

## Special Issue

# Offshore Geomechanics and Natural Gas Hydrate Exploitation

### Message from the Guest Editors

The safe and efficient exploitation of deep-sea natural gas hydrates relies heavily on offshore geomechanics. Hydrate dissociation can trigger reservoir deformation, sand production, and wellbore instability, threatening production safety. Recent advances have improved understanding of geomechanical behavior in hydrate-bearing sediments, geological risks, and engineering mitigation strategies. This Special Issue highlights cutting-edge research at the intersection of offshore geomechanics and hydrate extraction, supporting sustainable deep-sea resource development. We encourage the publication of high-quality papers directly related to all aspects described below. Novel techniques for the study are encouraged. Mechanical properties and microstructure of hydrate-bearing sediments Reservoir deformation and sand production mechanisms Formation/wellbore stability during extraction Multiphysics-coupled numerical and experimental studies Hydrate-related submarine landslides and geohazards Geomechanical parameter evaluation in drilling/completion In situ monitoring of reservoir responses

### Guest Editors

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### Deadline for manuscript submissions

closed (5 January 2026)



## Journal of Marine Science and Engineering

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## About the Journal

### Message from the Editor-in-Chief

*Journal of Marine Science and Engineering (JMSE, ISSN: 2077-1312)* focuses on research in the fields of Ocean Engineering, Coastal Engineering, Physical Oceanography, Geological Oceanography, Marine Biology, and Marine Environmental Science. It publishes reviews, regular research papers, and short communications, as well as Special Issues on particular subjects. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the maximum length of the papers.

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### Editor-in-Chief

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