

Mathematical Sociologist

Message from the Chair: Noah Mark



Greetings from the Mathematical Sociology Section! I hope everyone's new year is off to a good start. A lot is happening in the Math Soc Section, and I'm excited to catch you up.

Important deadlines are coming up. Get ready for Montreal! Submissions to present at ASA are due by Monday, February 26. You'll want to get your submissions in

because there will be a lot of great Math Soc presenting opportunities in Montreal and because our jointly sponsored sessions leveraging the intellectual synergy between Math Soc and our partner sections are sure to attract a crowd (continues on page 2)

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Thanks to the thoughtful leadership of Past-Chair Dawn Robinson, who brought section membership back above 300 (for the third year in a row!), we will have 5 Math Soc Section sessions on the program in Montreal. There will be four jointly sponsored, 90-minute, open-submission paper sessions. Look in this newsletter for session titles and descriptions. Thank you to Diego Leal, Omar Lizardo, David Melamed, and Laura Nelson for organizing these sessions.

There will also be a 60-minute, open-submission open topics in mathematical sociology flash talks session organized by John Skvoretz and Lynn Smith-Lovin. This session, which will combine the flash talk format with elements of a poster session, will create many full-audience presenting opportunities and small-group discussions ideal for individualized feedback on projects, especially works in progress. Thank you to John and Lynn for organizing this session.

The deadline for nominations for section awards is also approaching. Look for award descriptions and nomination instructions in this newsletter (or [on the ASA website](#)). Nominations are due by Friday, March 15, 2024. Self-nominations are welcome and encouraged. Don't be shy. It's not all about winning. Nominations improve the competition, and nominating your work is a great way to get five smart people who care about mathematical sociology to read your paper. Thank you to Weihua An, Neha Gondal, Tim Liao, Craig Rawlings, and Xi Song for chairing these committees and to the 20 additional dedicated members of the Section serving on these committees and making these awards possible.

The Math Soc Section is ready for the 2024 ASA Election. Our nominations committee, led by past chair Dawn Robinson, has recruited an amazing slate of candidates. The future is bright for Math Soc. The list of candidates is posted elsewhere in this newsletter. Thank you to the nominations committee—Dawn Robinson (chair), Maurice Bokanga, Tony Paik, Kim Rogers, and Jane Sell—for their hard work and vital service to the Section. Thank you to our candidates for agreeing to run and their future service to the Section.

In addition to candidates for section office, two proposed amendments to the Section Bylaws will appear on the 2024 ballot. One of these—The Section Officer Transition Date Amendment—would implement a change recommended to all sections by ASA. The amendment would change the section officer transition date from the last day of the ASA meeting to September 1 of the same year, bringing this date into line with that used by the ASA.

The other proposed amendment that will appear on the ballot is the Membership, Inclusion, and Community Committee Amendment. This amendment would turn our Ad Hoc Committees on Diversity, Equity, and Inclusion, External Affairs, and Membership Affairs into permanent structures under one standing umbrella committee called Membership, Inclusion, and Community that is charged with ensuring a stable and robust membership base, with increasing, diversity, equity, and inclusion within the Section, and with improving the Section's connection and visibility to individuals and organizations outside the ASA. The rationale behind the proposal is three-fold. First, turning the Ad Hoc Committee on Diversity, Equity, and Inclusion into a

permanent structure communicates the Section's commitment to its DEI goals. Second, permanent structures will be conducive to the sustained efforts the Section needs to make on these fronts to ensure the health and intellectual vitality of the Section. Third, the organization of these structures as overlapping sub-committees under a single umbrella committee will help the Section to pursue the interrelated goals of the Membership, Inclusion, and Community Committee in an integrated way.

Both proposed amendments are supported by the Math Soc Section Council and were passed unanimously by the Section membership attending the annual business meeting in Philadelphia in August. The final step for each is voting in the spring ASA election. Voting starts on April 17. Your membership in ASA and the Math Soc Section must be active from April 1 through June 1 to be eligible to vote and receive a ballot, so please keep your memberships current and renew by March 31 if your membership expires on or before June 1.

Finally, year two of the Section's mentoring program is well underway. The new Student and Early Career (SEC) Mentor Team has been assembled and is busy reaching out to EVERY NEW STUDENT MEMBER of the Section to tell them how they can participate in section activities and use section opportunities to improve their work and become better sociologists.

A critical task of the SEC mentors is helping their mentees connect with a more senior Math Soc Section mentor via network search. Correspondingly, you may get an email from a prospective mentee or an SEC mentor trying to help a prospective mentee connect with you. If you have time for one or two Math Soc Section mentoring conversations this year, please help us out. But we also know your time is scarce. If you can direct a prospective mentee to a colleague—maybe one whose expertise makes them a better match, perhaps one who might have more availability to meet—that would be a big help. We are connecting our new student members to mentors and teaching them to network and FIND a mentor, so the network journey is actually valuable in itself. My deep thanks to the members of the SEC Mentor Team: Nanum Jeon, Zara Jillani, Tenshi Kawashima, Zack Kline, Allison Leanage, Selena Livas, Bernardo Mackenna, Sabrina Mai, Viki Money, Jeffrey Shen, Loring Thomas, and Hannah Waight.

