



Optimization and Simulation of Intelligent Oil and Gas Wells

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Deadline for manuscript
submissions:
closed (16 January 2023)

Message from the Guest Editors

Improving oil and gas production efficiency and reducing costs have become the inevitable choice for oil companies to improve competitiveness and anti-risk ability. Oil companies are looking to improve the quality and management of their decisions across the industry chain through data analytics, real-time monitoring, and automation.

This Special Issue aims to present and disseminate the most recent advances related to the application of artificial intelligence in well drilling, reservoir simulation, oil production, hydraulic fracturing, etc.

Topics of interest for publication include but are not limited to:

- All aspects of well drilling, reservoir simulation, oil production, hydraulic fracturing, etc.
- Trajectory control, risk detection, the rate of penetration prediction, risk management, and real-time prediction.
- Cutting transport, gas–liquid two-phase flow, and critical transport velocity.
- Gas kick, gas–liquid two-phase flow, kick handling, drilling fluid properties, and flow pattern recognition.
- History matching, production forecasting, and production optimization.
- Proppant transport, hydraulic fracturing design, and hydraulics optimization.





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Message from the Editor-in-Chief

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Journal Rank: CiteScore - Q1 (Control and Optimization)

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