

Distinguished Lecture Series on Network Science and Research

In light of the growing interest and importance of network science and network research to the Penn State Research community, the Office of the Senior Vice President for Research is sponsoring this series. Prominent national experts are scheduled to present talks on campus throughout the academic year. The goal is to clarify the underlying principles in this intrinsically interdisciplinary research area and to bring the diverse community of Penn State researchers together around common themes to explore how their research might benefit from intellectual cross-fertilization.



“Using the Web to do Social Science”

Duncan Watts, Columbia University
Department of Sociology

Monday, March 16, 2009

11:30 a.m. – 12:30 p.m.

Cybertorium, 113 IST Building

Abstract:

Social science is often concerned with the emergence of collective behavior out of the interactions of large numbers of individuals; but in this regard it has long suffered from a severe measurement problem—namely that interactions between people are hard to measure, especially at scale, over time, and at the same time as observing behavior. In this talk, I will argue that the technological revolution of the Internet is beginning to lift this constraint. To illustrate, I will describe three examples of research that would have been extremely difficult, or even impossible, to perform just a decade ago: (1) using email exchange to track social networks evolving in time; (2) using a web-based experiment to study the collective consequences of social influence on decision making; and (3) using a social networking site to study the difference between perceived and actual homogeneity of attitudes among friends; and (4) using Amazon’s Mechanical Turk to study the incentives underlying “crowd sourcing.” Although internet-based research still faces serious methodological and procedural obstacles, I propose that the ability to study truly “social” dynamics at individual-level resolution will have dramatic consequences for social science.

Biography:

Duncan Watts is principal research scientist at Yahoo! Research, where he directs the *Human Social Dynamics* group. He is also professor of sociology at Columbia University, and an external faculty member of the Santa Fe Institute, and of Nuffield College, Oxford. His research interests include the structure and evolution of social networks, the origins and dynamics of social influence, and the nature of distributed “social” search. He is the author of *Six Degrees: The Science of a Connected Age* (W.W. Norton, 2003) and *Small Worlds: The Dynamics of Networks between Order and Randomness* (Princeton University Press, 1999). He holds a B.Sc. in Physics from the University of New South Wales, and Ph.D. in Theoretical and Applied Mechanics from Cornell University.

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