



Ultra Cold Atoms Workshop

September 04, 2009

The ICREA Workshop on Quantum Theories and Ultra Cold Atoms, organized by ICFO, has taken place during September 1st-4th.

The ICREA Workshop on Quantum Theories and Ultra Cold Atoms, organized by ICFO, has taken place during September 1st-4th.

ICFO is the organizer of the ICREA Workshop on Quantum Theories and Ultra Cold Atoms, a BEC 2009 Conference satellite meeting. Prof. Maciej Lewenstein is the chair of the organizing committee. The meeting is co-financed by the Caixa Manresa Foundation.

The workshop will address the physics of ultracold atoms and molecules, quantum information, and quantum field theories used in high energy and condensed matter physics. Ultracold atoms have been of central interest in atomic, molecular and optical physics and quantum optics for over 20 years. Recently, the physics of ultracold atoms has proven to be the perfect playground for the quantum engineering (i.e. the preparation, manipulation and

detection) of micro, meso and macroscopic states of quantum matter with unprecedented precision and control. In particular, ultracold gases in optical lattices can serve as "special purpose quantum computers" or quantum simulators of various condensed matter systems. Only a few researchers so far have dared to go even further and to consider possible connections and applications of ultracold atoms for problems relevant to high energy physics and quantum gauge theories, in particular non-Abelian ones. The challenges and hard-to-simulate problems of high energy and condensed matter physics provide the main motivation for organizing this workshop.

VENUE

[Mon Sant Benet](#), Barcelona.

TIME

September 1st to September 4th

