

Mathematical Sociologist

Message from the Chair:

Ken Land



Spring 2018 will be with us soon. This is a busy part of the academic year for teaching and research for most of us. My best wishes to all Math Soc Section members. One of my fond recollections of a quote from a senior member of the American Mathematical Society some years ago is “All I expect from my colleagues is their grudging respect for my

work.” Let’s hope for a bit more than that from each of us. This year’s ASA Annual Meeting is in Philadelphia, which should provide us with a good turnout for our Section Sessions. In addition to a regular Section Open Topic Session on Mathematical Sociology organized by Carter Butts, we will have a Computational Sociology Session organized by James Kitts, and Lynn Smith-Lovin, 2017 Coleman Award Winner, will make a presentation in the second half of our Section Business Meeting Session.

Remember that the Section has a website (<http://mathematicalsociology.org/>) organized by Matt Brashears at the University of South Carolina. The website states: “Mathematical sociologists use the language of mathematics to describe the structure, explain the events, and predict the dynamics of the social world. The effort is a inter-disciplinary, with contributions from physicists, mathematicians, computer scientists, psychologists, economists, etc.” I think we all can agree to that. The Section remains strong, both financially and in terms of member participation and activity. I close by thanking the members of the Section Council and the Editors of our Newsletter, Pamela Emanuelson and Diego F. Leal.

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Section Officers

Chair

Kenneth C. Land
Duke University

Student Representative

Diego F. Leal
University of Massachusetts

Kazuo Yamaguchi
University of Chicago

Chair-Elect

Carter T. Butts
University of California - Irvine

Section Council

David R. Schaefer
Arizona State University

Newsletter Co-Editors

Pamela Emanuelson
North Dakota State University

Past Chair

Murray A. Webster
University of North Carolina -
Charlotte

James Moody
Duke University

Diego F. Leal
University of Massachusetts

Arnout van de Rijt
Utrecht University

Webmaster

Matthew Brashears
University of South Carolina

Secretary/Treasurer

David M. Melamed
Ohio State University

Dawn T. Robinson
University of Georgia

Call for Submissions: Mathematical Sociology Section Awards

The Mathematical Sociology Section will make four Awards at the 113th Annual Meeting of the American Sociological Association, August 11-14, 2018 in Philadelphia, Pennsylvania. Currently, Section Committees are accepting nominations for these awards. The Committee Chair and their email addresses are:

James S. Coleman Distinguished Career Award – Carter T. Butts, buttsc@uci.edu

Outstanding Article Publication in Mathematical Sociology – Kazuo Yamaguchi, kyamagu@uchicago.edu

Outstanding Graduate Student Paper in Mathematical Sociology – David Melamed, melamed.9@osu.edu

Mathematical Sociology Outstanding Dissertation in Progress Award – James Moody, jmoody77@soc.duke.edu

ASA Mathematical Sociology Section Sessions

2018 113th ASA Annual Meeting – Philadelphia

August 11-14, 2018: Pennsylvania Convention Center and Philadelphia Marriot Downtown

At the 2018 Annual Meeting, the Mathematical Sociology Section will organize three sessions on Day Four of the Meeting (Tuesday, August 14, 2018) and a Joint Reception on Day Three of the Meeting (Monday, August 13, 2018):

Computational Sociology – Session Organizer and Presider James A. Kitts, jkitts@soc.umass.edu

Mathematical Sociology – Session Organizer and Presider Carter T. Butts, buttsc@uci.edu

Business Meeting, Award Session, and Coleman Award Invited Presentation Session – Organizer and Presider Kenneth C. Land, kland@soc.duke.edu; 2017 Coleman Award Recipient Lynn Smith-Lovin is to present in the second half of the Session

Mathematical Sociology Reception: In addition to these sessions, the Mathematical Sociology Section will host an on-site Joint Reception at 6:30pm on Monday, August 13, 2018, with the Evolution, Biology and Society and Rationality and Society Sections.

Annual Report 2016-2017

Murray Webster, Past Chair

Governance

Officers and Council members for the period are as follows.

