



Seminar/Talk

Resonant optical dipole-dipole interactions in cold atoms

Robin Kaiser

University Cote D'azur

Host: Julian Leonard

Abstract: The quest for Anderson localization of light is at the center of many experimental and theoretical activities. Cold atoms have emerged as interesting quantum system to study coherent transport properties of light. Initial experiments have established that dilute samples with large optical thickness allow studying weak localization of light, which has been well described by a mesoscopic model. Recent experiments on light scattering with cold atoms have shown that Dicke super- or subradiance occurs in the same samples, a feature not captured by the traditional mesoscopic models. The use of a long range microscopic coupled dipole model allows to capture both the mesoscopic features of light scattering and Dicke super- and subradiance in the single photon limit. I will review experimental and theoretical state of the art on the possibility of Anderson localization of light in 3D by cold atoms.

Tuesday, January 27, 2026 11:00am - 12:00pm

Heinzel Seminar Room



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.