You will find a lot more helpful information in this newsletter. Our newsletter is a valuable resource that takes a lot of work to produce. I deeply thank Diego Leal and Jorge Zazueta for their tireless efforts in creating such a wonderful newsletter for us.

Wishing everyone a happy and productive spring. Submit those papers and nominations. We're on track for a great year!

Warm regards,

Noah

Mathematical Sociology at the 2024 ASA Meeting. Call for Submissions

Computational and Mathematical Approaches to Social Problems and Inequalities **(Jointly Sponsored with Decision Making, Social Networks, and Society)**

Session Organizer: Diego F. Leal, University of Arizona.

This session invites paper submissions that leverage mathematical and computational models and methods (including, but not limited to, network analysis, agent-based models, text analysis, machine learning, and mathematical modeling) to the study of social problems and inequalities, broadly conceived (e.g., segregation, persistent poverty, racial and gender inequality, environmental disasters and their consequences, health care, discrimination, political polarization, crime, the impact of new technologies, imperialism, etc.). Paper submissions that develop new computational or mathematical methods (or introduce new models or extensions) to study social problems and inequalities are also welcomed.

Formal Models of Duality in Culture and Society **(Jointly Sponsored with Sociology of Culture)**

Session Organizer: Omar Lizardo, University of California, Los Angeles.

Marking fifty years since its publication, Ron Breiger's 1974 paper on "The Duality of Persons and Groups" continues to serve as the foundation of a lively research agenda across various fields in sociology. During the last five decades, scholars have exploited and generalized Breiger's duality idea "beyond persons and groups" to apply to all settings featuring a dual co-constitution of entities across different orders of organization. This session seeks papers pushing Breiger's duality idea forward both in terms of formal methodological innovation and substantive application to core issues in cultural analysis and the measurement of culture broadly conceived. These may include duality in cultural networks, fields of cultural production and consumption, cases and variables, persons and beliefs, and symbols and practices, among others. Papers seeking to move "beyond duality" methodologically and substantively will also be considered.

Mathematical and Computational Methods in Social Psychology
(Jointly Sponsored with Social Psychology)

Organizer: David Melamed, Ohio State University.

We seek papers for a session sponsored jointly by the Mathematical Sociology and Social Psychology Sections. This session will build on the longstanding connections between the sections and explore new opportunities for further development. We invite papers that advance, extend, test, or build on existing computational and mathematically formalized theoretical models in social psychology (or introduce new models or extensions); employ mathematical and computational models and methods (including but not limited to network analysis, agent-based models, text analysis, machine learning, and mathematical modeling) to explore social psychological questions and/or theory in innovative ways; work employing unique sources of data/complex data and computational methods to explore social psychological questions and/or theory; and work that demonstrates how social psychological theory and insights may be utilized by the broader population of mathematical and computational sociologists across the discipline. We especially invite works in progress (e.g., extended abstracts) that would benefit from professional feedback.

Computational and Mathematical Approaches to Qualitative and Quantitative Data
(Jointly Sponsored with Methodology)

Organizer: Laura K. Nelson, University of British Columbia.

The increasing importance of unstructured or nontraditional data, especially text, audio, and video data, maps, and networks, continues to introduce new challenges for sociological methodology, including the increasing importance of integrating computational and mathematical methods with existing qualitative and quantitative methods. This panel, co-sponsored by the Section on Mathematical Sociology and the Section on Methodology, will examine the integration of computational and mathematical methods into sociology, including, but not limited to, methods to analyze fine-grained spatial observations, multimodal data (images+text), video and audio data, large-scale networks, and AI-generated text and images. We invite applied and methodological papers that explore how computational and mathematical approaches are transforming data analysis and interpretation in sociology, particularly in ways that contribute to bridging the gap between qualitative and quantitative data. The panel aims to push the boundaries of contemporary research methodologies while staying grounded in our own sociological traditions.

Open Topics in Mathematical Sociology: Flash Talks Session

Session Organizers: John Skvoretz (University of South Florida) and Lynn Smith-Lovin (Duke University)

Parsimony, logical rigor, and substantive importance come together in Mathematical Sociology Flash Talks. This is not a typical paper session. A flash talk paper session creates many full-audience presentation opportunities within a single session. Short flash talk style presentations will be delivered to the full audience, followed by the same number of presentation-specific small group roundtable Q&A discussions. While the session format is different, the projects are the same. We invite papers and extended abstracts that use mathematics, social network analysis, and/or computational methods to advance sociological knowledge. Projects making theoretical, empirical, and/or methodological advances are all excellent fits for this session. Extended abstracts describing promising work in progress are encouraged.

2024 Call for Section Award Nominations

Award for Progress in Mathematical Sociology

Committee Chair: Tim F. Liao (Stony Brook University)

This award is given annually for a discovery, technical innovation, or invention representing a significant contribution to progress in mathematical sociology. The contribution may have been made at any time prior to the award year. While this contribution will ordinarily be described in one or more publications, this award recognizes the intellectual contribution by itself and not any publication arising from it. Up to three individuals may share a given award, provided that all meet the selection criteria. The committee will generate nominations and also encourages nominations from section members. Nominators and nominees must be members of the Mathematical Sociology Section. Self-nominations are welcome. Please submit nomination letters to Tim F. Liao, Chair (tim.liao@stonybrook.edu) by March 15, 2024.

