

The Mathematical Sociologist
Newsletter of the Mathematical Sociology
Section of the American Sociological Association

Section Officers

Chair

David Heise, Indiana University
heise@indiana.edu

Chair Elect

Kenneth C. Land Duke University
kland@soc.duke.edu

Past Chair, and Section Nominations Committee

Chair

Noah E. Friedkin,
University of California, Santa Barbara
friedkin@soc.ucsb.edu

Secretary/Treasurer – 2005

Lisa Troyer, University of Iowa
lisa-troyer@uiowa.edu

Council - 2004

Diane H. Felmlee,
University of California-Davis
dhfelmlee@ucdavis.edu

Murray Webster, Jr.
University of North Carolina, Charlotte
mwebster@carolina.rr.com

Council 2005

Bob Hanneman
University of California, Riverside
hanneman@ucr.edu

Noah P. Mark
Stanford University
nmark@leland.stanford.edu

Council 2006

James Montgomery
James Moody

Student Representative

Ju-Sung Lee
Newsletter Editor

Barbara F. Meeker
University of Maryland
bmeeker@socy.umd.edu

Website

<http://www.sscnet.ucla.edu/soc/groups/mathsoc/mathsoc.htm> .

Webmaster Jun Kobayashi

From the Newsletter Editor

This is a 'summer supplement' issue of the newsletter, containing information and reminders about ASA. Please plan to attend

Summer Supplement 2004

the regular and Section paper sessions, and especially to come to the Business Meeting. It is important to the recognition of our Section that the Business Meeting be well attended, and this is where the prize winners will be recognized.

Mathematical Sociology
Schedule for ASA

Regular paper sessions

Saturday, 8/14/2004 from 2:30 p.m. - 4:10 p.m.

Sunday, 8/15/2004 from 12:30 p.m. - 2:10 p.m.

Section paper session

Sunday, 8/15/2004 from 10:30 a.m. - 12:10 p.m.

Section Council Meeting (one-hour)

Sunday, 8/15/2004 from 2:30 p.m. - 3:25 p.m.

Section Business Meeting (40 minutes)

Sunday, 8/15/2004 from 3:30 p.m. - 4:10 p.m.

Joint Mathematical
Sociology/Rationality and Society
Miniconference

is scheduled on Wednesday, 8/18/2004 from 8:30 a.m. - 5:30 p.m.

New Section Officers

Chair-elect: Scott Feld

Council Members: Ronald Breiger and Carter T. Butts

Student Council Member: Casey A Borch

Congratulations to these new officers of the section. The elected officers assume their offices at the Section's business meeting, 2:30-4:10, Sunday, Aug. 15, in San Francisco.

The Section thanks all of the candidates who ran in this election for being willing to

commit a part of their future to the Section's well-being.

No Section Reception this Year

In February the ASA announced that the only possible day for a Mathematical Sociology Section reception was Saturday, the day before the Section's sessions for papers and business. Worried that too few would show up in advance to justify the considerable expense, Section Chair David Heise queried the Section Council, and only a small minority advised having the reception despite the poor scheduling. Thus the Section is not having a reception this year.

Prize Winners for 2004

Section prizes will be awarded during the Business Meeting, Sunday, 8/15/2004 from 3:30 p.m. - 4:10 p.m.

Arnout van de Rijt and Robb Willer win Graduate Student Paper Award

The Mathematical Sociology Section of the American Sociological Association is pleased to announce the winners of its graduate student paper award for 2004 are Arnout van de Rijt and Robb Willer of Cornell University, for their paper: "Metanetworks: A Factor in Structural Change."

The paper is a contribution to research on how patterns of connections among social actors change over time, or "network dynamics." The current state of a network is conceptualized as one node in a network of possible networks (or "metanetwork"). It is hypothesized that a network is likely to develop from its current structure toward a structure that is adjacent in the metanetwork of alternative networks that maximizes benefits to the actors. The paper explores two main scenarios in which actors seek to maximize structural holes or seek to maximize the validity of information that flows to them in the network. Simulation studies support the hypotheses that some networks move toward equilibrium positions predicted by the metanetwork analysis.

This paper represents a highly innovative and technically advanced approach to the formal analysis of network development. It combines innovative conceptualization, rigorous formal analysis, and simulation experimentation to further the development of theory in this cutting-edge area.

