

ICTP/SISSA JOINT COLLOQUIUM

Condensed Matter Physics with Cold Atoms and Molecules

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15:00, Main Lecture Hall, ICTP Main Building

Abstract: We discuss the physical realization of Hubbard models with cold atoms and molecules in optical lattices, and self-assembled dipolar lattices. Features of these systems are the control of Hubbard parameters, which allows the study of strongly correlated systems of bosons and fermions with tools of atomic physics, ranging from studies of d-wave suprafluidity all the way to the generation of exotic quantum phases and their excitations. In particular we will also discuss our recent extensions to include phonon degrees of freedom in these cold atom scenarios, and questions of dissipatively driven strongly correlated atomic systems.

All are welcome to attend.