

MODELLING OF HYDROELASTICITY IN MARINE ENGINEERING

2000 COMPUTATIONAL FLUID DYNAMICS

TOBIAS MARTIN^{*} AND HANS BIHS[†]

^{*} Department of Civil and Environmental Engineering, NTNU Norway
Høgskoleringen 7a, 7491 Trondheim
tobias.martin@ntnu.no
<https://www.ntnu.edu/employees/tobias.martin>

[†] Department of Civil and Environmental Engineering, NTNU Norway
Høgskoleringen 7a, 7491 Trondheim
hans.bihs@ntnu.no
<https://www.ntnu.edu/employees/hans.bihs>

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ABSTRACT

Hydroelasticity is concerned with the fluid-structure interaction (FSI) of deformable systems responding to excitations in the ocean environment. In the past, modelling of hydroelasticity was mostly concentrated on either the fluid or structural part of this interaction. In the upcoming years, the importance of the ocean for food and energy production is expected to increase rapidly. At the same time, the effects of climate change alter the loading on floating systems and increase the chances for storms. Thus, the neglect of the important phenomena arising from the interaction becomes increasingly severe.

In this Minisymposium, a platform for new FSI modelling approaches in the field of marine and ocean engineering shall be provided. It aims to bring together researchers working on mooring and marine cable dynamics, aquaculture farms, floating elastic systems such as bridges, sails as well as renewable energy systems. The focus shall be on different discretisation techniques and the coupling procedure to the fluid solution. Contributions focusing on the validation for relevant applications are also encouraged.

REFERENCES

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