



## The Association of American Geographers Spatial Analysis and Modeling Specialty Group Newsletter

Table of  
Contents

From the chair	1
News	3
Information	6

### FROM THE CHAIR

Dear SAM Members,

Hope all of you are having a great spring semester/quarter. The 2015 AAG Annual Meeting is coming soon, and we expect to see each other at Chicago, Illinois, April 21-25, 2015. The SAM Specialty Group is sponsoring a large number of sessions in the AAG meeting, and we are working hard to organize and promote several SAM related activities. I would like to highlight some of them below.



The **SAM Plenary Lecture** is a big event for the SAM community each year. The 2015 Plenary Speaker is **Dr. Keith C. Clarke**, who will give his lecture entitled "On the topology of topography" on Friday, 4/24/2015, from 1:20 - 3:00 PM in Crystal A, Hyatt, West Tower, Green Level. Please reserve time to attend the lecture session. Also exciting is that **Dr. Mei-Po Kwan** from University of Illinois at Urbana-Champaign (UIUC) and **Dr. Sergio Rey** from Arizona State University were selected as recipients of this year's SAM Outstanding Service Award. You are cordially invited to attend the SAM business meeting (date, time, and place are given below), congratulate our awardees, and listen to their brief messages.

Congratulations to **Dr. Heejun Chang** from Portland State University and **Dr. Debarchana (Debs) Ghosh** from University of Connecticut, who have been selected as SAM Chair and board member (2015- 2018) in a recent election! The **John Odland Award Paper Session(s)**, also known as SAM Student Paper Competition, is also a big event for the SAM community. Many students, with support from their mentor(s), participated in the competitions in the past years, making the paper session(s) a climax of SAM-sponsored activities. Please reserve time to attend it that is scheduled on Thursday, 4/23/2015, from 8:00 - 9:40 AM in San Francisco, Hyatt, West Tower, Gold Level in support of our students.

Finally I would like to thank all of you for your continued support to the SAM group, and invite you to attend the SAM business meeting scheduled on Friday, 4/24/2015 (Friday), from 11:50 AM - 1:10 PM in Crystal A, Hyatt, West Tower, Green Level. During the meeting, we will announce the awardees for John Odland Award, present award plaques to Outstanding Service awardees and listen to their brief messages, welcome the new SAM chair and board member, and report/discuss SAM businesses. For questions or suggestions

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about the business meeting, please contact me at [lan@mail.sdsu.edu](mailto:lan@mail.sdsu.edu). Look forward to seeing you in Chicago!

Best regards,



Li An, SAM Chair & Professor at Department of Geography,  
San Diego State University

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### **SAM's Outstanding Service Awardees**

Dr. Mei-Po Kwan from University of Illinois at Urbana-Champaign (UIUC) and Dr. Sergio Rey from Arizona State University have been selected as this year's SAM Outstanding Service Award recipients. This very prestigious award is annually given to individuals who have substantially contributed to the SAM group through outstanding service, including excellence in promoting the awareness and reputation of the SAM group as well as exceptional research and outreach activities that render the general public or researchers from other disciplines to accept / use spatial analysis and modeling theories or techniques. Below are biosketches of our awardees.

**Biosketch of Mei-Po Kwan:** Mei-Po Kwan is Professor of Geography and Geographic Information Science at the University of Illinois at Urbana-Champaign. She has served as Editor of the Methods, Models, and GIS (MMGIS) Section of the Annals of the Association of American Geographers since 2006, and as Associate Editor of Geographical Analysis from 2003 to 2012. Kwan has received over \$22 million grants as PI or Co-PI from sources including the National Science

Foundation, the National Institutes of Health, the U.S. Department of Transportation, and the William T. Grant Foundation. She has 30 edited or co-edited volumes (including two encyclopedias, five books and 23 journal special issues) and about 140 peer-reviewed journal articles and book chapters. Kwan has received several prestigious awards, including a Distinguished Scholarship Honors award from the AAG and the University Consortium for Geographic Information Science (UCGIS) Research Award. She was recognized in 2009 as a fellow of the American Association for the Advancement of Science (AAAS).

