Workshop on Random Graphs and Random Processes

Tuesday 25 April

Harvard Lecture Theatre[1]

Bush House, King's College London

The workshop looks at recent work in the area of random structures and algorithms and random processes on networks. In particular threshold behavior, the short term dynamics of processes during approach to equilibrium, the time taken to reach equilibrium and algorithmic efficiency.

Morning (9:45–12:40)
Coffee (from 9:20)

9:50-10:20	Alan Frieze CMU	Random Binary Matroids
10:20-10:50	Gregory Sorkin LSE	The Satisfiability Threshold for k-XORSAT

Coffee

11:20-11:50	Fiona Skerman Bristol	Modularity of Random Graphs
11:50-12:20	Reimer Kuehn KCL	Spectra of Random Markov Matrices and Relaxation in Complex Systems
12:20-12:40	Nicolas Rivera KCL	The Cover Time of Coalescing-Branching Random Walks on Graphs

Afternoon (13:50–16:30)

13:50-14:20	Leslie Ann Goldberg Oxford	Fixation probability in the Moran process
14:20-14:50	Thomas Sauerwald Cambridge	On coalescence time in graphs –When is coalescing as fast as meeting?
14:50-15:20	Fabio Caccioli UCL	Financial Networks

Coffee

15:40-16:10	Andrew Wade Durham	Non-Homogeneous Random Walks
16:10-16:30	Riccardo Margiotta KCL	Analysis of Hopping in Energy Landscapes Using Random Matrices

To plan how many people might attend, it would be helpful if you **Register (non-obligatory)**

[1]**Note: This is a change from the previously advertised venue**

Coffee etc is supplied, but not lunch. The cafeteria on the 2nd floor of the King's Strand building does food at reasonable prices.

PhD student funding.

The workshop has received funding from the LMS to support attendance by PhD students. For enquiries contact Andrew McDowell (andrew.mcdowell@kcl.ac.uk).

Organizers. C. Cooper, M. Dyer, R. Kuehn, A. McDowell, T. Radzik, P. Sollich

The workshop is held jointly between the Department of Informatics and Department of Mathematics at King's College, and the School of Computing, University of Leeds; and was organized by the research groups listed below. We gratefully acknowledge support from **EPSRC Project Randomized Algorithms for Computer Networks, LMS, Department of Mathematics, Department of Informatics**

Algorithm and BioInformatics Group, Department of Informatics, KCL

Disordered Systems Group, Department of Mathematics, KCL

Algorithms and Complexity Group, School of Computing, University of Leeds

Links to related papers and talks.

Alan Frieze. Random Binary Matroids

Gregory Sorkin. The Satisfiability Threshold for k-XORSAT

Fiona Skerman. Modularity of Random Graphs

Reimer Kuehn. Spectra of Random Markov Matrices and Relaxation in Complex Systems

Nicolas Rivera.The coalescing-branching random walk on expanders and the dual epidemic process

Leslie Ann Goldberg. Asymptotically Optimal Amplifiers for the Moran Process and Amplifiers for the Moran Process

Thomas Sauerwald. On coalescence time in graphs–When is coalescing as fast as meeting?

Fabio Caccioli. Website

Andrew Wade. Website

Riccardo Margiotta. From random matrix theory to glassy non-equilibrium dynamics