Entanglement for Quantum Technologies

Abstract:

Entanglement is a necessary resource for the development of new quantum technologies in sensing, computation, and cryptography. This "second quantum revolution" holds the promise of achieving performance levels far beyond those of current classical devices. I will provide a concise overview of the fundamental concept of entanglement and present a novel approach for its detection and characterization. Specifically, I will demonstrate a profound connection between the ability to statistically differentiate quantum states and a class of entangled states that prove to be crucial in ultrasensitive metrological and multi-phase interferometric applications.

mercoledì 6/12/2023, ore 16:30, Aula Newton (plesso fisica)