

The Association of American Geographers  
Spatial Analysis and Modeling Specialty Group Newsletter  
Spring 2016  
<http://sam-aag.org/>

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**FROM THE CHAIR**

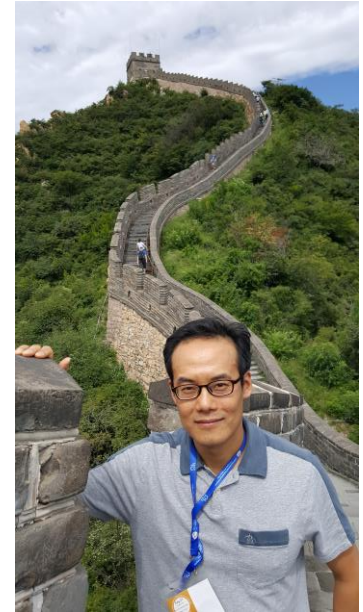
Dear SAM Members,

Hope everyone is doing well in the middle of the fall term. I am privileged to serve as Chair of the SAM, one of the six largest specialty groups of the AAG. I have been fortunate to work with some of the most reliable and committed people as SAM board members. We have been meeting every other months via phone to discuss various SAM-related activities, and I have been anxiously looking forward to these meetings. Daoqin has made conscientious effort to produce this newsletter, while Yolanda has updated our website by tracking down the past recipients of our awards. It is quite amazing to see the long and rich history of our specialty group. I owe much of this to the unselfish and endless dedications from each of you who have contributed to SAM in many ways.

The San Francisco AAG was a great success. With your strong support and enthusiasm, SAM sponsored more than 70 paper sessions. At the SAM business meeting in SFO, we discussed and created two new categories of awards – 1) emerging scholar award and 2) student travel award. We are currently receiving outstanding nominations from you (see announcement in this newsletter). Students who intend to attend the Boston AAG are encouraged to apply for travel awards.

As the deadline for AAG paper abstract submission is rapidly approaching, I encourage you to visit our website (also in this letter) to identify appropriate sessions for your paper. SAM will be sponsoring a wide range of topics such as agent-based simulation, spatial optimization, spatiotemporal analytics, uncertainty issues, smart cities, social network, spatial equity, urban sustainability, spatial weights, sensor ontologies, and spatial statistics. Since there is still time to organize SAM-sponsored sessions, please e-mail me at [changh@pdx.edu](mailto:changh@pdx.edu) if you would like to learn more about SAM sponsorship.

Once again, we will hold student paper competitions (graduate and undergraduate at a total minimum about of \$1,500). See the later section of



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this newsletter for full details of the contest. I would encourage SAM members to disseminate this information to their colleagues and students.

We will need to elect two new board members in early 2017 as both Enki's and Yolanda's (student representative) terms expire in 2017. If you are interested in becoming a board member and would like to know more about the responsibilities of these positions, please feel free to contact me or any other board members.

You are cordially invited to attend the 2017 SAM business meeting (date and place TBD), to share your ideas on how the specialty group may advance and better serve the SAM community. Additionally, if you have any other ideas related to SAM activities, please contact me at [changh@pdx.edu](mailto:changh@pdx.edu) at any time. Thank you for reading this email, and I look forward to seeing many of you in Boston and working with you closely related to SAM business.

Sincerely yours,



**Heejun Chang**  
**SAM Chair & Professor and Chair of Geography**  
**Portland State University**

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## **ANNOUNCEMENTS/NEWS**

[The Emerging Scholar Award](#) honors early- to mid-career scholars who have made significant contributions to education and research initiatives that are congruent with the mission of AAG-SAM Specialty Group. The candidates must have received their Ph.D. within the last 10 years and be a member of the AAG-SAM at the time of nomination.

The nominator must submit the following materials to the committee chair. Heejun Chang, [changh@pdx.edu](mailto:changh@pdx.edu) by October 31, 2016

- Letter of nomination
- Current CV of the candidate
- Evidence of scholarly excellence
- Any other supporting materials (e.g., letters from colleagues or former students, etc.)

