

Abstract Submitted
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Direct Numerical Simulation of Multiphase flow over Realistic Superhydrophobic Surfaces¹ KARIM ALAME, KRISHNAN MAHESH, University of Minnesota — Direct numerical simulations are performed using the volume of fluid methodology, for turbulent channel flow of water over a realistic superhydrophobic surface, which traps air. The surface is obtained from scanned data of the real sprayed surface. Multiphase laminar Couette flow and turbulent channel cases are examined. Drag reduction for different interface heights are shown, and the effect of turbulence on multiphase flow over rough surfaces is discussed.

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