Il Prof.

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A conclusione del **progetto CORI (responsabile F. Ciccarello)** dal titolo **«Sistemi quantistici fuori dall'equilibrio: teoria e applicazioni»,** terrà una lezione dal titolo:

Quantum absorption refrigerators

giorno **venerdì 9 Settembre 2022 alle** ore **12.00 presso l'aula E di** via Archirafi 36
Codice Team: **lsjn15r**

Tutti gli interessati, in particolare **studenti** e **dottorandi**, sono invitati a partecipare.

Abstract

Absorption refrigerators function using an external heat source, rather than work. In the quantum domain, absorption refrigerators have been extensively studied in the last years, thanks to their conceptual simplicity and as a popular example of an autonomous machine. In this seminar, I will explain their classical functioning and performance, extending the discussion to a quantum working medium. I will describe the smallest design consisting of only three qubits (or one qubit and a qutrit). I will then present a no-go theorem for the existence of absorption refrigerators made of linearly-coupled quantum harmonic oscillators with a time-independent Hamiltonian. Finally, I will talk about the existence of quantum absorption refrigerators without three-body interactions and recent experiments.