[SAM Student Paper Competition-John Odland Award](#) is open to active undergraduate and graduate students who have previously not won the award. Papers may be of theoretical or applied nature. They will be judged on the following criteria: (1) potential contribution to the use of mathematical models, statistical

techniques and other technological and computational approaches for analyzing spatial phenomena in any subfield of geography; (2) appropriate and sound use of methodology; (3) originality; (4) organization and written composition of the paper; and (5) quality of oral presentation.

Students wishing to enter the competition should submit the title and 1000-word extended abstract of their paper to SAM Board Member Enki Yoo ([eunhye@buffalo.edu](mailto:eunhye@buffalo.edu)) after registering to attend the 2017 AAG. Students should also include their registration PIN so that SAM can coordinate with the AAG to arrange competition paper presentations. The abstract submission deadline was October 20, 2016. So far, the committee has received a solid pool of applications and is working on reviewing abstracts.

The paper must be based on research primarily conducted while the student was at an accredited university. Coauthored paper is accepted as long as the student is the primary author of the manuscript. Each entrant must submit a statement with their completed paper from a university faculty member, preferably their undergraduate or graduate advisor, describing the role of the student in completing the paper **by February 15, 2017**. **\*\*The same paper cannot be submitted for multiple competitions and may not be submitted multiple years.**

**Outstanding Service Award** is to recognize individuals who have substantially contributed to the SAM group through outstanding service. Any current active SAM member with membership not less than two years and who has made substantial contributions to the SAM group in terms of one or any combination of

the following areas can be considered for Outstanding Service Award:

- documented evidence in increasing the number of SAM members,
- promoting the awareness and reputation of the SAM group (e.g., through SAM-sponsored AAG sessions, journal articles, or other publications),
- excellence in organizing SAM Student Paper Competition (e.g., through increasing number of participants, and/or quality of papers),
- seeking extramural funding (e.g., grants from NSF or other agencies) to support SAM activities such as (but not limited to) co-sponsoring a plenary speaker at the annual AAG meetings and/or other AAG events, and
- exceptional outreach activities that render the general public or researchers from other disciplines to accept/use spatial analysis and modeling theories or techniques.

Nominations have been received. The award committee is the process of reviewing all the nomination documents.

**Prof. Stewart Fotheringham has been elected as member of Academia Europaea.**



Stewart Fotheringham, Foundation Professor in the School of Geographical Sciences and Urban Planning at Arizona State University and leader in the realm of computational spatial science, has been elected

to membership in a highly prestigious scholarly organization, **Academia Europaea**.

Fotheringham is especially known for his work in spatial interaction modelling and local statistical analysis, and was one of the key developers of geographically weighted regression.

Academia Europaea is an international, non-governmental association of scientists and scholars from humanities, social and physical sciences, comparable to the National Academy of Sciences in the United States. Membership in the academy requires a rigorous review that includes peer group nomination, a thorough assessment based on the nominee's scholarship in their chosen field, and a formal election by the academy's members.

Although the academy's approximately 3400 members include 70 whose research area is geography, Fotheringham is the first member whose expertise is identified as "Geographic Information Science."

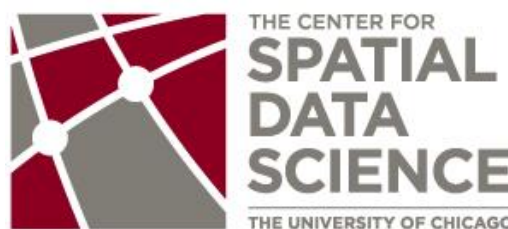
Fotheringham joined ASU in fall 2014. He's held academic positions at several United Kingdom and United States institutions including the University of St. Andrews in Scotland, the National University of Ireland, the University of Newcastle, and the State University of New York at Buffalo, and has worked as a Research Fellow at the National Center for Geographic and Information Analysis.

Fotheringham is a member of the US National Academy of Sciences and a Fellow of the UK's Academy of Social Sciences. He established both the Centre for Geoinformatics at the University of St Andrews in Scotland and the National Centre for Geocomputation in Ireland, and was awarded the first Science Foundation

Ireland Research Professorship in 2004. He has been awarded over \$15 million in funding, published 12 books and almost 200 research papers and book chapters.

"Working with Stewart is always professional, productive, and personal," said Taylor Oshan, one of Fotheringham's current doctoral advisees. "Over the last several years, he's helped me navigate through complex subjects, always providing the resources for me to challenge myself to become a better researcher and more equipped with the skills needed to be successful."