Committee: Ken Land, Lisa Troyer, Robert Hanneman (Chair)

James Moody and Douglas R. White Win Paper Prize

The 2004 prize goes to James Moody and Douglas R. White for their paper "Structural Cohesion and Embeddedness: A Hierarchical Concept of Social Groups," which was published in the *American Sociological Review*, (February, 2003) 68: 103-27.

Committee: James Montgomery, Ju-Sung Lee, John Skvoretz, Murray Webster (Chair)

Thomas Fararo Wins Distinguished Career Award

Thomas Fararo, Distinguished Service Professor of Sociology, University of Pittsburgh, has been awarded the Distinguished Career Award. Details of this award were announced in the Spring issue of *The Mathematical Sociologist* (vol 5 # 2).

Paper Sessions

(regular sessions as updated by Gene Johnsen, July, 2004)

Regular Session. Mathematical Sociology: Models and Methods, Consistency with Theory and Data, Network Location and Its Effects

Saturday, August 14, 2:30 p.m., Renaissance Parc 55 #96

Organizer and Presider: Eugene C. Johnsen, University of California, Santa Barbara

"Identifying Linking-Pin Organizations in Inter-Organizational Networks"

Patrick Doreian and Kayo Fujimoto, University of Pittsburgh

"A Baker's Dozen Sociological Models of Status and Status Claims"

Murray Webster, Jr., Joseph M. Whitmeyer, and Lisa Slattery Rashotte, University of North Carolina, Charlotte

"Strength of Communities with Low Infection Rates: A Spatial Network Explanation to the Racial/Ethnic Difference in the Prevalence of Sexually Transmitted Diseases"

Yoosik Youm, University of Illinois, Chicago

"A Network Analysis of Threshold Models"

Yen-Sheng Chiang, University of Washington

Discussant: Phillip Bonacich, University of California, Los Angeles

Regular Session. Mathematical Sociology: The Emergence, Coexistence, and Effects of Social Structures

Sunday, August 15, 12:30 p.m., Renaissance Parc 55 #239.

Organizer and Presider: Eugene C. Johnsen, University of California, Santa Barbara

"Structure Matters: An Analysis of Consensus Formation in Social Networks"

Fabio Rojas, Indiana University, and Tom Howe, University of Chicago

"Culture Wars and Dynamic Networks: A Hopfield Model of Emergent Structure"

Andreas Flache, University of Groningen, and Michael W. Macy, Cornell University

"Population Size, Network Density, and the Origin of Inherited Social Inequality"

Reuben J. Thomas, Stanford University

"Status Differentiation and the Cohesion of Social Networks"

Matthew S. Bothner and Toby E. Stuart, University of Chicago, and Harrison C. White, Columbia University

Discussant: Joseph M. Whitmeyer, University of North Carolina, Charlotte

Section Paper Session.

Sunday, 8/15/2004 from 10:30 a.m. - 12:10 p.m.

Organizer and Presider James Fisher Hollander (Texas Instruments)

Jun Kobayashi (University of Chicago), Hirokuni Ooura (Teikyo University), Yuhsuke Koyama (Tokyo Institute of Technology)
Title: Exit for Cooperation: A Simulation Study on Social Dilemmas with Mobility

Joseph M. Whitmeyer (University of North Carolina, Charlotte)
Title: Modeling Coleman's Friendly Association Networks

Song Yang (University of Arkansas), Henry Hexmoor (University of Arkansas Fayetteville)
Title: Measuring Optimal Connections in Large Networks

M. Hamit Fisek (Bogazici University), Stuart J. Hysom (Emory University)
Title: Status Characteristics and Reward Expectations: Test of a Model

Carter T. Butts (University of California, Irvine), Fabio Leite (University of California, Irvine)
Title: Bayesian Inference from Continuously Arriving Informant Reports, with Application to Crisis Response

PANEL DESCRIPTION:

Social agents interact in and defect from social networks. Simulation of the defection process based on a payoff comparison predicts its effect on the social groups. Models are tested with friendly association network data. The network ties may have unequal values and collective social agents are considered. Individual social agents and their reward expectations under status characteristics theory are analyzed. Another general model considers Bayesian inference from continuously arriving informant reports.