



Through the Looking-glass: a Glimpse into the Geometry and Topology of Materials

3-5 December 2012

Jadwin Hall, Fourth Floor, Room 407

Geometry and topology govern many of the physical, biological and material properties of everyday objects. Complexity often arises from simple interactions in systems living in nontrivial geometries or topologies. This interdisciplinary workshop aims to unite mathematicians, physicists, biologists and engineers sharing common interest in applied geometry and topology. Our goal is both to further develop the use of geometry to understand materials and introduce topology into the conversation. Topics include topological defects in condensed matter and complex materials, physics on curved surfaces, knots, braids and nets in physics and biology, and persistent homology as a technique to identify topological structure in data.

REQUIRED REGISTRATION at <http://pcts.princeton.edu/pcts/>

Program Organizers

Elisabetta Matsumoto, PCTS and Christian Santangelo, U. Mass, Amherst

Speakers

Daniel Beller, University of Pennsylvania
Dorothy Buck, Imperial, UK
Bryan Chen, Leiden University, Netherlands
Marcelo Dias, Brown University
Efi Efrati, University of Chicago
Myfanwy Evans, Institute for Theoretical Physics, Germany
Jemal Guven, Universidad Nacional Autónoma de México
Ana Hocevar, Rockefeller University
Stephen Hyde, Australian National University

Eleni Katifori, Max-Planck Institute
Lakshminarayanan Mahadevan, Harvard University
Narayanan Menon, University of Massachusetts
Christophe Oguey, Université de Cergy-Pontoise, France
Richard Prum, Yale University
Vanessa Robins, Australian National University
Gerd Schroder-Turk, Institute for Theoretical Physics, Germany
Daniel Vega, Universidad Nacional Del Sur, Argentina

For information on Poster Session Submissions, see website.

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