



SLAM Seminar

Grains, drops, waves and dislocations: experimental non-equilibrium physics at different scales

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Host: Scott Waitukaitis

In this talk I will overview a set experiments that show the beauty of non-equilibrium physics at different scales.

Confined non-cohesive granular systems show a plethora of wonderful phenomena, from non-equilibrium phase transitions, very low surface tension capillary waves, transitions to absorbing states and hyper-uniformity. But small grains also interact through electrostatic forces in free-fall conditions. Can lab experiments help us understand the problem of planet formation?

In water tanks, Faraday waves still deserve our attention: their contact line can induce beautiful streaming patterns and their non-propagating soliton solutions can juggle one or more stable oscillating drops.

Finally, crystal dislocations scatter elastic waves, which can be used to probe non-invasively the material properties. Can we develop a low-cost and precise probe for ductile failure in metallic alloys?

Thursday, July 7, 2022 at 11am

Heinzel Seminar Room / Office Bldg West (I21.EG.101)



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