

Analytical Methods in Combinatorics, Additive Number Theory and Computer Science

December 1 – 4, 2009

ORGANIZING COMMITTEE: Irit Dinur (Weizmann Institute of Science), Ben Green (University of Cambridge), Gil Kalai (Hebrew University, Institute of Mathematics), Alex Samorodnitsky (Hebrew University), Terence Tao (UCLA), Van Vu (Rutgers University)

Scientific Overview

Recently the applications of analytical tools, in particular methods of harmonic analysis and spectral techniques, have led to several major breakthroughs on problems in combinatorics, Discrete Probability, Additive Number Theory and Computer Science. This workshop will focus on a wide spectrum of these tools, and on the interplay between all of these fields.

One of the declared aims of the workshop is to foster interaction between researchers in these areas, discuss recent progress and communicate new results and ideas. We would also like to utilize this forum to make the state-of-the-art analytical techniques accessible to a broader audience, in particular graduate students.

Confirmed Speakers

Andrej Bogdanov (Chinese University of Hong Kong), Jean Bourgain (Institute for Advanced Study), Ernest Croot (Georgia Tech), Irit Dinur (Weizmann Institute), Ben Green (University of Cambridge), Derrick Hart (Rutgers University), Hamed Hatami (University of Toronto), Nets Katz (Indiana University), Subash Khot (NYU), Shachar Lovett (Weizmann Institute), Roy Meshulam (Technion-Israel Institute of Technology), Assaf Naor (NYU), Hoi Nguyen (Rutgers), Alex Samorodnitsky (Hebrew University), Tom Sanders (University of Cambridge), Madhu Sudan (Microsoft Research), Terence Tao (UCLA), Luca Trevisan (UC Berkeley), Avi Wigderson (Institute for Advanced Study), Julia Wolf (Rutgers University)

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 register and how to apply for funding, can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission, and we welcome their applications.

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