Past Chair: Douglas Heckathorn, Cornell University

Chair-Elect: Kenneth C. Land, Duke University

Chair: Murray Webster, University of North Carolina, Charlotte

Secretary-Treasurer: David M. Melamed, The Ohio State University

Student Representative: Emily J. Smith, University of California, Irvine

Newsletter Co-Editors: Pamela Emanuelson, North Dakota State University; Diego F. Leal, UMass
Webmaster: Matthew Brashears, University of South Carolina, Columbia

Section Council:

Amir Goldberg, Stanford University, through 2017
James A. Kitts, University of Massachusetts, Amherst, through 2017
Carter T. Butts, University of California, Irvine, through 2018
David R. Schaefer, Arizona State University, through 2018
James Moody, Duke University, through 2019
Arnout van de Rijt, SUNY-Stony Brook, through 2019

Committee Chairs

James S. Coleman Distinguished Career Award: Carter T. Butts, University of California, Irvine
Outstanding Article Publication Award: David Schaefer, Arizona State University
Outstanding Graduate Student Paper in Mathematical Sociology: Amir Goldberg, Stanford University
Outstanding Dissertation in Progress in Mathematical Sociology: James A. Kitts, University of Massachusetts, Amherst

2017 Award Recipients

James S. Coleman Distinguished Career Award: Lynn Smith-Lovin, Duke University
Outstanding Article Publication Award: "Modeling Dynamic Identities and Uncertainty in Social Interactions: Bayesian Affect Control Theory." *American Sociological Review*. Tobias Schröder (Potsdam University of Applied Sciences), Jesse Hoey (University of Waterloo), and Kimberly B. Rogers (Dartmouth College)
Outstanding Graduate Student Paper in Mathematical Sociology: "Structure of Cultural Rejection." *Sociological Perspectives*. Sosuke Okada (University of Arizona)
Outstanding Dissertation in Progress in Mathematical Sociology: Jaemin Lee (Duke University)

Actions during the Year and Reports

Tootell Award. In the spring of 2016, member Geoffrey H. Tootell (San Jose State University) made known his interest in establishing an award and a prize for a mid-career scholar working in mathematical sociology. Geoffrey previously established and endowed the Outstanding Dissertation in Progress award that allows the Section to honor and encourage students to bring mathematical work to their dissertations. He was also a founder of this Section. ASA Council had a long-standing prohibition of cash awards to faculty members. In June, I met with ASA Executive Officer Sally T. Hillsman and Justin A. Lini at ASA. They agreed to put the award prohibition on Council agenda, and at the 2016 meetings Council removed the prohibition. That action cleared the way for us to establish this new award. Geoffrey passed away in February 2017, and his will is in probate. Michael T. Lovaglia, working with Chair Kenneth Land, will monitor this situation and, we hope, will be able to establish this award during the coming year.

Web site. (<http://mathematicalsociology.org/>) We have a new host for the Mathematical Sociology web site! Initially the site was hosted at UCLA, managed by Phil Bonacich and Carter Butts. It became unwieldy to change or update the site, and its content became increasingly outdated. Matthew Brashears took on the (surprisingly complicated) task of moving the site. It now is hosted at his institution, the University of South Carolina. At some point, the Section may decide to move the host to ASA where several other Sections are housed, but for now we have a smoothly functioning site. Matt also discovered that some of the earlier pages had been lost. Barbara Meeker graciously supplied many missing pages from her own files, so the record now is as complete as possible. The site is an ideal place to house data sets for others to use, as well as to store research reports and newsletters.

Paper session. As in past years, the Council decided to use the time allocated for Council meeting for an open paper session. Alison Bianchi organized and chaired the session at ASA. The room was filled, members presented five papers, and we had lively discussions.

Council Meeting. Council met over breakfast on August 14. Members reviewed the membership and financial reports, and discussed plans for the coming year. There were no problems or other difficulties to discuss, and Council recommended some items for discussion at the Business Meeting.

Business Meeting. The Section Business Meeting was held in the afternoon of our Section Day, August 14. Forty-two members signed the attendance sheet (attached). Agenda items were:

