“Counterintuitive strings”

Speaker: Alberto Nicolis, Columbia University

I will describe the dynamics of vortex lines and vortex loops, which exist in ordinary fluids as well as in superfluids. These string-like objects behave nothing like string-like objects. They do not obey Newton's second law, and, as a consequence, their behavior is highly counterintuitive. I will describe how effective field theory provides us with an optimal tool to understand how they move and how they interact with one another and with sound. I will also describe how these techniques can help us shed some light on the nature of "rotons"—bizarre quantum excitations in superfluid helium.

Monday, February 24, 2014 / 428 Pupin Hall / 4:15 PM

Coffee served prior to the colloquium, wine and cheese following