

CU Physics Department Colloquium

Monday, February 13, 2012 4:10 PM 428 Pupin Hall

Effective field theories for fluids and superfluids

I will present a novel field theoretical framework that captures the long-distance and low frequency dynamics of hydrodynamical systems. The approach is that of effective field theories, whose building blocks are the infrared degrees of freedom and symmetries. Possible applications include questions in condensed matter physics, heavy-ion collisions, astrophysics and cosmology, and quantum hydrodynamics. Moreover, this formulation naturally invites (and answers) new questions in classical hydrodynamics.



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