

Michaelmas Term 2007

CABDyN SEMINAR SERIES
Saïd Business School, University of Oxford



Convenors:

Felix Reed-Tsochas, *James Martin Institute, 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 CABDyN Seminar Series is one of the activities of the CABDyN Research Cluster (<http://sbs-xnet.sbs.ox.ac.uk/complexity/>).

Tuesday 30th October, 12.30 – 2.00 pm

Seminar Room B

Dr Mason Porter

Mathematical Institute, University of Oxford

Complex Networks: From U.S. College Football to Congress

ABSTRACT

Whether they come from the realm of biology, physics, technology, or the social sciences, real-world networks are typically neither fully ordered nor fully random but instead share properties with both structured and random graphs. Such "complex networks" tend to live in small worlds (their diameters are small), yet most of them can also be decomposed into interconnected modules or "communities." In this talk, I'll discuss some research that my collaborators and I have done using network models to rank United States college football teams and uncover the community structure of the United States Congress (in terms of both committee assignments and legislation cosponsorship). I will also show how the concept of modularity can be used to examine partisan polarization and realignments in voting and legislation networks. I will end with a brief discussion of some current projects.

Sandwiches and drinks will be provided

For further information contact info.cabdyn@sbs.ox.ac.uk

Seminar webpage: http://sbs-xnet.sbs.ox.ac.uk/complexity/complexity_seminars.asp