

## Anderson transitions of matter waves in laser speckle potentials

Anderson localization, namely the absence of waves diffusion in disordered media, is a completely general phenomenon resulting from the interference of multiple scattering paths. We present recent numerical results [1,2] for Anderson localization of matter waves, describing the behavior of ultra-cold atoms in laser speckle potentials. Our computations of the critical point of the Anderson transition, the mobility edge, are based on a high order spatial discretization of the Schrodinger equation, to which we apply transfer matrix and finite size scaling techniques.

[1] G. Orso, PRL 118, 105301 (2017)

[2] M. Pasek, G. Orso and D. Delande, PRL 118, 170403 (2017)