Trinity Term 2007

COMPLEX ADAPTIVE SYSTEMS GROUP SEMINAR
Saïd Business School, University of Oxford

Convenors:
Felix Reed-Tsochas, *Saïd Business School*
Jukka-Pekka Onnela, *Physics Department & Saïd Business School*

Our meetings intend to provide a forum for rigorous research (in a broad range of disciplines) focusing on complex adaptive systems, using methods and techniques such as agent-based modelling and complex network analysis. Since potential areas of application for such approaches can be located across the social, natural and engineering sciences, our aim is to involve participants from a wide range of departments in Oxford. We welcome talks which focus on particular areas of application and associated technical issues, but also encourage contributions which address more fundamental conceptual or mathematical problems. The CASG Seminar Series is one of the activities of the CABDyN Research Cluster (http://sbs-xnet.sbs.ox.ac.uk/complexity/).

Tuesday 29th May 12.30 – 2.00 pm

Seminar Room A

Dr Jukka-Pekka Onnela
Physics Department and Saïd Business School
University of Oxford

Structure and tie strengths in large scale social networks

ABSTRACT

Modern communications technologies like the Internet and mobile phones connect individual members of a society into a massive global network. Taking advantage of the available electronic records of mobile phone calls of over seven million individuals, we reconstruct a large-scale weighted one-to-one social interaction network. We study both the local and global structure of the network and show that weak and strong ties have qualitatively different roles in it. We demonstrate that the structural organisation of social networks affects significantly the flow of information through them by trapping information in local communities and, contrary to expectations, makes both strong and weak ties ineffective in transmitting information.

Sandwiches and drinks will be provided

For further information contact felix.reed-tsochas@sbs.ox.ac.uk
Seminar webpage: http://sbs-xnet.sbs.ox.ac.uk/complexity/complexity_casg.asp