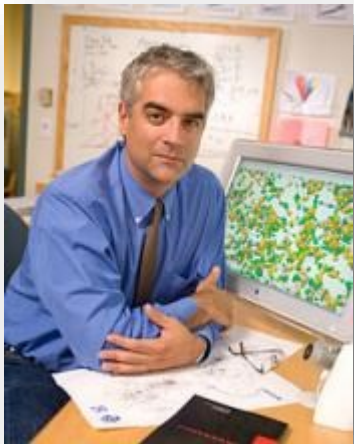# INAUGURAL APPLIED DATA SCIENCE SEMINAR

SOCIAL NETWORK EXPERIMENTS

Nicholas Christakis

Nicholas A. Christakis, MD, PhD, MPH, is the Sol Goldman Professor of Social and Natural Science, Director of the Human Nature Lab, and Co-Director, Yale Institute for Network Science, Yale University

All Talks

Monday February 20 Nicholas Christakis, *Social Network Experiments*

Monday March March 27 Debra Fischer, Yale Astronomy, Joint

Appointment In Yale Department of Geology & Geophysics Adjunct Professor

of Physics & Astronomy, San Francisco State University

Monday April 10 Mark Gerstein, Albert L Williams Professor of Biomedical

Informatics and Professor of Molecular Biophysics & Biochemistry, and of

Computer Science. Co-Director of the Yale Program in Computational

Biology & Bioinformatics

Monday April 17 Frank Keil, Charles C & Dorathea S Dilley Prof Psychology
and Linguistics; Chn Psychology. Director of the Cognition and Development lab.

Social Network Experiments

Human beings choose their friends, and often their neighbors and co-workers, and we inherit our relatives; and each of the people to whom we are connected also does the same, such that, in the end, we assemble ourselves into large face-to-face social networks, with particular, discernible mathematical properties. Here, I explore how an understanding of human social network structure and function can be used to intervene in the world. I will review recent research describing two classes of interventions – involving both offline and online networks: (1) interventions that rewire the connections between people, and (2) interventions that manipulate social contagion. I will present a variety of experiments (involving thousands of subjects) in settings as diverse as fostering health behavior change in developing world villages, fostering cooperation in networked groups online, facilitating the diffusion of innovation or coordination in groups, and other examples. By taking account of people's structural embeddedness in social networks, and by understanding social influence, it is possible to intervene in social systems to enhance desirable population-level properties as diverse as health, wealth, cooperation, coordination, and learning.