IAS

Women and Mathematics

A Program of the Institute for Advanced Study and Princeton University

May 13-24, 2013

ORGANIZERS

Sun-Yung Alice Chang
Princeton University

Antonella Grassi
University of Pennsylvania

Dusa McDuff
Barnard College and Columbia University

Christine Taylor
Institute for Advanced Study
and Princeton University

Combinatorics and Graph Theory 2013

Program Introduction Since 1994 with the support of the National Science Foundation, the Institute for Advanced Study, together with Princeton University, has hosted an intensive eleven-day mentoring program for undergraduate, graduate, and postdoctoral women in mathematics. The program brings together research mathematicians with students and postdocs on the campus of the Institute and is designed to address issues of gender imbalance in mathematics. Activities include lectures and seminars on a focused mathematical topic, mentoring, discussions on peer relations, an introduction to career opportunities, and a Women-in-Science seminar.
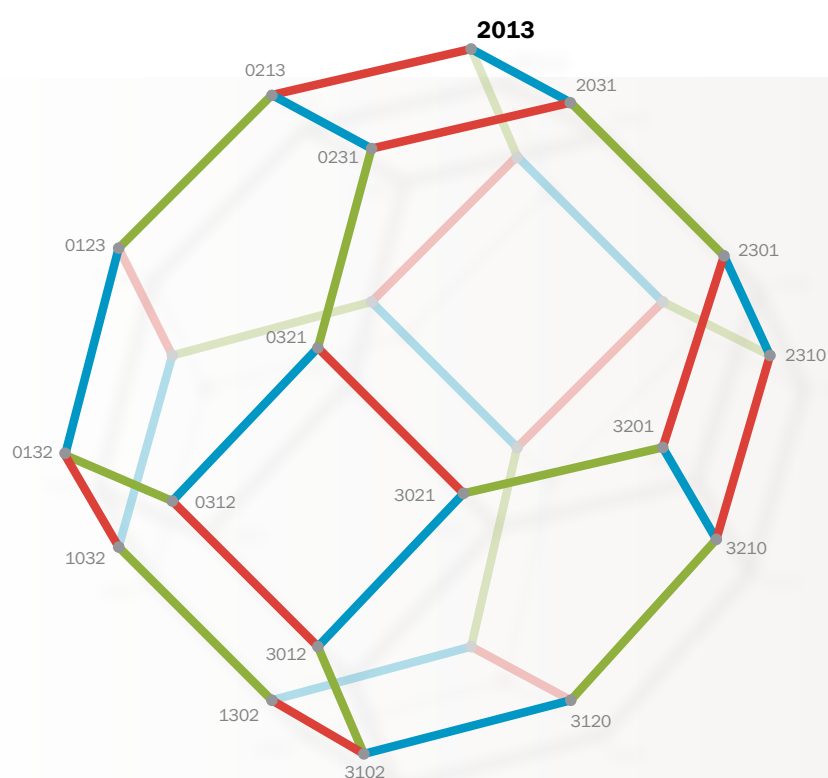
Combinatorics

Lecturers
Margaret Readdy, University of Kentucky
Lauren Williams, University of California, Berkeley

Combinatorics is the study of finite or countable discrete structures. These structures are widespread throughout mathematics, including geometry, topology, and algebra. This course will give an introduction to some of the techniques in the field, and how they relate to objects such as matroids, polytopes, and hyperplane arrangements. Current work and open problems will also be discussed.
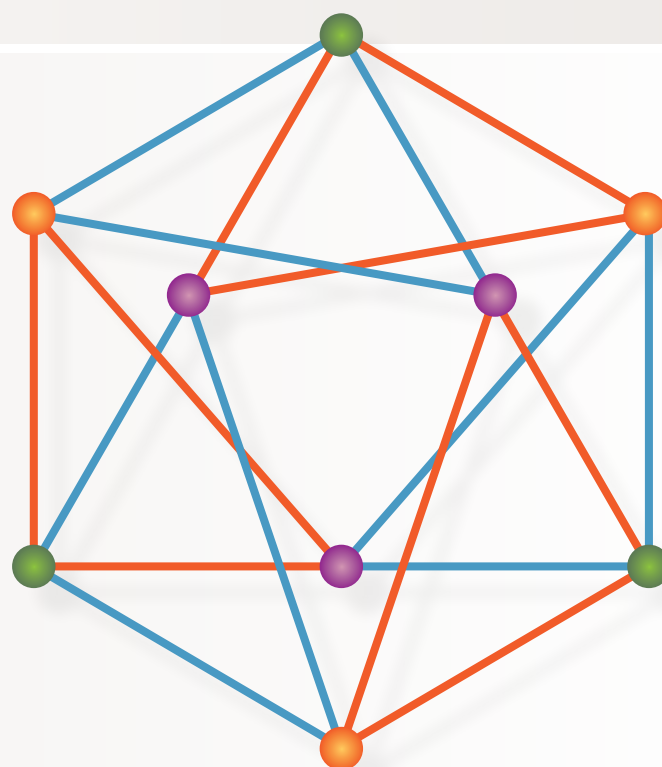
Graph Theory

Lecturers
Maria Chudnovsky, Columbia University
**Penny Haxell**, University of Waterloo

The study of the structure of graphs with certain induced subgraphs forbidden has been an active area of research in graph theory in recent years, after the long-standing Strong Perfect Graph Conjecture was proved using structural methods. The goal of this course will be to cover some of the recent developments in the area. The course starts with some general background in graph theory, including basic coloring, Ramsey theory, and simple theorems about forbidden induced subgraphs, and leads to the latest research results.

Diagram: Dr. Annegret Wagler

Application and Information: **www.math.ias.edu/wam** • Application Deadline: **February 20, 2013**
All participants receive support for shared lodging, meals, and transportation.

Please Post: Combinatorics and Graph Theory 2013

Institute for Advanced Study
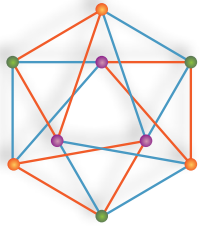
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