

Guest Editors:

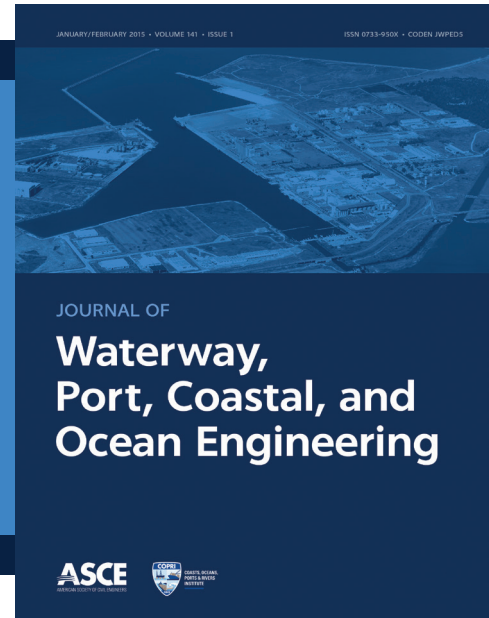
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Call for Papers

Special Issue on Modeling of Liquefaction Around Marine Structures



Aims & Scope

Throughout the past decades, an increasing exploitation of the marine environment can be observed. Next to traditional fields, such as oil and gas exploration or the shipping industry, novel players, such as marine renewable energy, are entering the offshore environment.

Among the different engineering challenges to design the required marine structures, seabed liquefaction needs to be considered; however, is often under-explored. Seabed liquefaction describes the phenomenon by which the seabed soil loses its bearing capacity and acts like a highly viscous fluid due to the accumulation of pore pressure, potentially leading to severe system failure.

The modeling, analysis, and prediction of seabed liquefaction renders challenging, due to the highly complex interaction of the hydrodynamic and geotechnical processes. To date, experimental and numerical modeling approaches are commonly used to investigate liquefaction. However, the employed models show different limitations, which need to be addressed to enable holistic analysis of seabed liquefaction for engineering applications. Among the efforts to improve the modeling of liquefaction, the NuLIMAS project (Numerical modelling of Liquefaction around Marine Structures), as a successor project to the LIMAS project (2001-2004), aims to address shortcomings of current numerical modeling approaches by developing a novel numerical toolbox to analyse seabed liquefaction.

This special issue aims to attract significant contributions focusing on different aspects of the numerical and experimental modeling of seabed liquefaction, as well as on the wider scope of hydrodynamic behaviour of marine structures. Thereby, this special issue will disseminate the recent efforts in the modeling of liquefaction around marine structures, sharing significant results to end users in consulting companies, contractors, governmental authorities, and research entities at universities and research institutions within the coastal and offshore engineering, as well as the geotechnical and structural engineering communities.

Journal of Waterway, Port, Coastal, and Ocean Engineering



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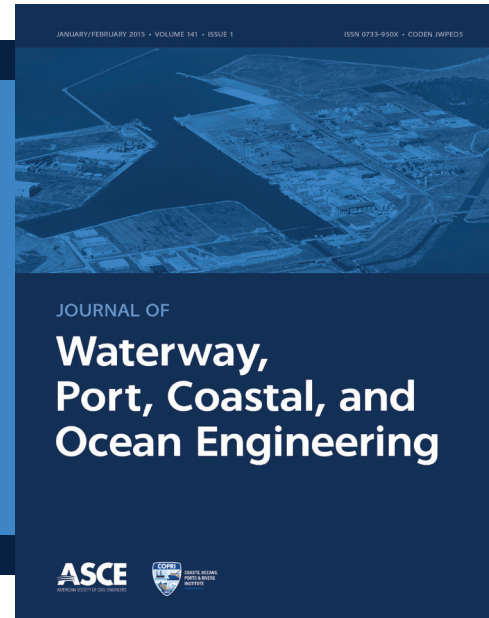
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Topics of Interest

Specific topics in the special issue are expected to include, but are not limited to the following:

- Numerical modeling approaches of liquefaction around marine structures.
- Numerical validation and calibration studies
- Analytical modeling approaches of liquefaction around marine structures.
- Experimental modeling of liquefaction around marine structures, from small to large scale.
- Literature reviews.

Submission Guidelines

- Prospective authors should prepare their manuscripts according to guidelines in Author Guide, <https://ascelibrary.org/doi/book/10.1061/9780784479018>
- In submitting their manuscript electronically, authors should access the journal at the Manuscript Tracking System <https://www.editorialmanager.com/jrnwweng>
- When submitting, the prospective authors should indicate in the submission questions that the paper is being submitted in response to this call for papers (Special Issue: Numerical modeling of liquefaction around marine structures).
- Please note that this is an invitation to submit papers for peer review and does not imply acceptance for publication. Acceptance of submitted papers depends on the results of the normal refereed peer review process of the journal.

Deadline for Paper Submissions

The deadline for paper submissions under this solicitation is December 31, 2024.