Journal of Seismic Exploration

Geophysical Inversion and Intelligent Prediction Technologies for Complex Hydrocarbon Reservoirs

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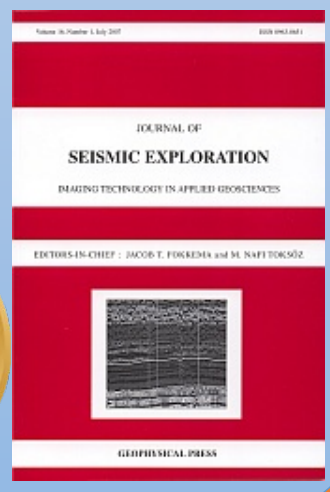

CALL FOR PAPERS 2025

Submission Deadline:
25 March 2026

AIMS & SCOPE

The Special Issue titled "Geophysical Inversion and Intelligent Prediction Technologies for Complex Hydrocarbon Reservoirs" aims to address the significant challenges in the exploration and prediction of complex hydrocarbon reservoirs. These reservoirs are often characterized by complex geological features and strong heterogeneity. With increasing exploration difficulty and the rise of intelligent technologies, enhancing geophysical inversion accuracy is crucial.

This Special Issue will highlight the latest developments in methodologies of advanced inversion techniques. The primary focus is on the fusion of geological feature information with data-driven algorithms. Additionally, we will explore the growing role of machine learning and artificial intelligence in seismic data processing and interpretation.

We invite submissions of original research on the application of geophysics to complex hydrocarbon reservoirs, including case studies, theoretical advancements, and innovative methodologies. Topics of interest include: (1) Integration of geological prior information in seismic inversion; (2) Rock physics modeling and quantitative interpretation for unconventional or heterogeneous reservoirs.; (3) Integration of advanced seismic inversion and machine learning for reservoir property prediction. (4) AI-driven seismic interpretation for automated detection of faults, fractures, and stratigraphic features.

KEYWORDS

- complex hydrocarbon reservoirs
- machine learning
- seismic attributes
- reservoir prediction
- geological priors
- reservoir heterogeneity
- artificial intelligence

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