
# "Topological and Strongly Correlated Phases in Cold Atoms"

## Tutorial: 29 April 2015

## Program: 30 April - 1 May 2015

### Jadwin Hall, Fourth Floor, Room 407, PCTS

Recently, ultra-cold atom systems have become a new frontier in quantum physics. The unique controllability in experiments provides a playground for studying exotic phenomena proposed in condensed matter, statistical physics, quantum information and high-energy physics. Moreover, there is the exciting prospect of having novel topological and strongly interacting phenomena that are not easily accessible in usual solid-state systems, but realizable with cold atoms. This program will consolidate the collaboration between cold atom experimentalists and theorists from all interested fields, to discuss new mechanisms, realizations, and detections of topological and strongly interacting phases in cold atom systems. Topics will include but will not limit to artificial gauge fields, topological band structures, fractional quantum Hall physics, Mott phases and ferromagnetic phases in cold atom systems. This program will start with 1 day of pedagogical tutorials and will be followed by 2 days of conference.

## FREE, but REQUIRED REGISTRATION is available online at http://pcts.princeton.edu/pcts/

**Workshop Organizers:** Waseem Bakr, David Huse, Yi Li, Titus Neupert, Curt von Keyserlingk

**Speakers**

Ehud Altman, Weizmann Institute
Immanuel Bloch, MPI
Nigel Cooper, Cambridge University
Eugene Demler, Harvard University
Marcus Greiner, Harvard University
Massimo Inguscio, LENS
Deborah Jin, University of Colorado/NIST
Erich Mueller, Cornell University
Ana-Maria Rey, University of Colorado, Boulder
Ian Spielman, University of Maryland
Tilman Esslinger, ETH Zurich
Congjun Wu, UCSD

## SPECIAL EVENT: 40TH Annual Donald Hamilton Lecture

## "Fun with Ultracold Atoms"

## Deborah Jin, JILA and University of Colorado

## Thursday, April 30, 2015 * 8 p.m. * McDonnell Hall, A-02 Auditorium