ADVANCES IN COMPUTATIONAL MECHANICS FOR FLOW-INDUCED VIBRATIONS

Frederick Gosselin[1] *and Rajeev Jaiman*[2]

[1]*Polytechnique Montreal*
[2]*University of British Columbia*

MINISYMPOSIUM

Explore the forefront of computational mechanics in the context of flow-induced vibrations (FIV) at our symposium. We invite contributions encompassing:

- Development of Computational Methods: Delve into novel and efficient computational techniques, including monolithic, partitioned iterative, body-fitted moving boundary, immersed methods, as well asd Eulerian/Lagrangian approaches, and more as they apply to FIV. Propose new ideas for flow-induced vibration/noise, contacts and fretting, multiphase flow and free-surface, and other interacting physical fields.
- Application of Computational Software to FIV Applications: Present your application of numerical methods for FIV, whether with in-house codes or commercial software solutions , emphasizing their applications in aerospace, offshore engineering, biomedical sciences, acoustics, renewable energy, nuclear engineering and other fields..
- Scaling for Real-World Challenges: Discuss parallel computing algorithms, acceleration techniques, and reduced-order modeling tailored for addressing large-scale FIV problems, bridging the gap between simulations and practical solutions.

We encourage an inclusive atmosphere where contributions that may not directly match the description but hold potential interest for the computational FIV community are also welcome. Join us in advancing our understanding of FIV and its crucial applications across various fields in this symposium dedicated to computational mechanics.