DAMOP16-2016-020076

Abstract for an Invited Paper for the DAMOP16 Meeting of the American Physical Society

## Anderson localization and beyond with disordered quantum gases GIOVANNI MODUGNO, LENS and Physics Department, University of Florence

Ultracold atoms in disordered optical potentials allow to simulate fundamental aspects of the physics of disordered quantum systems. Employing non interacting atoms we have been able to verify the existence of the mobility edge in 3D predicted by P.W. Anderson more than 50 years ago. We are currently exploring the complex phases that arise in presence of disorder, interactions and finite temperature.