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 and celebrated its tenth anniversary in 2016.

Faculty Fellows
Paul Steinhardt, Director
Igor Klebanov, Associate Director
Andrei Bernevig
Curtis Callan
Pablo Debenedetti
Eve Ostriker
Howard Stone
Herman Verlinde
Ned Wingreen

Center Postdoctoral Fellows
Barry Bradlyn 2015-2018
Jennifer Cano 2015-2018
Anna Frishman 2016-2019
Bruno Le Floch 2015-2018
Daniel Lecoanet 2016-2019
Zhiyuan Li 2015-2018
Biao Lian 2017-2020
Pierre Ronceray 2016-2019
Yizhi You 2017-2020
Yaojun Zhang 2015-2018

To find out more about Center Postdoctoral Fellowships and Programs see:
http://pcts.princeton.edu/pcts

“Geometrically Frustrated Self-Assembly”

27-29 November 2017

Jadwin Hall, Room 407

Workshop Organizers
Gregory Grason (UMass Amherst)
Pierre Ronceray (Princeton University)
“Geometrically Frustrated Self-Assembly”

Monday, November 27, 2017

8:30 Coffee & Light Breakfast

9:00-10:00 Gregory Grason, "Anomalous assembly of ill-fitting elements: competing morphologies of geometrically frustrated assemblies".

10:00-10:30 Coffee break

10:30-11:30 Vinothan Manoharan, "Colloidal self-assembly on curved surfaces – and the connection to icosahedral viruses".

11:30-12:30 Gilles Tarjus, "Geometrical Frustration in the Bulk".

12:30-2:30 Lunch at PCTS

Tuesday, November 28, 2017

8:30 Coffee & Light Breakfast

9:00-10:00 Haim Diamant, "Self-organization of forced colloids into hyperuniform dynamic structures".

10:00-10:30 Coffee break

10:30-11:30 Ned Wingreen, "Magic numbers in protein phase separation".

11:30-12:30 Arvind Murugan, "Associative retrieval of memories in frustrated disordered self-assembly".

12:30-2:30 Lunch at PCTS

Tuesday, November 28, 2017 (cont.)

2:30-3:30 Patrick Charbonneau, "Packing and assembling spheres in cylindrical confinement".

3:30-4:30 Miranda Holmes-Cerfon, "Are sticky spheres frustrated?".

4:30-5:00 Coffee break

5:00-6:00 Randall Kamien, "Focal Conic Domains – how they pack on finite surfaces".

Wednesday, November 29, 2017

8:30 Coffee & Light Breakfast

9:00-10:00 Tom Witten, "Funneling into a frustrated fiber: towards a continuum understanding of kinetically selected one-dimensional self assembly".

10:00-10:30 Coffee break

10:30-11:30 Pierre Ronceray, "What determines the dimensionality of self-assembled aggregates?"

11:30-12:30 Ryan Hayward, "Fabrication and (frustrated) assembly of shape-programmed polymer particles".

12:30-2:00 Lunch at PCTS

2:00-3:30 OPEN DISCUSSION: “Is geometrical frustration a unifying concept for self-assembly?”