1. Welcome of new Council members and officers, and thanks to those retiring. These are listed earlier in this report.
2. Announcement of award winners, also shown above.
3. The Coleman Award in recent years has included a talk by the recipient. This year's recipient, Lynn Smith-Lovin, asked to present her talk at next year's Section meeting due to heavy commitments this year. Council agreed and this was reported at Section Meeting, without dissent.
4. Budget and membership report. David Melamed, Secretary-Treasurer, was unable to attend ASA this year, so Murray Webster presented his report. The section is healthy, both in membership and finances. Reports are attached. Some figures:
 - a. The most recent report from ASA showed 196 members, an increase from 174 members in April.
 - b. The Section has two accounts. The Section Account, which depends on membership-based allocation from ASA and gifts, had \$4175.00. Approximately \$1800 was allocated for the 2017 Section reception and \$500 for the student paper award, so pending balance was about \$1700.00, before next year's allocation from ASA. The Dissertation Award endowed by Geoffrey Tootell and other members' gifts, had \$200,847.30. Of that, \$1500 was allocated for this year's award, so pending balance was \$199,347.30.
5. At Council's recommendation, we asked Section members to consider increasing the Dissertation award. After discussion, members voted unanimously to increase this award to \$2500.00 beginning with next year's competition.
6. Council had discussed the advisability of flexibility in the Coleman Lifetime Contribution and the Section Outstanding Book awards. At present, our Bylaws specify that each must be given in alternate years. Since mathematical sociological work is less likely to be reported in a book than some other work, Council felt that some flexibility might be useful. We might allow the committee to decide whether to give a book award or a lifetime award in each year. Since that would require a change in our Bylaws, Council recommended and Section members agreed to defer making the change pending further study.
7. ASA has requested that each Section designate a liaison who could comment on, or identify experts in, current events. Members were told of the request and a volunteer was solicited. Since none was found, we did not provide a name to ASA. We do not know whether other Sections provided a contact or whether ASA will continue to request one, but the Section decided to await further information and request before providing the person.

Valedictory. Charing this Section has been an honor and a pleasure. Members' willingness to contribute to section activities has been inspiring. Council members willingly took on selecting members and chairing our award committees. Alison Bianchi graciously agreed to organize an excellent session at ASA. Dave Melamed handled our budget and many other tasks efficiently and cheerfully. Pam Emanuelson and Diego Leal produced fine-looking informative newsletters. Matt Brashears managed the diplomatic and technical work of transferring and developing our web site. Carter Butts and Ken Land provided historical

information on the Section and gave many helpful suggestions this year. Doug Heckathorn quickly provided documents and guidance on several crucial occasions. And I got to coordinate it all. The section remains strong and I will enjoy watching it develop with our new officers.

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## Work by Members of Our Community

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**Abramson, Corey M., Jaqueline Joslyn, Sarah Garrett, Katharine Rendle, and Daniel Dohan. 2018. "The Promises of Computational Ethnography: Improving Transparency, Replicability, and Validity for Realist Approaches to Ethnographic Analysis." *Ethnography***

This article argues the advance of computational methods for analyzing, visualizing and disseminating social scientific data can provide substantial tools for ethnographers operating within the broadly realist 'normal-scientific tradition' (NST). While computation does not remove the fundamental challenges of method and measurement that are central to social research, new technologies provide resources for leveraging what NST researchers see as ethnography's strengths (e.g. the production of in situ observations of people over time) while addressing what NST researchers see as ethnography's weaknesses (e.g. questions of sample size, generalizability and analytical transparency). Specifically, we argue computational tools can help: (1) scale ethnography, (2) improve transparency, (3) allow basic replications, and (4) ultimately address fundamental concerns about internal and external validity. We explore these issues by illustrating the utility of three forms of ethnographic visualization enabled by computational advances – ethnographic heatmaps (ethnoarrays), a combination of participant observation data with techniques from social network analysis (SNA), and text mining. In doing so, we speak to the potential uses and challenges of nascent 'computational ethnography.'

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Thank you for your timely contributions to the Spring/Summer Issue of the Mathematical Sociologist. Please continue to send us your announcements, articles, book reviews, conference announcements, etc. The more you are involved with the newsletter, the better it will be. Please feel free to send us your comments, concerns, corrections, or any ideas you have for the newsletter.

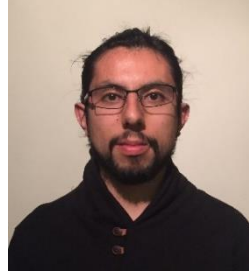
We also wanted to let our members know that the Section website (<http://www.mathematicalsociology.org>) is now housed in a server at the University of South Carolina. Thanks to the webmaster, Matt Brashears, for keeping the site up and running!

Have a great summer and watch your email for future newsletter editor requests.

### Newsletter Co-Editors



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### **Mission Statement of the Mathematical Sociology Section**

The purpose of the Mathematical Sociology Section of the American Sociological Association is to encourage, enhance and foster research, teaching and other professional activities in mathematical sociology, for the development of sociology and the benefit of society, through organized meetings, conferences, newsletters, publications, awards and other means deemed appropriate by the Section Council. The Section seeks to promote communication, collaboration and consultation among scholars in sociology in general, mathematical sociology and allied scientific disciplines.