



Tuesday, 1st June 2010, 9:00 - 10:30 | Hermes + Apollon

From Disasters to WoW: Using Web Science to understand and enable 21st century multidimensional networks

Recent advances in Web Science provide comprehensive digital traces of social actions, interactions, and transactions. These data provide an unprecedented exploratorium to model the socio-technical motivations for creating, maintaining, dissolving, and reconstituting multidimensional social networks. Multidimensional networks include multiple types of nodes (people, documents, datasets, tags, etc.) and multiple types of relationships (co-authorship, citation, web links, etc). Using examples from research in a wide range of activities such as disaster response, public health and massively multiplayer online games (WoW - the World of Warcraft), Contractor will argue that Web Science serves as the foundation for the development of theories and methods to help advance our ability to understand and enable multidimensional networks.

Noshir Contractor is the Jane S. & William J. White Professor of Behavioral Sciences in the [School of Engineering](#)

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, USA. He is the Director of the Science of Networks in Communities (

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) Research Group at Northwestern University. Noshir Contractor is a Programme Director of the Web Science Trust.

He is investigating factors that lead to the formation, maintenance, and dissolution of dynamically linked social and knowledge networks in communities. Specifically, his research team is developing and testing theories and methods of network science to map, understand and enable more effective networks in a wide variety of contexts including communities of practice in business, science and engineering communities, disaster response teams, public health networks, digital media and learning networks, and in virtual worlds, such as Second Life.

His research program has been funded continuously for over a decade by major grants from the U.S. [National Science Foundation](#) with additional funding from the U.S. [National Institutes of Health](#) (NIH), U.S. [National Aeronautics and Space Administration](#) (NASA), the Rockefeller Foundation, and the MacArthur Foundation.

Professor Contractor has published or presented over 250 research papers dealing with communicating and organizing. His book titled *Theories of Communication Networks* (co-authored with Professor Peter Monge and published by Oxford University Press in English and scheduled to be published by China Renmin University Press in simplified Chinese in 2008) received the 2003 Book of the Year award from the Organizational Communication Division of the National Communication Association. He is the lead developer of *IKNOW* (Inquiring Knowledge Networks On the Web), and its Cyberinfrastructure extension *CI-KNOW*, a network recommender system to enable communities using cyberinfrastructure, as well as *Blanche*, a software environment to simulate the dynamics of social networks.

His papers have received Top Paper awards from the International Communication Association and the National Communication Association. In 2000 he was awarded the Outstanding Member Award by the Organizational Communication Division of the International Communication Association. He has served on the editorial boards of *Human Communication Research*, *Journal of Applied Communication Research*, *Journal of Communication*, *Management Communication Quarterly*, *Organization Science*, and the *World Wide Web Electronic Journal of Computer-Mediated Communication*.

He has consulted with Procter & Gamble, Boeing, Charles Schwab, Fiat, Illinois Power, McKinsey Management Consulting, Merrill Lynch, Michigan Consolidated, National Cancer Institute, Paramount Pictures, the Utah Transit Authority, and Vodafone. He developed one of the first graduate and undergraduate "virtual" courses on "Emerging Technologies in the Workplace" to be webcast and cablecast by Jones International University. Internationally,

Professor Contractor has also conducted workshops on social network analysis and the management of knowledge networks in China, Finland, India, Israel, Italy, Japan, Spain, Thailand, and the United Kingdom.

Professor Contractor holds a Ph.D. from the Annenberg School for Communication at the University of Southern California and a Bachelor's Degree in Electrical Engineering from the Indian Institute of Technology in Madras (Chennai). He was on the faculty at the University of Illinois at Urbana-Champaign for twenty years prior to joining Northwestern in 2007.

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