DIATI SEMINAR

Experimental observations on sand and snow dynamics

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Research interests: Experimental Fluid Mechanics, Geophysical Flows, wind power, hydrokinetic energy conversion, Turbulence.

Abstract. Geophysical flows are rarely single phase flows. During floods, sand storms or snowfalls particles of different size and density represent a source of complexity, but also an opportunity for unprecedented measurements. Imaging techniques at both field and laboratory scales can use transported particles to provide high spatio-temporal information on the flow depending on the Stokes number and on the spatial scale we aim to resolve. While the problem is far from trivial, because particles and turbulence are known to interact, we can always choose what to focus on. I will report some results from ongoing research on snow dynamics (and wind power), and on sand dynamics (and hydrokinetic energy conversion) to illustrate how we can learn about turbulent flows and renewable energy, and also how we can learn about particle dynamics.

VENERDI' 23 GIUGNO, ORE 12:00

Sala riunioni DIATI-3 primo piano