Kwan has made outstanding contributions to geographical analysis, geographic information science (GIScience) and the development of innovative geographic methods, especially in developing geocomputational algorithms for implementing space-time accessibility measures that are sensitive to individual differences, activity pattern analysis using sequence alignment and evolutionary algorithm, 3D interactive geovisualization, network-based 3D topological data models, GIS-based intelligent emergency response systems (GIERS), and computational-process modeling of activity-travel decisions. Her research interests also include environmental

health, human mobility, neighborhood effects, sustainable transport and cities, and application of GIS methods in geographic research.

**Biosketch of Sergio Rey:** Rey's research interests focus on the development, implementation, and application of advanced methods of spatial and space-time data analysis. His substantive foci include regional inequality, convergence and growth dynamics as well as neighborhood change, segregation dynamics, spatial criminology and industrial networks. Recent and current research projects include an analysis of the relationships between spatial linkages and urban economic dynamics (EDA), flexible geospatial visual analytics and simulation technologies to enhance criminal justice decision support systems (NIJ), spatial analytical framework for examining community sex offender residency issues over space and time (NSF), and cyberGIS software integration for sustained geospatial innovation (NSF). Rey is the creator and lead developer of the open source package STARS: Space-Time Analysis of Regional Systems as well as PySAL: A Python Library for Spatial Analysis. He is a fellow of the Spatial Econometrics Association and since 1999 has served as the Editor of the International Regional Science Review. In 2014 he became editor of Geographical Analysis. He is president of the Western Regional Science Association (2014). For more information, please see <http://geoplan.asu.edu/rey>.

### SAM's 2015 Plenary Speaker

Dr. Keith C. Clarke from University of California, Santa Barbara has been selected by the SAM Specialty Group and the Editor of Geographic Analysis as their 2015 Plenary Speaker. His plenary lecture, entitled "On the topology of topography", is scheduled on Friday, 4/24/2015, from 1:20 PM - 3:00 PM in Crystal A, Hyatt, West Tower, Green Level.

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### NEWS

#### SDSU opens the Center for Information Convergence and Strategy (CICS)



The Center for Information Convergence and Strategy (CICS) was inaugurated this summer at San Diego State University

(SDSU). With U.S. Representative Scott Peters as inaugural speaker, introduced by SDSU Provost Chukuka S. Enwemeka CICS aims to catalyze and nurture collaboration and innovation among partners in government, industry, and academia.

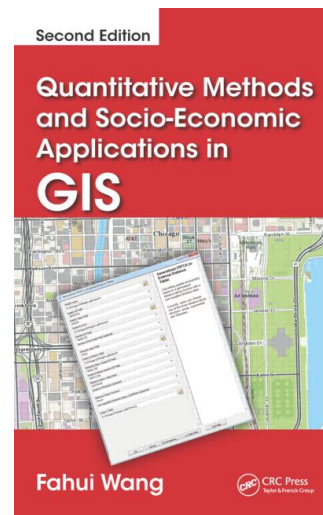
CICS focuses on modern technology application in diverse domains at local, state, federal, tribal, and international levels. It supports research across related disciplines with an emphasis on data acquisition and analytics, social media solutions, strategic mapping, and systems integration and

development. From visualization to predictive analytics, CICS leverages various information technologies to evaluate current trends and develop strategies based on dynamically evolving content.

The Center offers transparent interaction among government, industry, and academia in order to promote innovation through open collaboration. CICS acts as a platform for trans-disciplinary research and education efforts, with particular focus on data mining and advanced visual techniques, building strategies and solutions for government and private industry. The Center has assembled a diverse group of faculty researchers and subject matter experts that deploy a range of methodologies, from machine learning and advanced visualization to rhetoric analysis, applied to subjects as diverse as disaster response, studies. In response to industry demand, CICS researchers are currently prototyping an information system dashboard capable of supporting the detection, understanding, and forecasting of obvious and non-obvious threats to regional and global stability.

CICS is now developing partnerships in South East Asia, the Middle East, and other strategic regions globally. For further information or to schedule a visit, see <http://cics.sdsu.edu/> or contact the Center Co-Directors, André Skupin and Akshay Pottathil.

