

## Workshop II: Combinatorial Geometry

### Monday October 19, 2009

- 8:00–8:50 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:50–9:00 *Welcome and Opening Remarks*
- 9:00–9:50 **Jacob Fox** (Princeton University)  
*Geometric intersection graphs*
- 10:00–10:15 *Break*
- 10:15–11:05 **Imre Barany** (Renyi Institute of Mathematics)  
*Jarnik's convex lattice  $n$ -gon for non-symmetric norms*
- 11:15–11:30 *Break*
- 11:30–12:20 **Rekha Thomas** (University of Washington)  
*Theta Bodies for Polynomial Systems*
- 12:30–2:00 *Lunch (on your own)*
- 2:00–2:50 **Frank Vallentin** (CWI (Center for Mathematics and Computer Science))  
*Covering maxima*
- 3:00–3:15 *Break*
- 3:15–4:05 **Keith Ball** (University College London)  
*Superexpanders and Markov cotype in the work of Mendel and Naor*
- 4:30–6:30 *Poster Session and Reception (Hosted by IPAM)*

### Tuesday October 20, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Janos Pach** (Renyi Institute of Mathematics)  
*Conway's Thrackle Conjecture Revisited*
- 10:00–10:15 *Break*
- 10:15–11:05 **Fu Liu** (University of California, Davis (UC Davis))  
*Higher integrality conditions and volumes of slices*
- 11:15–11:30 *Break*

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- 11:30–12:20 **Uli Wagner** (ETH Zürich)  
*Combinatorial and Computational Aspects of Embeddability*
- 12:30–2:00 *Lunch (on your own)*
- 2:00–2:50 **Francisco Santos** (University of Cantabria)  
*Unimodular triangulations of multiples of 3-polytopes*
- 3:00–3:15 *Break*
- 3:15–4:05 **Rom Pinchasi** (Technion - Israel Institute of Technology)  
*On some unrelated problems about planar arrangements of lines*
- 4:15–4:30 *Break*
- 4:30–5:20 **Igor Pak** (University of California, Los Angeles (UCLA))  
*Acute triangulations of polytopes*

### Wednesday October 21, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Bernd Sturmfels** (University of California, Berkeley (UC Berkeley))  
*Spectrahedra*
- 10:00–10:15 *Break*
- 10:15–11:05 **Eran Nevo** (Cornell University)  
*Missing faces and generalized lower bounds on face numbers*
- 11:15–11:30 *Break*
- 11:30–12:20 **Richard Stanley** (Massachusetts Institute of Technology)  
*Some recent work on the volume,  $f$ -vector, and Ehrhart polynomial of certain polytopes*
- 12:30–2:00 *Lunch (on your own)*
- 2:00–2:50 **Timothy Chan** (University of Waterloo)  
*On  $k$ -Sets and  $k$ -Levels*
- 3:00–3:15 *Break*
- 3:15–4:05 **David Eppstein** (University of California, Irvine (UCI))  
*Hyperconvexity and metric embedding*

## Thursday October 22, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Günter Ziegler** (Technische Universität Berlin)  
*Optimal bounds for the colored Tverberg problem*
- 10:00–10:15 *Break*
- 10:15–11:05 **Isabella Novik** (University of Washington)  
*Face numbers of spheres, manifolds, and pseudomanifolds*
- 11:15–11:30 *Break*
- 11:30–12:20 **Caroline Klivans** (University of Chicago)  
*A Geometric Interpretation of the Characteristic Polynomial of a Hyperplane Arrangement*
- 12:30–2:00 *Lunch (on your own)*
- 2:00–2:50 **Richard Ehrenborg** (University of Kentucky)  
*Excedance statistic for affine permutations and skew root polytopes*
- 3:00–3:15 *Break*
- 3:15–4:05 **Eric Babson** (University of California, Davis (UC Davis))
- 4:15–4:30 *Break*
- 4:30–5:20 **Jesús De Loera** (University of California, Davis (UC Davis))  
*New Geometric Algorithms and their Applications in Discrete Optimization*

## Friday October 23, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Gabriel Nivasch** (ETH Zürich)  
*Stair-convexity*
- 10:00–10:15 *Break*
- 10:15–11:05 **Geza Toth** (Renyi Institute of Mathematics)  
*Relationships between different crossing numbers of graphs*
- 11:15–11:30 *Break*
- 11:30–12:20 **Jozsef Solymosi** (University of British Columbia)  
*On the unit distance problem*

