

## 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  
David Spergel  
Salvatore Torquato

### Center Postdoctoral Fellows:

Dmitry Abanin 2008-2011  
Benjamin Basso 2009-2012  
Adam Brown 2009-2012  
Bryan Clark 2009-2012  
Thomas Klose 2007-2010  
Jean-Luc Lehners 2007-2010  
M. Lisa Manning 2008-2011  
Matthew Reece 2008-2011  
Branson Stephens 2007-2010  
Aleksandra Walczak 2007-2010

### Center Associate Postdoctoral Fellows:

Jeremy England, Lewis-Sigler Institute for Integrative Genomics 2009-2010  
Shravan Hanasoge, Geosciences, 2009-2010

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

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



# Anti-de Sitter/Conformal Field Theory: *New Developments and Applications*

**8-9 October 2009**

**Fourth Floor, Jadwin Hall**

### Program Organizers

Steven Gubser, Chris Herzog, Igor Klebanov  
Thomas Klose and Amos Yarom

**Co-sponsored by The D. E. Shaw Group**

## AdS/CFT

Thursday, 8 October 2009

- 9:00 – 9:30 am Breakfast
- 9:30 – 9:40 am Welcome Remarks  
**Igor Klebanov, PCTS**
- 9:40 – 10:40 am “Analytic Continuation of Chern-Simons Theory”  
**Edward Witten, Institute for Advanced Study**
- 10:50 – 11:50 pm “Superconformal Chern-Simons Theories: D=3 with N=5,6,8”  
**Jonathan Bagger, Johns Hopkins University**
- 12:00 – 1:00 pm Lunch**
- 1:00– 2:00 pm “Remarks on monopole operators”  
**Anton Kapustin, Caltech**
- 2:10 – 3:30 pm “An Introduction to AdS/CS Duality”  
**Oren Bergman, Technion**
- 3:30 – 4:00 pm Questions & Answers
- 4:00 – 4:30 Tea, Room 218 Jadwin Hall**
- 4:30 – 5:30 Physics Colloquium, Room A-10 Jadwin Hall
- “Gauge-Gravity Duality”  
**Joseph Polchinski, KITP**

## AdS/CFT

Friday, 9 October 2009

- 9:00 – 9:30 am Breakfast
- 9:30– 10:30 am “Loop operators in various dimensions”  
**Jaume Gomis, Perimeter Institute**
- 10:30 – 11:30 am “The superconformal index for N=6 Chern-Simons theory”  
**Seok Kim, Imperial**
- 11:30 – 12:30 pm “Emergent string and supersymmetry in condensed matter systems”  
**Sung-Sik Lee, McMaster University**
- 12:30 – 1:30 pm Lunch**
- 1:30 – 2:30 pm “Integrability in the ABJM/ABJ Models”  
**Joseph Minahan, Uppsala & MIT**
- 2:30 – 3:30 pm “N=8 SUSY Enhancement of ABJM at k=1 and 2”  
**Soo-Jong Rey, Seoul National University & IAS**
- 3:30 – 4:00 pm Coffee Break**
- 4:00 – 5:00 pm “Outlook for M2 branes and Chern-Simons”  
**Daniel Jafferis, Rutgers University**