

AVVISO DI SEMINARIO

Il Dipartimento di Fisica di Pisa organizza, in collaborazione con INO-Pisa, una serie di seminari di Fisica della Materia. I seminari sono pensati per un pubblico di studenti, dottorandi e ricercatori **NON SPECIALISTI** del settore.

La formula attualmente scelta è quella del seminario da remoto. Il primo sarà tenuto dal **Dott. Luca TANZI** (CNR INO) il giorno:

Venerdì 18 Novembre 2022 alle ore 15:00

Titolo del Seminario:

Exploring the supersolid phase of matter with dipolar quantum gases

Abstract

"Supersolidity is a paradoxical quantum phase of matter that combines the properties of superfluids and crystals. Although it was proposed more than 50 years ago for helium, its experimental verification has long remained elusive. Recently, at the "Dysprosium Lab" in Pisa, we discovered supersolidity in an ultracold sample of strongly magnetic atoms. In this talk, I will report on a series of experiments aimed at revealing the fundamental nature of dipolar supersolids, shedding light on their intertwined superfluid and solid properties. Supersolids are a new phase of matter with unconventional properties, many of which have yet to be revealed. Understanding their physical behaviour could also open new directions for potential applications, such as the creation of innovative quantum materials."