Invited Talks

Keynote Address

Behavioral Experiments in Strategic Networks

Michael Kearns

For four years now, we have been conducting "medium-scale" experiments in how human subjects behave in strategic and economic settings mediated by an underlying social network structure. We have explored a wide range of networks inspired by generative models from the literature, and a diverse set of collective strategic problems, including biased voting, graph coloring, consensus, and networked trading. These experiments have yielded a wealth of both specific findings and emerging general themes about how populations of human subjects interact in strategic networks. Kearns will review these findings and themes, with an emphasis on the many more questions they raise than answer.

Michael Kearns is a professor of computer and information science at the University of Pennsylvania, where he holds the National Center Chair in Resource Management and Technology. He is the founding director of Penn Engineering's new Market and Social Systems Engineering (MKSE) program. Kearns has secondary appointments in the Statistics and Operations and Information Management (OPIM) departments of the Wharton School, and is an affiliated faculty member of Penn's Applied Math and Computational Science graduate program. Kearns also serves as an advisor to Yodle, kaChing, Invite Media, and Kwedit. His research interests include topics in machine learning, algorithmic game theory, social networks, computational finance, and artificial intelligence. Most recently, he has been conducting human-subject experiments on strategic and economic interaction in social networks. Kearns received his B.S in mathematics and computer science from the University of California at Berkeley in 1985, and his Ph.D. in computer science from Harvard University in 1989. He has served as the program chair of NIPS, AAAI, COLT, and ACM EC. He is a member of the NIPS Foundation and the steering committee for the Snowbird Conference on Learning, and serves on the editorial board of The MIT Press series on adaptive computation and machine learning.

Keynote Address

Evidenced-Based Design of Online Communities

Robert E. Kraut

Online communities are the fastest-growing portion of the Internet and provide members with information, social support, and entertainment. While a minority, such as Wikipedia, MySpace, Facebook and the Apache Server project are highly successful, many others fail. To be successful, online communities must overcome challenges common in almost all groups, organizations, and voluntary associations — solving problems of start-up, recruitment, socialization, commitment, contribution, coordination and regulation of behavior. The social sciences can tell us a lot about how to create thriving online communities. Social science theories can inform choices about how to get a community started, integrate newcomers, encourage commitment, regulate behavior when there are conflicts, motivate contributions, and coordinate those contributions to maximize benefits for the community.

This talk focuses on ways to build members' commitment to online communities, based on theories of social identity and interpersonal bonds. It provides an overview of the relevant theory, describes results of a 6-month field experiment in which an existing site was redesigned based on principles derived from social identity and interpersonal-bond theories, and describes the results of an agent-based model that examines how different approaches to moderating the content in a group influence social identity and interpersonal bonds.

Robert Kraut is Herbert A. Simon Professor of Human-Computer Interaction at Carnegie Mellon University.
Mellon University. Kraut has broad interests in the design and impact of social computing and conducts research on everyday use of the Internet, technology and conversation, collaboration in small work groups, computing in organizations and contributions to online communities. His most recent work examines factors influencing the success of online communities and ways to apply psychology theory to their design. He received his Ph.D. in social psychology from Yale University in 1973 and has previously taught at the University of Pennsylvania and Cornell University. He was a research scientist at AT&T Bell Laboratories and Bell Communications Research for twelve years.

**Special Session on Social Science Research in Social Media**

This special session will showcase a diverse array of perspectives on social-medial research from the fields of psychology, sociology, and communication.

**Words as Reflections of Psychological State**  
*Invited Talk by James W. Pennebaker*

Pennebaker's research explores the links between traumatic experiences, expressive writing, natural language use, and physical and mental health. Across numerous real-world contexts, his studies have demonstrated that the words people use serve as powerful reflections of their personality and social worlds. For example, his analyses of over 1,000 people who wrote blogs in the weeks before and after September 11 terrorist attacks showed that the journal entries revealed pronounced psychological changes in response to the attacks. His talk will address the fact that most language-based computer programs analyze content-heavy words (such as nouns and regular verbs) and throw out “junk” words (such as pronouns, prepositions, and articles) to understand people’s thinking, buying, searching, and other behaviors. According to Pennebaker’s work, analyses of junk words can yield important insights into the social and psychological processes of people across cultures and languages. He will talk about his recent studies, which point to the role of junk words in identifying personality, depression, status, honesty, group cohesiveness, and other individual and group behaviors.

**Got Facebook? Investigating What’s Social about Social Media**  
*Invited Talk by S. Craig Watkins*

Watkins has been researching young people’s media behaviors for more than ten years and he teaches in the departments of Radio-Television-Film and Sociology and the Center for African and African American Studies. His recent book, *The Young and the Digital: What the Migration to Social Network Sites, Games, and Anytime, Anywhere Media Means for Our Future*, explores young people’s dynamic engagement with social media, online games, mobile phones, and communities like Facebook and MySpace. A few short years ago Facebook was widely viewed as a site for college students who used the platform primarily for social purposes — making new friends, stalking each other, and posting pictures from a weekend of partying and drinking. Watkins’ talk will show how young people’s participation in Facebook is actually more complex than the popular images and myths suggest. Drawing from both survey data and in-depth interviews with current college students and recent college graduates the talk considers how the use of Facebook evolves across the young life-cycle. The talk also discusses the question: what’s social about social media?

**Examining Online and Offline Communication Processes in Online Dating and Social Network Sites**  
*Invited Talk by Nicole B. Ellison*

Ellison’s research has been examining the ways in which new information and communication technologies shape social processes, and vice versa. Her recent research has focused on the social capital implications of social network site use and issues of self-presentation, relationship formation and maintenance, and impression formation in online contexts. Ellison’s talk will present research examining how people use the Internet to engage in self-presentation, form and maintain relationships, and garner social capital benefits. The talk will focus on two new streams of research: one examining the ways in which people use Facebook to connect with others and access social support and the other exploring online dating participants’ perceptions regarding acceptable and unacceptable misrepresentation in online dating profiles.