

INT International Conference, **Frontiers in Quantum Simulation with Cold Atoms**

March 30 – April 2, 2015

(Part of the INT 15-1 Program)

DURING CONFERENCE WEEK, ALL LECTURES WILL BE IN THE ALDER HALL AUDITORIUM, ROOM 104

There will be a \$35 registration fee to attend the 15-1 international conference. The registration fee includes participation in the international conference, lectures, poster sessions, and coffee breaks.

Monday, March 30, 2015

Time	Lecture / Activity	Speaker
8:15am	Registration in Alder Hall lobby	
9:00am	The topological Haldane Model	Tilman Esslinger, Institute for Quantum Electronics
9:50am	Coffee Break	
10:20am	Gauge fields in multi-level atoms: magnetism and synthetic dimensions	Ian Spielman, National Institute of Standards and Technology
11:10am	Simulating abelian and non-abelian lattice gauge theories with cold atoms	Benni Reznik, Tel Aviv University
12:00pm	Lunch	
2:00pm	Observing Berry flux and Chern numbers in optical lattices	Ulrich Schneider, Ludwig-Maximilians University of Munich
2:50pm	Coffee Break	
3:20pm	Quantum many-body localization: new insights from theory and experiment	Ehud Altman, Weizmann Institute of Science
4:10pm	Quantum versus classical simulation of quantum systems	Matthias Troyer, ETH Zurich

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Tuesday, March 31, 2015

Time	Lecture / Activity	Speaker
9:00am	Measuring Entanglement Entropy in Synthetic Matter	Markus Greiner, Harvard University
9:50am	Coffee Break	
10:20am	Magnetic like interactions in quantum gases	Klaus Sengstock, Institut für Laser-Physik
11:10am	Exploring quantum polarons with ultracold atoms	Eugene Demler, Harvard University
12:00pm	Lunch	
2:00pm	Dipolar quantum phenomena with strongly magnetic atoms	Francesca Ferlaino, University of Innsbruck
2:50pm	Interaction Effects in Topological Modes of Cold Atom Systems	Hui Zhai, Tsinghua University
3:40pm	Coffee Break / Poster Setup	
4:20pm	Poster Session	Conference Participants
7:30pm	Poster Tear Down	

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Wednesday, April 1, 2015

Time	Lecture / Activity	Speaker
9:00am	How Low Can You Go?	Randall Hulet, Rice University
9:50am	Coffee Break	
10:20am	Probing correlations and their evolution in non-equilibrium quantum systems	Joerg Schmiedmayer, Vienna Center for Quantum Science and Technology
11:10am	Quantum dynamics of strongly interacting spins and photons	Mikhail Lukin, Harvard University
12:00pm	Lunch	
2:00pm	SU(N) orbital magnetism and synthetic dimensions with two-electron fermions	Leonardo Fallani, University of Florence
2:50pm	Coffee Break	
3:20pm	Simulating Fluids	Thomas Schaefer, North Carolina State University
4:10pm	Quantum magnetism at temperature regimes above quantum degeneracy	Ana Maria Rey, JILA, University of Colorado Boulder

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Thursday, April 2, 2015

Time	Lecture / Activity	Speaker
9:00am	A Bose-Fermi Double Superfluid Mixture	Christophe Salomon, Ecole Normale Supérieure (ENS)
9:50am	Coffee Break	
10:20am	Local Shear viscosity of a unitary Fermi gas near the superfluid phase transition & Spin-imbalanced quasi-2D Fermi gases	James Joseph & Ilya Arakelyan, North Carolina State University
11:10am	Is the composite fermion a Dirac particle?	Dam Thanh Son, University of Chicago
12:00pm	Lunch	
2:00pm	Magnetism, rotons, and beyond: engineering atomic systems with lattice shaking	Colin Parker, University of Chicago
2:50pm	Coffee Break	
3:20pm	Topological flat bands with Chern number $C=2$ by dipolar exchange interactions	Hans Peter Büchler, University of Stuttgart
4:10pm	Uniform Bose gases	Zoran Hadzibabic, University of Cambridge

Our Universe: From the Quantum World to Cosmology presents Public Lecture in **Kane Hall, Room 130**.

7:00pm Paul McEuen, Cornell University
"The Future of Small"

Please RSVP if you plan to attend: <http://engage.washington.edu/site/Calendar?id=123681&view=Detail>

Friday, April 3, 2015

Not part of international conference. Discussion will be in Physics/Astronomy Tower, Room C520.

10:00am Immanuel Bloch, Cheng Chin, & Zoran Hadzibabic
Open Discussions on Quantum Simulation with Cold Atoms

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Name, Institution	Email	Arrival	Depart
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