

Princeton Center for Theoretical Science

The Princeton Center for Theoretical Science is dedicated to exploring the frontiers of theory in the natural sciences. Its purpose is to promote interaction among theorists and seed new directions in research, especially in areas cutting across traditional disciplinary boundaries.

The Center is home to a corps of Center Postdoctoral Fellows, chosen from nominations made by senior theoretical scientists around the world. A group of senior Faculty Fellows, chosen from science and engineering departments across the campus, are responsible for guiding the Center. Center activities include focused topical programs chosen from proposals by Princeton faculty across the natural sciences. The Center is located on the fourth floor of Jadwin Hall, in the heart of the campus "science neighborhood". The Center hopes to become the focus for innovation and cross-fertilization in theoretical natural science at Princeton.

Faculty Fellows

Paul Steinhardt, Director
Igor Klebanov, Associate Director
Ravindra Bhatt, Acting Associate Director
Adam Burrows
Curtis Callan
Roberto Car
David Huse
Salvatore Torquato
Jeroen Tromp

Center Postdoctoral Fellows

Benjamin Basso 2009-2012
Adam Brown 2009-2012
Bryan Clark 2009-2012
Yoav Kallus 2011-2014
Mariangela Lisanti 2010-2013
Joseph Maciejko 2011-2014
Elisabetta Matsumoto 2011-2014
Timothy Merlis 2011-2014
Marco Schiro', 2010-2013
Alexander Tcchekhovskoy 2010-2013
Mosahito Yamazaki 2010-2013

To find out more about Center Postdoctoral Fellowships and Programs see:

<http://pcts.princeton.edu/pcts>



Strongly Interacting Electrons in Low Dimensions: New Orders, Symmetries, and Excitations

New Frontiers in Low Dimensional Systems Program

12-14 September 2011

**PCTS – Jadwin Hall
Fourth Floor, Room 407**

Organizers

Dmitry Abanin, Andrei Bernevig
Shivaji Sondhi

Strongly Interacting Electrons in Low Dimensions: New Orders, Symmetries, and Excitations

Monday 12 September 2011

8:50 am Welcoming Remarks

9:00 – 9:50 “TBA”
Dan Arovas, UC San Diego

10:00 – 10:50 “TBA”
Eduardo Fradkin, University of Illinois

11:00 – 11:15 Coffee break

11:15 – 12:05 “Topological order and quantum entanglements--from a unification of light and electrons to a classification of interacting topological insulators/superconductors”
Xiao-Gang Wen, MIT

12:15–1:30 pm Lunch

1:30 – 2:20 “TBA”
Andrei Bernevig, Princeton University

2:30 – 3:20 “TBA”
Piers Coleman, Rutgers University

3:30 – 4:20 “Talk title”
Allan MacDonald, University Texas, Austin

Tuesday, 13 September 2011

9:00 – 9:50 “Circuit Quantum Electrodynamics”
Steven Girvin, Yale University

10:00 – 10:50 “TBA”
Senthil Todadri, MIT

11:00 – 11:15 Coffee break

11:15 – 12:05 “From Luttinger Liquid to Non-Abelian Quantum Hall States”
Charles Kane, University of Pennsylvania

12:15–1:30 pm Lunch

1:30 – 2:20 “TBA”
Edward Rezayi, California State University

2:30 – 3:20 “TBA”
Duncan Haldane, Princeton University

3:30 – 4:20 “TBA”
Ashvin Vishwanath, UC Berkeley

Wednesday, 14 September 2011

9:00 – 9:50 “Majorana Fermions in superconducting nanowires: Interaction and fluctuation effects”
Matthew Fisher, UC Santa Barbara

10:00 – 10:50 “The uses of gauge-gravity duality in condensed matter physics”
Subir Sachdev, Harvard University

11:00 – 11:15 Coffee break

11:15 – 12:05 “TBA”
Joel Moore, UC Berkeley

12:15–1:30 pm Lunch

1:30 – 2:20 “TBA”
Gregory Moore, Rutgers University

2:30 – 3:20 “New insights from the Landau-Ginzburg-Chern-Simons theory of quantum Hall systems”
Steven Kivelson, Stanford University

3:30 – 4:20 “Quantum Hall Transitions and Quantum Number Fractionalization in Trapped Cold Atom Systems”
Kun Yang, Florida State University