**Prof. Luc Anselin joined the University of Chicago** faculty on July 1, 2016 as the **Stein-Freiler Distinguished Service Professor** in Sociology and the College. He is directing the new **Center for Spatial Data Science (CSDS)** at UChicago, which succeeds the GeoDa Center for Geospatial Analysis and Computation at Arizona State University. Julia Koschinsky, Xun Li and Marynia Kolak are also part of the new CSDS team. A joint initiative of the Division of Social Sciences and the Computation Institute, the new Center is part of UChicago's commitment to advancing data science and the computational social sciences.



Like its predecessor, CSDS will continue to focus on spatial research, education and software development related to state-of-the-art methods for geospatial analysis, spatial

econometrics, and geo-visualization. Current research evaluates health policy through spatial multilevel modeling and spatial econometric evaluation methods and enables on-the-fly analysis of health data through open spatial technology platforms. Over 120 recorded lectures of Luc Anselin are already available on the Center's YouTube channel and will soon be supplemented by new education materials on spatial analytics. The free and open source programs GeoDa and PySAL's spreg API used by over 200,000 analysts will also continue to be developed and supported at the new Center. Future work includes extending spatial methods and tools to gain insights from new and larger sources of data.

You can reach UChicago's Center for Spatial Data Science at <https://spatial.uchicago.edu> or [spatial@uchicago.edu](mailto:spatial@uchicago.edu).

**[The 1st Symposium on Research Methodologies in a Big Data Era \(SRMBD 2016\)](#)** was successfully hosted by KSEA Central Pennsylvania Chapter with Eun-Kyeong Kim and Jungwoo Ryoo as General Co-Chairs on May 13 – May 15, 2016 in State College, PA, USA. This symposium aimed at providing a forum for transdisciplinary discussions on current status and future directions of research methodologies in various disciplines of social and natural sciences and engineering. Focused themes of SRMBD 2016 were (big) data analytics, computational methods, and experiment design associated with advanced technologies. The symposium successfully attracted high qualified researchers and professionals from various fields of disciplines with more than 40 participants. The symposium consisted of keynote speeches, tutorials, paper presentation sessions, a poster session, a career development session, a reception, and a

banquet. More information is available at <http://sites.psu.edu/ekgeog/2016/05/31/srmbd-2016-news/>.

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## MEMBER PUBLICATIONS

Kim, E.-K., and Jo, H.-H. (2016). Measuring Burstiness for Finite Event Sequences. *Physical Review E*, 94(3): 032311

Grabowski, Z.J., Watson, E., and Chang, H. (2016) [Using spatially explicit indicators to investigate watershed characteristics and stream temperature relationships](#). *Science of The Total Environment* 551-552: 376-386.

McDonald, Y.J., Goldberg, D.W., Scarinci, I.C., Castle, P.E., Cuzick, J., Robertson, M., and Wheeler, C.M. on behalf of the New Mexico HPV Pap Registry Steering Committee. (2016). Health service accessibility and risk in cervical cancer prevention: Comparing rural versus non-rural residence in New Mexico. *The Journal of Rural Health*. DOI:10.1111/jrh.12202

Ghosh, D., Krishnan, A., Gibson, B., Brown, S., Latkin, C.A., and Altice, F.L. (2016). Social Network Strategies to Address HIV Prevention and Treatment Continuum of Care Among At-risk and HIV-infected Substance Users: A Systematic Scoping Review. *AIDS and Behavior*. In Print. PMID: 27125244

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## SAM-SPONSORED SESSIONS AT 2017 AAG MEETING

[Advances in Analyzing Contextual Effects on Behavior, Practice and Experience](#)

[Advances in Spatial Statistics](#)

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[All Things Nuclear in a Post-Fukushima Context: Geographical Perspectives](#)

[Automated GISci for Network-based Decisions](#)

[Capturing Context: Integrating Geography and Social Networks](#)

[Directions for computational modeling of complex systems with big data and big models](#)

[Framing urban sustainability: Smart, efficient, green, or just](#)

[Geographic Data Science](#)

[Geography and Substance Use](#)

[Geospatial Health Research Symposium](#)

