HQOC
Harvard Quantum Optics Center

ITAMP
INSTITUTE FOR THEORETICAL ATOMIC MOLECULAR AND OPTICAL PHYSICS

Joint Quantum Sciences Seminar

Wednesday, October 28, 4:00 pm
Jefferson 250

Prof. Eric Akkermans

Technion

"Topology and fractals : measuring Chern numbers with waves in quasicrystals"

I will present recent results obtained both theoretically and experimentally on fractal spectral properties of a polariton gas in Fibonacci quasi-periodic potential. The observed spectrum is accurately reproduced from a theoretical model that we shall present. We have observed for the first time log-periodic oscillations and the opening of mini-gaps following the gap labeling theorem and the corresponding topological Chern numbers. These results illustrate the potential of cavity polaritons as a quantum simulator in complex topological geometries.

Student Presentation by Soonwon Choi will begin at 4:00 PM
Guest Presentation will begin at 4:30 PM
Refreshments will be provided