

Mesoscale modeling of aeolian sand transport

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Emerging mesoscale structures govern many interesting but incompletely understood physical and biological phenomena, as much as they protect them from microscopic details and contingencies. Our work on the mesoscale structure of aeolian sand transport specifically addresses some of the most eminent open tasks identified during last year's interdisciplinary GEOFLOW program at the KITP; notably, the grain-scale physics that is responsible for the emergence of ripples and megaripples and for the enigmatic characteristic scale of sand dunes.

