



2D Image of the Internet, complements of The Opte Project

MULTISCALE REPRESENTATION, ANALYSIS, AND MODELING OF INTERNET DATA AND MEASUREMENTS

● **September 22 – 26, 2008**

ORGANIZING COMMITTEE: Paul Barford (University of Wisconsin-Madison), Anna Gilbert (University of Michigan), Mauro Maggioni (Duke University), Morley Mao (University of Michigan), Rob Nowak (University of Wisconsin-Madison)

● Scientific Overview

The purpose of this workshop is to bring together a diverse group of researchers and practitioners to discuss several aspects of the structure of the Internet and of network traffic on the Internet. In particular, one of the main themes will be a discussion of current tools to measure and infer the connectivity structure of the Internet, and to measure and model the statistics of dynamics of the traffic. Another main theme will be the modeling of both the emergence of network structures and traffic patterns, through progressive competitive/ cooperative growth, and the a posteriori statistical analysis of measured traffic data, with explicit connections and studies on available data sets. Challenges and opportunities in constructing multiscale models for such complex networks and traffic patterns will be discussed, from both a mathematical perspective and in view of concrete application to the data sets above.

● Confirmed Speakers

Shweta Agarwal (Cambridge), Paul Barford (Univ of Wisconsin-Madison), Andrea Bertozzi (UCLA), Sven Dietrich (Stevens Institute of Technology), Brian Eriksson (Univ of Wisconsin), Lixin Gao (Univ of Massachusetts Amherst), Alfred Hero (Univ of Michigan), Eric Kolaczyk (Boston Univ), Mauro Maggioni (Duke), Morley Mao (Univ of Michigan), Vishal Misra (Columbia), Muthu Muthukrishnan (Rutgers), Michael Rabbat (Univ of Wisconsin-Madison), Reza Rejaie (University of Oregon), Amos Ron, (Univ of Wisconsin-Madison), Oliver Spatscheck, (AT&T Labs-Research), Martin Strauss, (Univ of Michigan), Renata Teixeira, (CNRS), Shang-Hua Teng (Boston Univ), Rebecca Willett (Duke), Ming Zhang (Microsoft)

● Long Program Schedule

This workshop is part of the long program Internet Multi-Resolution Analysis:

- Tutorials, September 9-12, 2008
- **Workshop 1: Multiscale Representation, Analysis and Modeling of Internet Data and Measurements, September 22-26, 2008**
- Workshop 2: Applications of Internet MRA to Cyber-Security, October 13-17, 2008
- Workshop 3: Beyond Internet MRA: Networks of Networks, November 3-7, 2008
- Workshop 4: New Mathematical Frontiers in Network Multi-Resolution Analysis, November 17-21, 2008

● Participation

Additional information about this workshop including links to register and to apply for funding, can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission, and we welcome their applications.

● www.ipam.ucla.edu/programs/mraws1



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