



PHYSICS AND ASTRONOMY SEMINAR

Dr. Paolo Glorioso
Stanford University

“Fractons and (fluctuating) hydrodynamics with translation symmetry”

Recently there has been an intense exploration of systems displaying fractonic behavior. In the context of hydrodynamics, novel scalings associated with these excitations have been found both theoretically and experimentally. When translation invariance is present, a crucial feature is that fractons possess a nontrivial extension of spacetime symmetries. In this talk, I will introduce the hydrodynamics of fractons with translation symmetry and show how the novel spacetime symmetry algebra leads to rather exotic features. I will also discuss the regime beyond mean-field theory using an effective field theory approach. This may contain relevant perturbations, which potentially modify the naive hydrodynamic scaling at very low energy.

Wednesday, February 10, 2021
10:00 a.m.

Zoom link:

<https://uvic.zoom.us/j/88976589165?pwd=NFJzSzJWdUlWZEFRNzI0a2dHOEoxZz09>