

LMS Durham Symposium on Probabilistic Methods in Combinatorics
28th June - 8th July 1991

Programme

Saturday 29th June

- 9.40 Welcome
- 9.45-10.45 Professor Svante Janson
Asymptotic distributions of graph statistics.
Coffee
- 11.30-12.30 Professor Noga Alon
Probabilistic methods in Combinatorial Number Theory.
- 1.00 Lunch
- 4.00 Tea
- 4.30-5.30 Dr. Graham Brightwell
Linear Extensions of random partial orders.

Sunday 30th June

- 9.30-10.15 Professor J. Michael Steele
Probability theory of Euclidean Optimization Problems.
- 10.15-11.00 Professor Joel Spencer
Aspects of the 'Local Lemma', especially algorithmic
implementations due to J. Beck.
Coffee
- 11.30-12.30 Professor Boris Pittel
On likely solutions of a stable matching problem.
- 1.00 Lunch
- 4.00 Tea
- 4.30-5.30 Professor Alan Frieze
Matchings in random graphs.

Monday 1st July

- 9.30-10.15 Professor Noga Alon
The Hadwiger-Debrunner conjecture on piercing convex sets.
- 10.15-11.00 Professor Herb. S. Wilf
Some probabilistic problems on labelled trees.
Coffee
- 11.30-12.30 Dr. Tomasz Luczak
First-order properties of random structures.
- 1.00 Lunch
- 1.50 Symposium photograph
- 2.30 Cathedral visit
- 4.30 Tea

Tuesday 2nd July

- 9.30-10.15 Dr. John M. Hammersley
Self-avoiding walks.
- 10.15-11.00 Professor Hans-Jürgen Prömel
Excluding subgraphs: remarks on the asymptotic structure
and some consequences.
Coffee
- 11.30-12.30 Professor Umesh Vazirani
Reversible Markov chains and learning theory.
- 1.00 Lunch
- 4.00 Tea
- 4.45-5.30 Dr. Colin McDiarmid
Quicksort rarely makes large deviations
- 5.30-6.30 Professor John C. Wierman
Equality of critical exponents in bond percolation models.

Thursday 4th July

- 9.30-10.00 Professor J. Michael Steele
Some random problems.
- 10.00-11.00 Dr János Pach
 ϵ -nets and combinatorial geometry.
Coffee
- 11.30-12.30 Professor Harry Kesten
Speed of convergence in first-passage percolation.
- 1.00 Lunch
- 4.00-4.30 Tea
- 4.45-5.30 Professor Andrzej Ruciński
Random graphs with maximal degree 2.
- 5.30-6.30 Professor Mike Paterson
Shrinkage of formulae and stretching of lower bounds.
- 7.15 Sherry
- 7.45 Conference dinner

Friday 5th July

- 9.30-10.15 Dr. Martin Dyer
Random walks on unimodular zonotopes.
- 10.15-11.00 Professor Alan Frieze
Multicoloured Hamiltonian cycles.
Coffee
- 11.30-12.15 Dr. Colin Cooper
Hamilton cycles in k -in, k -out digraphs.
- 1.00 Lunch
- 4.00-4.30 Tea
- 5.00-6.00 Professor Peter J. Donnelly
The biology of random permutations.

Saturday 6th July

- 9.30-10.15 Dr. Tomasz Luczak
Phase transition phenomena in different models of random structures.
- 10.15-11.00 Professor John Hawkes
Branching trees and the Neyman-Scott model for galaxies.
Coffee
- 11.30-12.00 Professor Boris Pittel
The structure of a random graph at the point of phase transition.
- 12.00-12.30 Professor Joel Spencer
Proportional graphs.
- 1.00 Lunch
- 4.00-4.30 Tea
- 5.00-5.30 Dr. Mark Jerrum
The elusiveness of large cliques in a random graph.
- 5.30-6.00 Professor Svante Janson
Very recent progress on the number of linear extensions of a random partial order.

Sunday 7th July

- 9.30-10.00 Dr. Bernd Voigt
Ramsey properties of random graphs.
- 10.00-10.30 Professor Svante Janson
The number of perfect matchings in a random graph.
- 10.30-11.00 Dr. Zoltán Füredi
Random sets in high-dimensional spaces.
Coffee
- 11.30-12.30 Professor Umesh Vazirani
The isolating lemma and its applications.
- 1.00 Lunch
- 4.00-4.30 Tea
- 5.00-5.45 Professor Harry Kesten
Inequalities for the time-constant in first-passage percolation
- 5.45-6.30 Professor Geoffrey Grimmett
Random walks and electrical networks on random lattices