James S. Coleman Distinguished Career Award

Committee Chair: Neha Gondal (Boston University)

The Distinguished Career Award is given biennially in even-numbered years to recognize a lifetime of contributions to the field of Mathematical Sociology. A letter of nomination should outline the candidate's activities of lasting significance in mathematical sociology conducted over the course of their career. The nomination also should include a copy of the candidate's curriculum vitae and an assurance that the

candidate has given permission to be nominated for the award. Nominators and nominees must be members of the Mathematical Sociology Section at the time the nomination is submitted. Please submit materials to Neha Gondal, Chair (gondal@bu.edu) by March 15, 2024.

Geoffrey Tootell Mathematical Sociology Outstanding Dissertation-in-Progress Award

Committee Chair: Weihua An (Emory University)

This award, given annually, provides a grant of \$5,000 to meet some of the scholarly expenses of a student whose dissertation employs mathematics in an interesting, imaginative, or ingenious way to advance sociological knowledge. The applicant should submit a copy of the approved dissertation proposal, with a list of any requirements added by the graduate committee. The application packet should also include a letter of support from the student's sponsor, which describes the student's qualifications for completing the work and the potential importance of the project. Applicants must be members of the Mathematical Sociology Section and must agree to remain members through the period covered by the grant. Please send a copy of the dissertation proposal and an application letter to Weihua An, Chair (weihua.an@emory.edu) by March 15, 2024. (Letters of support may be sent separately in cases of self-nomination; please indicate the name of the letter writer in the application letter.)

Outstanding Article Publication Award

Committee Chair: Xi Song (University of Pennsylvania)

This award is given annually for a published article making significant contributions to mathematical sociology. Eligible papers must have a publication date during the three years before the award year, that is, in 2021-2024. Nominators and nominees must be members of the Mathematical Sociology Section at the time the nomination is submitted. Self-nominations are welcome. Please submit papers and a nomination letter to Xi Song, Chair (xisong@sas.upenn.edu) by March 15, 2024.

Outstanding Graduate Student Paper Award

Committee Chair: Craig Rawlings (Duke University)

This award is given annually for a paper that significantly contributes to mathematical sociology. Papers can be published or unpublished. The submission can consist of a dissertation chapter but not the entire dissertation. Eligible papers must have been written while the corresponding or first author was still a graduate student and during the three years before the award year, that is, 2021-2024. Multiple-author papers

are admissible, provided that the corresponding or first author meets the eligibility requirements and no non-student is co-first author. In the case of multi-authored papers with non-student authors, a letter from the most senior non-student author is required, which describes the student(s) contributions. Nominators and nominees must be members of the Mathematical Sociology Section at the time the nomination is submitted. Self-nominations are encouraged. On multiple-author papers, including non-student authors who are Section members, the award is shared by the eligible student authors. Please email (1) a copy of the paper, (2) a brief nomination letter describing the reasons for the nomination, and, if relevant, (3) a co-authorship letter to Craig M. Rawlings, Chair (craig.rawlings@duke.edu) by March 15, 2024. (Faculty co-authorship letters may be sent separately in case of self-nomination; in that case, please indicate the name of the co-authorship letter writer in the nomination letter.)

2024 Math Soc Election Slate

Chair-elect

(3-year term begins in 2024. One person to be elected)

- ❖ David Schaefer, University of California, Irvine.
- ❖ Omar Lizardo, University of California, Los Angeles.

Graduate Student Representative

(1-year term, begins in 2024. One person to be elected)

- ❖ Aidan Combs, Duke University.
- ❖ Chen-Shuo Hong, University of Massachusetts, Amherst.

Council Members

(1-year term, begins in 2024. Two people to be elected)

- ❖ Charles Gomez, University of Arizona.
- ❖ Elisa Bienenstock, Arizona State University.
- ❖ Natasha Quadlin, University of California, Los Angeles.
- ❖ Yongren Shi, University of Iowa.

Secretary/Treasurer

(3-year term, begins in 2024. One person to be elected)

- ❖ Hana Shepherd, Rutgers University.
- ❖ Kimberly Rogers, Dartmouth College.

Mission Statement

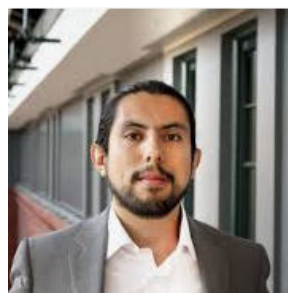
Thank you for your timely contributions to this issue of the Mathematical Sociologist. Please continue to send us your announcements, articles, book reviews, conference announcements, etc. The more you are involved with the newsletter, the better it will be. Please feel free to send us your comments,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

Have a great Spring semester 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. In addition, the Section seeks to promote communication, collaboration, and consultation among scholars in sociology in general, mathematical sociology, and allied scientific disciplines.