

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>



Rare Events in Computational, Financial and Physical Sciences

21-22 October 2010

**Jadwin Hall, Fourth Floor
Room 407**

Organizer
Ravindra Bhatt

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

Rare Events in Computational, Financial and Physical Sciences

Thursday, October 21, 2010

2 - 3:15 pm *Rare events in physics and finance: Concepts and applications Part I*
Jean-Philippe Bouchaud, École Polytechnique

3:15 - 4:15pm Tea at PCTS

4:30 - 5:30pm Physics Colloquium, McDonnell A-02

Glassy phase transitions in hard computer science problems.
Marc Mezard, Laboratoire de Physique Theorique et Modeles Statistiques, Université Paris Sud

Rare Events in Computational, Financial and Physical Sciences

Friday, October 22, 2010

9:15 -10:15 am *Rare events in physics and finance: Concepts and applications Part II*
Jean-Philippe Bouchaud, École Polytechnique

10:15 - 10:45 am Coffee

10:45 -11:45 am *Adiabatic quantum optimization and Anderson Localization.*
Jeremie Roland, NEC Labs

11:45 - 12:30 pm *Phase transitions in QMA-hard computer science problems*
Christopher Laumann, Harvard University

12:30 - 1:45 pm Lunch

1:45 - 2:45 pm *Broadcast on a tree and reconstruction.*
Marc Mezard, Laboratoire de Physique Theorique et Modeles Statistiques, Université Paris Sud

2:45 – 3:00 pm Conclusion