Abstract Submitted for the DFD13 Meeting of The American Physical Society

Turbulent transport at rough surfaces SRIKANTH TOPPAL-ADODDI, JOHN WETTLAUFER, Yale University, University of Oxford, SAURO SUCCI, Istituto Applicazioni Calcolo, CNR Roma — We use the Lattice Boltzmann Method to study the effects of rough walls on transport properties at large Reynolds numbers in two dimensions. The roughness elements used have both uniform and non-uniform distributions and we compare our approach with previous studies that have investigated the effects of rough walls on flows in micro channels. The non-uniform roughness distributions have the same spectral properties as that of the underside of Arctic sea ice.

Srikanth Toppaladoddi Yale University, University of Oxford

Date submitted: 29 Jul 2013 Electronic form version 1.4