"Fracton Phases of Matter and Topological Crystalline Order"

December 3-5, 2018

Jadwin Hall, Fourth Floor, Room 407, PCTS Seminar Room

Topological quantum phases of matter remain one of the most exciting playgrounds for exploring the interplay between strong correlations, symmetry, and topology in many-body quantum systems. Recently, there has been growing interest in novel quantum phases of matter—so-called "fracton" phases. These systems extend and challenge our existing notions of topological order and have attracted broad interdisciplinary interest, lying at the intersection of multiple fields including topological order, higher rank gauge theories, gravity, quantum information, and elastic descriptions of soft matter. We expect that this workshop will bring together leading experts from these various communities, with the primary aim being the stimulation of discussions and promotion of cross-disciplinary interactions amongst the participants.

Program Organizers: **Fiona Burnell, Biao Lian, Abhinav Prem, Shivaji Sondhi and Yizhi You**

FREE, but REQUIRED REGISTRATION is available online at
http://pcts.princeton.edu/pcts

Speakers

Maissam Barkeshli
Xie Chen
Jeongwan Haah
Michael Hermele
Rahul Nandkishore
Titus Neupert
Adrian Po
Mike Pretko
Shinsei Ryu
Kevin Slagle
Sagar Vijay
Beni Yoshida
Felix von Oppen