Paul Dirac Collegiate Professor of Physics, University of Michigan and Santa Fe Institute

November 11, 2011
Time: 2:00pm
Devon Energy Hall
Room 120

The University of Oklahoma School of Computer Science
Distinguished Lecture Series
“Large-Scale Structure in Social and Biological Networks”
Mark E. J. Newman

ABSTRACT:
Many systems of scientific interest take the form of networks, including the Internet, the world wide web, social networks, metabolic and genetic networks, citation networks, and others. A substantial body of research in recent years has addressed the question of how the structure of these networks affects the behavior of the systems they represent. This talk will introduce some of the fundamental questions in this area and take a closer look at one topic in particular, the community detection problem, which has become a testing ground for the application of techniques from machine learning, statistical physics, statistics, and other areas to the solution of network problems.

BIOGRAPHY:
Mark Newman is the Paul Dirac Collegiate Professor of physics at the University of Michigan as well as a professor in the University’s Center for the Study of Complex Systems. Prior to this he had worked at the Santa Fe Institute in New Mexico, a think-tank devoted to the study of complex systems. He received his Ph.D in physics from the University of Oxford and did postdoctoral work at Cornell University. Professor Newman’s research is on statistical physics and the theory of complex systems, with a primary focus on networked systems, including social, biological and computer networks. He is the author of several books, including a recent textbook on network theory and a popular book of cartography.

Accommodations on the basis of disability are available by contacting the School of Computer Science at (405) 325-4042