[Hazards and GIScience](#)

[High spatial resolution remote sensing: data, techniques, and applications](#)

[Historical Medical/Health Geography](#)

[Human Behavior Analysis with Contextual Factors using Machine Learning](#)

[Mainstreaming Human Rights in Geography and the AAG](#)

[Patterns, Processes, and People: Measurement Methods for Landscape Ecology and Land Architecture](#)

[Penchansky and Thomas' \(1981\) Theory of Access: The Role of Availability, Accessibility, Accommodation, Affordability, and Acceptability in Health Studies](#)

[Pyrogeography](#)

[Risk Communication and Resilience](#)

[Sea Level, GIScience, and Uncertainty](#)

[Sensor Ontologies](#)

[Smart Cities and Urban Computing](#)

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[Social Equity, Environmental Justice and Urban Water Systems](#)

[Spatial Data Mining and Big Data Analytics](#)

[Spatial Optimization and Analysis](#)

[Spatial-Social Networks in GIS](#)

[Spatial Weights](#)

[Spatiotemporal Analytics in Earth Science](#)

[Spatiotemporal data modelling and analytics](#)

[Symposium on CyberGIS for Advancing Data-Intensive Geographic Research and Education](#)

[Symposium on Human Dynamics in Smart and Connected Communities](#)

[Spatiotemporal Symposium: Spatiotemporal Analytics in Earth Science](#)

[Spatiotemporal Symposium: Spatiotemporal Thinking, Computing and Applications](#)

[Uncertainty and Context in Geography and GIScience: Advances in Theory, Methods, and Practice](#)

[Uncertainty and Spatial Sampling](#)

[Uncertainty in Spatial Patterns](#)

[Uncertainty propagation in combining social media data with GIS](#)

[Understanding Neighborhood Dynamics](#)

[Validation Methodologies for Agent-based Simulations](#)

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INFORMATION

Spatial Analysis and Modeling (SAM)  
Specialty Group



Our mission is to foster and maintain interaction, cooperation and community among individuals interested in the analysis of geo-referenced data, modeling of spatio-temporal processes and the use of analytical and computational techniques in solving geographic problems. The specialty group promotes the scientific study of physical, environmental and socioeconomic geography and the development, use and teaching of analytical cartography, GIS, remote sensing, spatial statistical, mathematical and computational techniques for spatial analysis. For more information, see the SAM-SG homepage (<http://sam-aag.org/>).

### Membership Dues

Regular: \$6  
Student: \$1

### Submissions

This newsletter reaches a large number of readers and is therefore an excellent venue for getting the word out on community news, departmental happenings, research findings, media appearances, and the like. It is also a good place to post calls for proposals, awards, grants, fellowships, and jobs. We also invite you to submit commentaries or features of broad interest to specialty group members.

The newsletter relies on volunteers to submit articles, so please take a moment to send along relevant items when they are solicited.

### Officers

#### Chair

#### **Heejun Chang**

Department of Geography  
Portland State University

Portland, OR 97201

Email: [changh@pdx.edu](mailto:changh@pdx.edu)

Term expires: 2018

#### Vice Chair/Treasurer

#### **Carson Farmer**

Department of Geography

University of Colorado

Email: [carson.farmer@gmail.com](mailto:carson.farmer@gmail.com)

Term expires: 2019

#### Board Members

#### **Daoqin Tong**

School of Geography and Development

University of Arizona

Email: [daoqin@email.arizona.edu](mailto:daoqin@email.arizona.edu)

Term expires: 2019

#### **Eun-Hye Enki Yoo**

Department of Geography

University at Buffalo, The State University of  
New York (SUNY)

Buffalo, NY 14261-0055

Email: [eunhye@buffalo.edu](mailto:eunhye@buffalo.edu)

Term expires: 2017

#### **Debarchana (Debs) Gosh**

Department of Geography

Storrs, CT

Email: [debarchana.ghosh@uconn.edu](mailto:debarchana.ghosh@uconn.edu)

Term expires: 2018

#### Student Representative

#### **Yolanda J. McDonald**

Department of Geography

Texas A&M University

College Station, TX 77840

Email: [ymdonald77@tamu.edu](mailto:ymdonald77@tamu.edu)

Term expires: 2017