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

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Message from the Editor-in-Chief

The *Journal of Marine Science and Engineering* (*JMSE*; ISSN 2077-1312) is an international peer-reviewed open access journal which provides an advanced forum for studies related to marine science and engineering. The journal aims to provide scholarly research on a range of topics, including ocean engineering, chemical oceanography, physical oceanography, marine biology and marine geosciences. We invite you to publish in our journal sharing your important research findings with the global ocean community.

Editor-in-Chief

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