

FLUID-STRUCTURE INTERACTION ALGORITHMS AND APPLICATIONS

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ABSTRACT

This minisymposium focuses on methods for modeling fluid-structure interaction (FSI) problems. The goal of this minisymposium is to provide a forum for investigators to discuss state-of-the-art solutions to the modeling of, and numerical challenges unique to, FSI problems. Contributions detailing algorithm development, software development, and/or applications are sought. In particular, presentations comparing and benchmarking the performance of FSI algorithms, describing the software implementation details, and discussing interesting or novel applications are welcome. Presentations that compare and discuss the merits and limitations of one approach to modeling FSI over another are especially encouraged, as are those focused on verification and validation methods.

Novel papers describing the application of FSI technology to problems of all scales are welcome. Targeted themes for this session include:

- The identification of problems requiring fully coupled FSI algorithms.
- Computational algorithms for solving FSI problems.
- Performance evaluation of original and commercial codes.
- Verification and validation methods, and benchmark problems.
- ALE formulations, fully Lagrangian or Eulerian formulations, moving-mesh methods.
- Discretization techniques and approximation spaces.