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The Immersed Interface Method for Two-Fluid Flows MIGUEL UH, Southern Methodist University — In the Immersed Interface Method, a two-fluid flow problem is formulated as one set of governing equations and simulated on a fixed Cartesian grid. The effect of the two- fluid interface enters the formulation as a singular force and a numerical scheme as jump conditions. In this talk, we will present principal jump conditions and discuss the difficulties in implementing them. Finally, we will demonstrate the accuracy and efficiency of our immersed interface method for two-fluid flow simulation.

Miguel Uh
Southern Methodist University

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