

# Special issue on Fluid-Structure Interactions

## Preface

This special volume consists of selected papers from the mini-symposium ‘Fluid-Structure Interactions’ in ‘The 2018 World Congress on Advances in Civil, Environmental, and Material (ACEM18)’ held at Songdo Convensia, Incheon, South Korea, during August 27-31, 2018. The papers in this volume were selected from papers at the mini-symposium and have all been peer-reviewed. The symposium focused on flow-induced vibrations of three circular cylinders in equilateral triangular arrangements, control of flow-induced vibrations of building structures, structural instability of wind turbines, flow around bridge piers, interactions of waves with breakwaters, and fluid dynamics around two interacting cylinders. From the symposium, it is understood that an increase in the reduced velocity leads to five different vibration responses of three cylinders in the equilateral arrangement. A steady suction at the free-end of a building structure can reduce vibration of the structure up to 92%, which is a significant achievement. When three piers are placed in side-by-side, a very large (about 200 times the cross-section of a pier) recirculation wake may form for a certain range of the gap distance between the piers, which may cause sediment accumulation behind the piers. Depending on the incident wavelength, there is a critical breakwater width corresponding to minimum energy transmitted through the breakwaters. The connection between structural instability, added mass and added damping could be a challenging future research direction. We would like to thank all authors for submitting their papers for this special issue and for commitment to revising their papers following the reviewer comments. We cordially acknowledge the reviewers for their time and effort in reviewing the papers.

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