Basin; ***Journal of Petroleum Science and Engineering***, *182 (2019), 106338. https://doi.org/10.1016/j.petrol.2019.106338*
31. **Ghosh S.** and Slatt R.M.; Tectonic joint size, abundance, and connectivity: Examples from Woodford Shale and HuntonLimestone, 2019; ***Shale Shaker***, *70(3), 112-136*
32. **Ghosh S.**, Galvis-Portilla H.A., Klockow C.M., and Slatt R.M., 2018. An application of outcrop analogues to understanding theorigin and abundance of natural fractures in the Woodford Shale; ***Journal of Petroleum Science and Engineering***, *164 (2018), 623-639. https://doi.org/10.1007/s13202-021-01437-2*
33. Alrefaee H., **Ghosh S**., and Abdel-Fattah M., 2018. 3D seismic characterization of the polygonal fault systems and its impact onfluid flow migration: An example from the Northern Carnarvon Basin, Australia; ***Journal of Petroleum Science and Engineering***, *167 (2018), 120-130. https://doi.org/10.1016/j.petrol.2017.11.073*
34. **Ghosh S.**, Hooker J.N., Bontempi C.P., and Slatt R.M., 2018. High-resolution stratigraphic characterization of natural fracture attributes in the Woodford Shale, Arbuckle Wilderness and US-77D Outcrops, Murray County, Oklahoma; ***Interpretation***, *6(1), SC29-SC41. https://doi.org/10.1190/INT-2017-0056.1*
35. Milad B., **Ghosh, S.**, and Slatt R.M., 2018. Comparison of rock and natural fracture attributes in karsted and non-karsted HuntonGroup Limestone: Ada and Fittstown area, Oklahoma; ***Shale Shaker***, *69 (2), 70-86*
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37. Prasun S. and **Ghosh S.**, 2018. A new analytical model of ultimate water cut for light oil reservoirs with bottom-water; ***Journalof Oil, Gas and Petrochemical Sciences***, *1 (3), 74-81*

# Full Paper Conference

1. Farouk S., Sen S., **Ghosh S.**, 2025. Geomechanical evaluation of the Pliocene El Wastani clastic reservoir from a deepwater gas field, Nile Delta. ***ARMA-IGS-2025-0016***. *https://doi.org/10.56952/IGS-2025-0016*
2. Sharma P., **Ghosh S.**, Joshi N., Srivastava D.K., 2023. Natural fracture parameterization and connectivity in Rohtas Limestone, Vindhyan Basin, Central India. ***AIP Conference Proceedings***, *2855 (1), 40004*
3. **Ghosh S.**, Sharma S., Kukreti A., Das S., Saini D., Rawat A., 2023. A comparative study of potentially productive Indian shale plays. ***AIP Conference Proceedings***, *2855 (1), 40001*
4. Sen D., Chowdhury D., Mandal PP., **Ghosh S.**, 2023. An Automated Python Script-Based Platform for CCS Screening Feasibility of Subsurface Geological Formations. ***Society of Petroleum Geophysicists, India,*** *14 (2023), 1-5*
5. Sharma P., **Ghosh S.**, Tandon A., 2022. Study of $CO_2$ injection in a depleted oil reservoir using geomechanically coupled and non-coupled simulation models. ***Materials Today: Proceedings***, *57 (4), 1805-1512*
6. Patidar A.K., **Ghosh S.**, Thakur N.K., Sharma A, Baliyan A, 2021. A review and comparative analysis of effectively functionalized eco-friendly and biodegradable nanoparticle-based additives for drilling muds. ***Material Today: Proceedings***, *57 (4), 1598-1604*
7. Milad B., **Ghosh S.**, Suliman M., Slatt R.M., 2018. Upscaled DFN models to understand the effects of natural fracture properties on fluid flow in the Hunton Group tight Limestone; ***Unconventional Resource Technology Conference***, 1-6; College Station, TX, USA
8. **Ghosh S.**, Rai C.S., Sondergeld C.H., Larese R.E., 2014. Experimental investigation of proppant diagenesis; ***SPE⁄CSUR Unconventional Resource Conference***, 1-23; Calgary, AB, Canada

# Oral Conference Presentations

1. **Ghosh, S.**; Multiscale natural fracture dimensions in the Woodford Shale, 2017. ***AAPG Southwest Section Meeting***; 1-18; Midland, TX, USA
2. **Ghosh, S.**, Busetti, S; Prediction of hydraulic fracture damaged zone geometries in the Woodford Shale in Arkoma Basin using discrete fracture network models, 2017. ***AAPG Southwest Section Meeting***, 1-25; Midland, TX, USA