**dg.o2005 Tutorial:** Application of Social Network Analysis in Digital Government Research

**Presenters:**
- David Lazer, Ines Mergel  
  Kennedy School of Government, Harvard University
- Noshir Contractor  
  University of Illinois at Urbana-Champaign

**Tutorial home page**

**Scheduled:** 2 p.m. to 5 p.m., Sunday, May 15  
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**Description:**
Social network analysis is a developing paradigm in academia, business and also in private lives. It spins across all kinds of academic disciplines, such as sociology, anthropology, psychology, organization studies or political sciences. It helps to map and measure of relationships and communication or resource flows between people, groups, organizations, computers or other entities. The nodes in the network are the people and groups while the links show relationships or flows between the nodes. Social networks are formed of social relations that consist of nodes (represented by actors, players, agents, vertices or points) and are connected by lines (ties, links or edges). The nodes can either consists of individuals or collectivities, such as organizations, political units (cities, nations, or societies). Social network analysis provides both concepts and theories, but also statistical tools to visualize and analyze the observed relationships.

**Goal:**
The target audience of the tutorial "Application of Social Network Analysis in Digital Government Research" is any researcher interested in the theory and analysis of relationships between computer networks, organizational and institutional actors. This tutorial is intended to give an overview of the existing theories, a brief introduction into the analysis of network data using a common tool called UCInet and into different visualization methods. Moreover, specific applications for digital government researchers are presented. A Q&A session will end the tutorial, in which researchers can address their specific research needs.

We will use existing, well-known and often reanalyzed data to show the relevance of social network analysis in different fields of application. In addition, we will use our own data from...
different studies in the area of Digital Government to show the relevance of the method and enhance the understanding of social network analysis. After this tutorial, attendees will be able to analyze their own data using social network analysis techniques. The lecturers will submit a list of introductory readings and Internet resources on Social Network Theory and Analysis.

**Outline:**

- 2:00-3:00 p.m.: *Introduction to Social Network Theory*
- 3:00-4:00 p.m.: *Introduction to Social Network Analysis using UCInet & Network Visualization Methods*
- 4:00-5:00 p.m.: *Applying Social Network Techniques in Digital Government Research (Examples of projects and Q&A)*

**Brief bios:**

David Lazer is an Associate Professor of Public Policy at the Kennedy School of Government, Harvard University and teaches classes on Social Network Analysis. David is the Associate Director and Co-Principal Investigator of the National Center for Digital Government, a NSF funded research center. He runs the Cambridge Colloquium on Social Networks and Complexity (see http://www.ksg.harvard.edu/complexity). For more information about David see: http://ksgfaculty.harvard.edu/David_Lazer

**Contact:**

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Ines Mergel is a Postdoctoral Fellow at the National Center for Digital Government that is located at the Kennedy School of Government, Harvard University. She has recently finished her dissertation with the title: "The influence of multiplex network ties on the diffusion of eLearning techniques "A social network analysis". She holds a PhD from the University of St. Gallen, Institute of Management, in Switzerland. In her research she focuses on the social network relationships in the diffusion of innovative technologies from a Social Sciences perspective.

Ines will be responsible for the second part of the tutorial and will give an introduction on Social Network Analysis techniques and different kinds of visualization techniques. For more information, resume, and a list of publications see: http://www.ksg.harvard.edu/digitalcenter/people/mergel_bio.htm

**Contact:**

**Ines Mergel**
Kennedy School of Government
Noshir Contractor (www.uiuc.edu/ph/www/nosh) is a professor of speech communication and Director of the Science of Networks in Communities (SONIC) Group at the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign. His research program, funded continuously for the past decade by NSF, is investigating factors that lead to formation, maintenance, and dissolution of dynamically linked knowledge networks in 21st century organizational forms. His book titled "Theories of Communication Networks" (co-authored with Professor Peter Monge and published by Oxford University Press) received the 2003 Book of the Year award from the Organizational Communication Division of the National Communication Association.

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