

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
William Bialek
Curtis Callan
Roberto Car
Salvatore Torquato
Jeroen Tromp

Center Postdoctoral Fellows

Dmitry Abanin 2008-2011
Benjamin Basso 2009-2012
Adam Brown 2009-2012
Bryan Clark 2009-2012
Mariangela Lisanti 2010-2013
M. Lisa Manning 2008-2011
Matthew Reece 2008-2011
Marco Schiro', 2010-2013
Alexander Tchekhovskoy 2010-2013
Mosahito Yamazaki 2010-2013

Associate Postdoctoral Fellows

Shravan Hanasoge 2010-2011

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

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



Electronic Properties of Graphene

8-9 October, 2010

**Jadwin Hall, Fourth Floor
Room 407**

Organizers:

Dmitry Abanin, Joseph Checkelsky, and N. Phuan Ong

**Co-sponsored by Princeton Center for
Complex Materials**

Electronic Properties of Graphene

Friday, October 8, 2010

- 9:00 am Welcoming Remarks**
- 9:10 – 9:45 "Magnetism and Strong Correlations in Chemically Modified Graphene"
Antonio Castro Neto, Boston University
- 9:45 – 10:20 "Charge Transport in Single- and Bi-layer Graphene"
Michael Fuhrer, University of Maryland
- 10:20 - 10:40 Coffee Break**
- 10:40 -11:15 "High Resolution Tunneling Spectroscopy of Graphene in Strong and Weak Disorder Potentials"
Joseph A. Stroscio, Center for Nanoscale Science and Technology, NIST
- 11:15- 11:50 "Broken symmetry in suspended bilayer graphene"
Amir Yacoby, Harvard University
- 11:50 - 12:25 "Electron transport in Graphene on Boron Nitride"
Cory Dean, Columbia University
- 12:25 - 1:40 pm Lunch & Poster Session**
- 1:40 – 2:15 "Fermi-line topology, Lifshitz transitions and symmetry breaking in bilayer graphene"
Vladimir Fal'ko, Lancaster
- 2:15 – 2:50 "Tunable optical properties of graphene"
Feng Wang, UC Berkeley
- 2:50 – 3:25 "Guiding Electrons in Graphene p-n Junctions"
James Williams, Stanford University
- 3:25 – 3:35 Coffee Break**
- 3:35 – 4:10 "Investigations of Scattering and Coulomb Interactions in Graphene by ARPES Measurements"
Eli Rotenberg, Lawrence Berkeley University
- *4:10 – 5:00 "Interacting fermions on the honeycomb bilayer: from weak to strong coupling"
Oskar Vafek, Florida State University
- 5:00 – 6:30 Poster Session, Coffee & Snacks**

Electronic Properties of Graphene

Saturday, October 9, 2010

- 9:00 – 9:35 am "Layer and Orbital ordering in Bilayer graphene"
Yafis Barlas, University of Florida
- 9:35 – 10:10 "Electronic Transport in Dual-Gated Bilayer Graphene at Large Displacement Fields"
Pablo Jarillo-Herrero, MIT
- 10:10-10:30 Coffee Break**
- 10:30 – 11:05 "Interactions in graphene"
Philip Kim, Columbia University
- *11:05 – 11:55 "Probing the electronic properties of graphene: from Landau level quantization to fractional quantum Hall effect."
Eva Andrei, Rutgers University
- Noon – 2:00 pm Lunch & Poster Session**
- 2:00 – 2:35 "Batch fabrication of single layer graphene devices and membranes"
Jiwoong Park, Cornell University
- 2:35 – 3:10 "Ordered states of adatoms on graphene"
Boris Altshuler, Columbia University
- 3:10 – 3:45 "Giant Flavor-Hall Effect and Nonlocal Transport in Graphene"
Dmitry Abanin, Princeton University
- 4:00 – 7:00 Poster Session, Coffee & Snacks**

* Talks of General Interest