



COMBINATORIAL GEOMETRY

October 19 – 23, 2009

ORGANIZING COMMITTEE: Alexander Barvinok (University of Michigan), Gil Kalai (Hebrew University of Jerusalem), János Pach (EPF de Lausanne and City College of New York), József Solymosi (University of British Columbia), Emo Welzl (ETH Zurich)

Scientific Overview

Although geometry has been studied for thousands of years, the term combinatorial geometry is relatively new. Combinatorial geometry deals with the structure and complexity of discrete geometric objects and is closely related to computational geometry, which deals with the design of efficient computer algorithms for manipulation of these objects. This area is by its nature interdisciplinary and has relations to many other vital mathematical fields and also applications to computer science. The focus of this workshop will be on the study of discrete geometric objects, their combinatorial structure, stressing the connections between discrete geometry and combinatorics, number theory, analysis and computer science.

Confirmed Speakers

Eric Babson (UC Davis); Keith Ball (University College London); Imre Barany (Renyi Institute of Mathematics); Anders Bjorner (KTH); Timothy Chan (Waterloo); Henry Cohn (Microsoft Research); Jesus De Loera (UC Davis); Richard Ehrenborg (University of Kentucky); David Eppstein (UC Irvine); Jacob Fox (Princeton); Caroline Klivans (University of Chicago); Fu Liu (UC Davis); Eran Nevo (Cornell); Gabriel Nivasch (Tel Aviv); Izabella Novik (University of Washington); Janos Pach (City College of New York); Igor Pak (University of Minnesota, Twin Cities); Rom Pinchasi (Technion-Israel Institute of Technology); Paco Santos (University of Cantabria); Jozsef Solymosi (University of British Columbia); Richard Stanley (MIT); Bernd Sturmfels (UC Berkeley); Rekha Thomas (University of Washington); Geza Toth (Renyi Institute of Mathematics); Frank Vallentin (Center for Mathematics and Computer Science); Uli Wagner (Institute of Theoretical Computer Science); Günter Ziegler (Technische Universität Berlin)

Workshop Schedule

This workshop is part of the long program “Combinatorics: Methods and Applications in Mathematics and Computer Science.”

- Tutorials: September 9 – 16, 2009
- Workshop 1: Probabilistic Techniques and Applications, October 5 – 9, 2009
- **Workshop 2: Combinatorial Geometry, October 19 – 23, 2009**
- Workshop 3: Topics in Graphs and Hypergraphs, November 2 – 6, 2009
- Workshop 4: Analytical Methods in Combinatorics, Additive Number Theory and Computer Science, December 1 – 4, 2009
- Culminating Workshop at Lake Arrowhead Conference Center, December 6 – 11, 2009

Participation

Additional information about this workshop, including links to registration and application for funding, can be found on the webpage below. Encouraging the careers of women, minority mathematicians, and scientists from industry is an important component of IPAM's mission, and we welcome their applications.

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