

Network Theory Working Group II

A Collaborative initiative of the
CSIRO Centre for Complex Systems Science
and the ARC Complex Open Systems
Research Network (COSNet),

2nd Announcement Jan 2005

NTWG II — Of nodes, edges, small worlds and collaborative networks

**March 8th and 9th 2005 -
CSIRO Sustainable Ecosystems, Canberra**

Background

The analysis and design of complex networks have attracted increasing attention in recent years. It has been shown that the many real world networks such as power grids, rail systems, neural networks, food webs and electrical circuits, share common topological properties. Understanding the topological properties, the dynamics they can support, and their evolution is essential in managing and controlling complex systems.

Aims and Scope

This workshop brings together researchers from research organisations, companies and universities in the fields of the social sciences, physics, mathematics, engineering, computer sciences, biology and complex systems to exchange ideas, present research, demonstrate new software tools and discuss possible collaborations. Researchers with a general interest in complex systems who are interested in collaboration are also welcome.

During the Workshop, attendees will be encouraged to participate in the development of new Network Theory projects for funding applications, including seed-funding from COSNet for further proposal development.

In order to encourage in-depth technical discussions, **the number of participants of the Symposium will be limited to 50**. The workshop will allocate ample time for discussions in addition to paper presentations. The workshop will have two main foci:

New Research

The emphasis is on new and novel research into the analysis, understanding, design and evolution of complex networks. Examples of research areas include, but are not limited to, social networks, biological networks, ecological networks, engineering design, the physics and mathematics of complex networks, commerce and computer science.

Tools and Analysis

The emphasis here is on demonstrating tools and techniques for the analysis and simulation of complex networks. Papers in this area should present a worked case study, and authors should be willing to present a high level overview of the usefulness of their tool or technique. Examples of the tools include but are not limited to: analysis of network structure & behaviour, model & simulation development, visualisation, and pattern detection.

For more information contact:

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Network Theory Working Group II First Announcement

Invited Speakers

Network Theory Working Group II - Of nodes, edges, small worlds and collaborative networks, will feature presentations from:

Professor Steven Borgatti
Research Professor,
Dept of Organisation Studies
Boston College
Boston

Professor Pip Pattison
Professor,
Psychology Department
University of Melbourne
Melbourne

Professor David Green
Research Professor,
Information Technology Research
Monash University

Professor Janet Wiles
Associate Professor
Complex & Intelligent Systems Group
School of Information Technology and
Electrical Engineering
The University of Queensland

Special Session – Network Theory Showcase

The aim of this session is to showcase the potential of Network Theory to address real world problems. The session is aimed at raising awareness of the usefulness of understanding the structure and behaviour of complex networks, and to demonstrate that there is a substantial body of knowledge in this area both within CSIRO and Universities. Government representatives, private industry and the media will be in attendance.

Paper Submission

The workshop is limited to 16 papers. The length of the paper should be no more than 15 pages. Anything longer will only be accepted after consideration. Selected papers from the workshop will be submitted as a set to be reprinted in the journal **Complexity International**. All submitted papers will be reviewed by three referees before being accepted for the workshop. Manuscripts will be assessed in terms of their relevance, significance, and scientific rigour. Manuscripts should be submitted as a PDF file, formatted according to the Complexity International guide for authors (<http://www.complexity.org.au/ci/info-author.html>).

Important Dates

Registration of Abstracts	- December 20th 2004
Paper Submission	- January 28 th 2005
Paper Acceptance	- February 11 th 2005
Registration	- February 15 th 2005
Final Copies	- February 18 th 2005

Note : Registration will be limited to approximately 50 attendees.

**All completed registration forms should be
by sent by email to david.newth@csiro.au**

Websites

<http://www.csiro.au/css>

<http://www.complexsystems.net.au>

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