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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.

Thursday 25th November
(12.00noon - 2.00pm) Pusey Room
Keble College

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'A Taxonomy of Networks'

ABSTRACT

The study of networks has grown into a substantial interdisciplinary endeavour across the natural, social, and information sciences.

Yet there have been very few attempts to investigate the interrelatedness of the different classes of networks studied by different disciplines. Here, we introduced a framework to establish a taxonomy of networks from various origins. The provision of this family tree not only helps understand the kinship of networks, but also facilitates the transfer of empirical analysis, theoretical modelling, and conceptual developments across disciplinary boundaries. The framework is based on probing the mesoscopic properties of networks, an important source of heterogeneity for their structure and function. Using our method, we computed a taxonomy for 752 individual networks and a separate taxonomy for 12 network classes. We also computed three within-class taxonomies for political, fungal, and financial networks, and found them to be insightful in each case.