



SAID BUSINESS SCHOOL, University of Oxford

SEMINAR SERIES / MICHAELMAS 2010

Convenors: Felix Reed-Tsochas, Institute for Science, Innovation and Society,
Saïd Business School
Eduardo López, Saïd Business School

For further information please contact the Cabdyn Administrator:

info.cabdyn@sbs.ox.ac.uk

01865 288785

Seminar webpage:
www.cabdyn.ox.ac.uk/complexity_seminars.asp

Sandwiches and drinks will be provided

Please note: although the seminar programme detailed was correct at time of printing, seminar arrangements are subject to change - for the latest information, please check the seminar webpage.

Tuesday 12th October
(12.30pm - 2.00pm) James Martin Seminar Room

Dr Jari Saramäki

Department of Biomedical Engineering and Computational Science, Aalto University, Helsinki, Finland. Visiting scholar, Wolfson College, University of Oxford

'Temporal correlations and spreading dynamics in communication networks'

ABSTRACT

Communication networks show the small-world property of short paths, but spreading dynamics in them turns out slow. We follow the time evolution of information propagation through communication networks by using the SI model with empirical data on contact sequences. We introduce null models where the sequences are randomly shuffled in different ways, enabling us to distinguish between the contributions of different impeding effects. The slowing down of spreading, as compared to uncorrelated networks and contact sequences, is found to be caused mostly by weight-topology correlations and the bursty activity patterns of individuals.



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