

Combinatorics Tutorials

Wednesday September 9, 2009

- 8:30–9:15 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:15–9:30 *Welcome and Opening Remarks*
- 9:30–10:30 **Igor Pak** (University of California, Los Angeles (UCLA))
Tree bijections
- 10:30–11:00 *Break*
- 11:00–12:00 **Robin Thomas** (Georgia Institute of Technology)
The circumference of color-critical graphs
- 12:00–12:30 *Core Orientation with IPAM Staff*
- 12:30–2:00 *Lunch (on your own)*
- 2:00–3:00 **Jacob Fox** (Princeton University)
Geometric graphs
- 3:00–3:30 *Break*
- 3:30–4:30 **Angelika Steger** (ETH Zürich)
The Regularity Lemma

Thursday September 10, 2009

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:30 **Robin Thomas** (Georgia Institute of Technology)
Clique minors and linkages in large t -connected graphs
- 10:30–11:00 *Break*
- 11:00–12:00 **Igor Pak** (University of California, Los Angeles (UCLA))
Partition bijections
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Angelika Steger** (ETH Zürich)
The Blowup Lemma
- 3:00–3:30 *Break*
- 3:30–4:30 **Jacob Fox** (Princeton University)
Separator theorems and their applications



Friday September 11, 2009

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:30 **Igor Pak** (University of California, Los Angeles (UCLA))
Young tableaux bijections
- 10:30–11:00 *Break*
- 11:00–12:00 **Robin Thomas** (Georgia Institute of Technology)
Three-coloring triangle-free graphs on surfaces
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Angelika Steger** (ETH Zürich)
The Sparse Regularity Lemma
- 3:00–3:30 *Break*
- 3:30–4:30 **Jacob Fox** (Princeton University)
Geometric intersection graphs and partially ordered sets

Monday September 14, 2009

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:30 **Penny Haxell** (University of Waterloo)
Sperner's Lemma, Scarf's Lemma and applications in combinatorics
- 10:30–11:00 *Break*
- 11:00–12:00 **Nathan (Nati) Linial** (Hebrew University)
Expander graphs and their applications
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Benjamin Sudakov** (University of California, Los Angeles (UCLA))
Turan theorem: generalizations and applications
- 3:00–3:30 *Break*
- 3:30–4:30 **Jozsef Solymosi** (University of British Columbia)
Sum-Product problems over various fields

Tuesday September 15, 2009

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:30 **Penny Haxell** (University of Waterloo)
Sperner's Lemma, Scarf's Lemma and applications in combinatorics
- 10:30–11:00 *Break*
- 11:00–12:00 **Jozsef Solymosi** (University of British Columbia)
Schur's Theorem, Van der Waerden's Theorem and the Hales-Jewett Theorem
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Nathan (Nati) Linial** (Hebrew University)
Expander graphs and their applications
- 3:00–3:30 *Break*
- 3:30–4:30 **Peter Keevash** (Queen Mary, University of London)
Hypergraph Tur'an Problems

Wednesday September 16, 2009

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:30 **Penny Haxell** (University of Waterloo)
Sperner's Lemma, Scarf's Lemma and applications in combinatorics
- 10:30–11:00 *Break*
- 11:00–12:00 **Jozsef Solymosi** (University of British Columbia)
Density versions of theorems from Lecture 2
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Nathan (Nati) Linial** (Hebrew University)
Expander graphs and their applications
- 3:00–3:30 *Break*
- 3:30–4:30 **Peter Keevash** (Queen Mary, University of London)
Extremal Set Theory

