

Special issue on Fluid-Structure Interactions

Preface

This special volume consists of selected papers from the mini-symposium ‘Fluid-Structure Interactions’ in the ‘The 2017 World Congress on Advances in Structural Engineering and Mechanics (ASEM17)’ held at KINTEX, Ilsan, South Korea, during August 28 – September 01, 2017. The papers in this volume were selected from the oral presentations at the mini-symposium and have all been peer-reviewed. The symposium focused on flow-induced vibrations, flow around buildings, vibration suppression, bluff-body wakes, vortex shedding, and interaction between vortices and flexible structures. By means of the works presented in this symposium, it has been revealed that the flow over long flexible structure is highly complicated, leading to structural modal vibration upto the 6th in the cross-stream direction and the 11th in the streamwise direction. Applying grid plates in a twin-box girder bridge has positive impacts on suppression the heaving vibration responses. For a building structures, the maximum turbulence intensity prevails in the shear layers separated from the free edge and behind the structures. A most challenging future direction of research coming from the works in this symposium is the prediction of added mass and added damping connected to the different modes of vibration. 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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