

Quantitative and Computational Aspects of Metric Geometry

Monday January 12, 2009

- 8:00–9:00 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:00–10:00 **Assaf Naor** (New York University)
Embeddings of Discrete Groups and the Speed of Random Walks
- 10:00–10:15 *Break*
- 10:15–11:15 **Yury Makarychev** (Microsoft Research New England)
Integrality Gaps for Sherali-Adams Relaxations
- 11:15–11:30 *Break*
- 11:30–12:30 **Sanjeev Arora** (Princeton University)
Passing algorithms and better LP decoding
- 12:30–2:00 *Lunch (on your own)*
- 2:00–3:00 **Nathan (Nati) Linial** (Hebrew University)
Combinatorics meets topology
- 3:00–3:15 *Break*
- 3:15–4:15 **Subhash Khot** (New York University)
Inapproximability of NP-complete problems, Discrete Fourier Analysis, and Geometry.
- 4:30–6:00 *Poster Session & Reception (Hosted by IPAM)*

Tuesday January 13, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:00 **Uriel Feige** (Weizmann Institute of Science)
Interchanging distance and capacity in probabilistic mappings
- 10:00–10:15 *Break*
- 10:15–11:15 **James Lee** (University of Washington)
Eigenvalue bounds, spectral partitioning, and flow deformations
- 11:15–11:30 *Break*

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- 11:30–12:30 **Robert Krauthgamer** (Weizmann Institute of Science)
Overcoming the L_1 Non-Embeddability Barrier
- 12:30–2:00 *Lunch (on your own)*
- 2:00–3:00 *Gregory Margulis - "Homogeneous Dynamics and Number Theory" - Part of "Distinguished Lecture Series" at UCLA Math Department*
- 3:00–3:15 *Break*
- 3:15–4:15 **Alain Valette** (Université de Neuchâtel)
Proper isometric actions of wreath products.

Wednesday January 14, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:00 **Anupam Gupta** (Carnegie-Mellon University)
How to Complete a Doubling Metric
- 10:00–10:15 *Break*
- 10:15–11:15 **Guy David** (Université Paris-Sud 11)
A variant of the Reifenberg parameterization algorithm
- 11:15–11:30 *Break*
- 11:30–12:30 **Moses Charikar** (Princeton University)
- 12:30–2:00 *Lunch (on your own)*
- 2:00–3:00 *Gregory Margulis - "Homogeneous Dynamics and Number Theory" - Part 2 in MS6627 (Math building next door)*
- 3:00–3:15 *Break*
- 3:15–4:15 **Alexandr Andoni** (Massachusetts Institute of Technology)
Approximating Edit Distance in Near-Linear Time

Thursday January 15, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:00 **Tatiana Toro** (University of Washington)
Cones of measures
- 10:00–10:15 *Break*

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- 10:15–11:15 **William Johnson** (Texas A&M University - College Station)
Lipschitz p -summing mappings
- 11:15–11:30 *Break*
- 11:30–12:30 **Gideon Schechtman** (Weizmann Institute of Science)
Diamonds and super-reflexivity
- 12:30–2:00 *Lunch (on your own)*
- 2:00–3:00 **Nir Ailon** (Google Research)
Efficient Dimension Reduction
- 3:00–3:15 *Break*
- 3:15–4:15 **Yuval Rabani** (Technion - Israel Institute of Technology)
Explicit construction of a small epsilon-net for linear threshold functions

Friday January 16, 2009

- 8:00–9:00 *Continental Breakfast*
- 9:00–10:00 **Ofer Neiman** (Hebrew University)
- 10:00–10:15 *Break*
- 10:15–11:15 **Konstantin Makarychev** (IBM Thomas J. Watson Research Center)
Local Global Tradeoffs in Metric Embeddings
- 11:15–11:30 *Break*
- 11:30–12:30 **Leonard Schulman** (California Institute of Technology)
Geometry-based sampling in learning and classification

