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The effects of interface deformation of superhydrophobic surface on turbulent flows SHAO-CHING HUANG, JOHN KIM, University of California, Los Angeles — Direct numerical simulations of a turbulent channel flow over superhydrophobic surface are performed to study the effects of gas-liquid interface deformation. An immersed boundary method is developed to resolve the deformed gas-liquid interface. Turbulence statistics obtained from idealized interface configurations is compared to those obtained from previous studies using the flat interface assumption. Implications on the drag reduction mechanism will be discussed.

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