## Special Issue

# Innovations in Unconventional Reservoirs and Their Integration into Natural Hydrogen Reservoirs Exploration: Advanced Drilling System Controls

### Message from the Guest Editor

This Special Issue aims to publish the most recent advances in drilling vibration control designed for unconventional reservoirs, geothermal wells, and perspectives for hydrogen exploration:

- All aspects of drilling challenge modeling related to Axial, Lateral, and Torsional vibrations in unconventional reservoirs, geothermal wells, and natural hydrogen exploration
- Geomechanical properties studies linked to drilling
- Drilling efficiency improvement techniques
- Case studies of vibration control approaches integrations in unconventional reservoirs
- Comparative studies and review papers between drilling in conventional, unconventional, geothermal, and hydrogen reservoirs
- Simulation studies of new concepts in real-time vibration monitoring and control
- Geothermal wells drilling: challenges and innovations
- Perspectives of exploration wells drilling for hydrogen reservoirs
- Al and data-driven approaches for drilling performance improvement

#### **Guest Editor**

Dr. Mohamed Zinelabidine Doghmane

Bob L. Herd Department of Petroleum Engineering, Texas Tech University, Lubbock, TX 79414, USA

### Deadline for manuscript submissions

closed (25 September 2025)



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Energies Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 energies@mdpi.com

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### Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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