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Direct numerical simulations of flow over ridges in presence of waves and current LONG CHAU, KIRAN BHAGANAGAR, University of Texas, San Antonio — In this talk we demonstrate Direct numerical simulation (DNS) as a robust and a valid tool to study fundamental physics for coastal problems. We focus on turbulent pulsatile flow over 3-D ridged surfaces, which are relevant for oceanographic problems. We consider different morphological surfaces to explore the differences in turbulence production, dissipative and transport mechanisms. The influence of ridge shape and the pulse frequency on the scaling of the drag is explored.

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