

Abstract Submitted
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Some recent developments of the immersed interface method for flow simulation¹ SHENG XU, Southern Methodist University — The immersed interface method is a general methodology for solving PDEs subject to interfaces. In this talk, I will give an overview of some recent developments of the method toward the enhancement of its robustness for flow simulation. In particular, I will present with numerical results how to capture boundary conditions on immersed rigid objects, how to adopt interface triangulation in the method, and how to parallelize the method for flow with moving objects. With these developments, the immersed interface method can achieve accurate and efficient simulation of a flow involving multiple moving complex objects.

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