Special Issue

EGS Reservoir Simulation: Tools, Challenges and Innovations

Message from the Guest Editors

In this Special Issue, topics of interest for publication include, but are not limited to, the following:

- Thermo–hydro–mechanical–chemical (THMC) simulation in EGS reservoirs;
- Fracture propagation modelling in naturally fractured rock mass;
- Proppant transport, settlement, embedment in EGS stimulation and operation;
- Innovative well (e.g., parent–child wells) and stimulation (e.g., zipper fracking) design;
- Induced seismicity prediction and mitigation through simulation;
- Fracture network permeability evolution due to geochemical reaction;
- Data assimilation and uncertainty quantification in reservoir simulations;
- AI and machine learning in geothermal reservoir modeling;
- Case studies and field-scale applications of EGS simulation;
- Integration of geophysical monitoring data into simulation workflows;
- Coupled simulation of surface and subsurface systems;
- Simulation tools for sustainability, performance optimization, and risk assessment.

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Deadline for manuscript submissions

15 April 2026

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/247128

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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