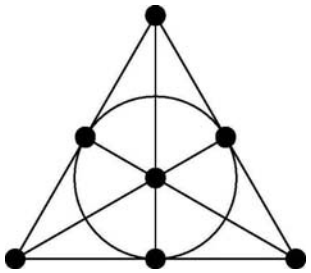

INSTITUTE FOR PURE AND APPLIED MATHEMATICS

Los Angeles, California

Topics in Graphs and Hypergraphs

November 2 – 6, 2009

ORGANIZING COMMITTEE: **Benny Sudakov** (UCLA), **Jacques Verstraete** (UCSD), **Penny Haxell** (University of Waterloo), **Vera Sós** (Rényi Institute), **Dhruv Mubayi** (University of Illinois, Chicago)

Scientific Overview

The workshop will focus specifically on several major research directions in modern Graph and Hypergraph theory. These topics will include Ramsey theory, Extremal problems for graphs and hypergraphs and in particular Turán-type questions, Extremal set theory and its applications to Information theory, Computer science and Coding Theory, algebraic methods in extremal combinatorics, Szemerédi's Regularity Lemma for graphs and hypergraphs and its application to number theory and property testing, Graph sequences and limits of graphs, topological methods for graphs and hypergraphs, Spectral techniques in graph theory, expander graphs and their applications, structural approach to graph theory, graph minors and application of graph theory to optimization.

Confirmed Speakers

Maria Chudnovsky (Columbia University), **Fan Chung-Graham** (University of California at San Diego), **David Conlon** (Cambridge University), **Zoltan Füredi** (University of Illinois at Urbana), **Penny Haxell** (University of Waterloo), **Peter Keevash** (Queen Mary University of London), **Yoshi Kohayakawa** (University of São Paulo), **Alexander Kostochka** (University of Illinois at Urbana), **Imre Leader** (University of Cambridge), **Tomasz Łuczak** (Adam Mickiewicz University), **Dhruv Mubayi** (University of Illinois at Chicago), **Oleg Pikhurko** (Carnegie Mellon University), **Paul Seymour** (Princeton University), **Asaf Shapira** (Microsoft Research), **Miklós Simonovits** (Rényi Institute of Mathematics), **Vera Sós** (Rényi Institute of Mathematics), **Tibor Szabó** (McGill University), **Jacques Verstraete** (UCSD)

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, November 16 – 20, 2009
- Culminating Workshop at Lake Arrowhead Conference Center, December 6 – 11, 2009

Participation

Additional information about this workshop including links to register and 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.

www.ipam.ucla.edu/programs/cmaws3

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