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Computational Fluid Dynamics (CFD) and Fluid-Structure Interaction (FSI): Methods Development and Applications

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ABSTRACT

This symposium brings together researchers from the engineering community to share and discuss advances in computational fluid dynamics (CFD) and fluid-structure interaction (FSI). Covering both computational methods and engineering applications, topics include — but are not limited to — theoretical developments, novel computational frameworks, new discretization methods, high-order approaches, moving-mesh methods such as the Arbitrary Lagrangian-Eulerian (ALE) and space-time (ST) formulations, isogeometric analysis (IGA), FSI coupling strategies, Eulerian and ALE hydrocodes, high-performance computing, and applications to complex problems in engineering, science, and medicine. Emerging trends in machine learning for CFD and FSI will also be featured. The symposium serves as a collegial platform for researchers from academia and industry to exchange ideas on the latest advances and future directions in the field.