## **Quantitative Methods and Socio-Economic Applications in GIS released**



The second edition of a bestseller, Quantitative Methods and Socio-Economic Applications in GIS (previously titled Quantitative Methods and Applications in GIS) details applications of quantitative methods in social science, planning,

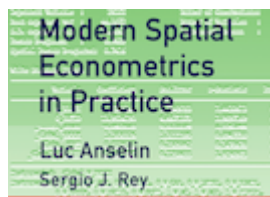
and public policy with a focus on spatial perspectives. The book integrates GIS and quantitative (computational) methods and demonstrates them in various policy-relevant socio-economic applications with step-by-step instructions and datasets. The book demonstrates the diversity of issues where GIS can be used to enhance the studies related to socio-economic issues and public policy.

December 19, 2014 by CRC Press  
Reference - 333 Pages - 99 B/W Illustrations  
ISBN 9781466584723 - CAT# K19056

## **User's Guide to GeoDa, GeoDaSpace, and PySAL available**

The user's guide to the spatial regression functionality in the software packages GeoDa and GeoDaSpace, as well as the spreg module in the PySAL library is out! It explains the methods and how to implement them in the software packages developed at Arizona State

University's GeoDa Center for Geospatial Analysis and Computation.



Since the development of the user's guides is no longer covered by external funding sources, we are financing the

development through the sale of the user's guide. An updated version of the non-regression functionality of GeoDa is also under development (will be released in about a year).

Modern Spatial Econometrics in Practice: A Guide to GeoDa, GeoDaSpace and PySAL can be purchased as a:

Paperback - US\$56

Kindle edition (can be read with free reading app; has a lot of formatting problems) -

US\$9.99

(<https://geodacenter.asu.edu/category/access/public/spatial-regress>).

The book provides the techniques to test for and estimate spatial effects in linear regression models, addressing both spatial dependence (spatial autoregressive models) as well as spatial heterogeneity (spatial regimes models). It serves as an introduction and a practical guide to spatial econometrics in that it covers the methodological principles and formal results that underlie the various estimation methods, test procedures and model characteristics computed by the software. While the classical maximum likelihood estimation is included, the book's coverage emphasizes modern techniques based on the principle of generalized method of moments (GMM).

#### **Dr. Daniel Griffith elected fellow of ASA**

Dr. Daniel A. Griffith, Ashbel Smith Professor of Geospatial Information Sciences at the University of Texas/Dallas, was elected a fellow

of the American Statistical Association (ASA), the preeminent professional statistical society in the United States, in recognition of his reputation in and outstanding contributions to the field of statistical science. The designation of ASA Fellow is an honor that has been bestowed for nearly 100 years, and is restricted to no more than one-third of one percent of the ASA membership each year. Dan also has received awards from the Fulbright and John Simon Guggenheim Memorial Foundations, Association of American Geographers, Leverhulme Trust, and Pennsylvania Geographical Society, and is an elected Fellow of the American Association for the Advancement of Science, the Regional Science Association International, the New York Academy of Sciences, the Spatial Econometrics Association, and Fitzwilliam College (U. of Cambridge).

Dan currently is Chair of the Steering Committee of the International Spatial Accuracy Research Association (ISARA), co-chair of the Geocomputation 2015 conference, a Steering Committee member of the International Geographical Union Commission on Modeling Geographical Systems, and past editor of Geographical Analysis.

#### **Dr. Li An's Team Recruits a Postdoctoral Fellow**

Dr. Li An's team at San Diego State University has successfully recruited a postdoctoral research fellow, Dr. Hsiang Ling Chen (recently graduated from University of Arizona), to join his NSF CNH project Impact of Payments for Ecosystem Services in Coupled Nature and Human Systems (<http://goldenmonkey.sdsu.edu/>). Dr. Chen is coordinating the project's mammalian habitat occupancy and diversity research, including camera trapping fieldwork at Fanjingshan National Nature Reserve (FNNR) in China.

## Dr. Li An Gives Invited Talks

Dr. Li An was invited to present his research as part of their Winter 2015 Ecosystem Services Seminar sponsored by an NSF IGERT award (<http://www.pdx.edu/esur-igert/faculty-team>) at Portland State University (PSU). By the invitation of Dr. Heejun Chang, Dr. An gave a lecture entitled "Agent-based Modeling of the Impact of Social Norms on PES Effectiveness" in his GEOG 694 class. Dr. An also gave a lecture entitled "Payments for Ecosystem Services: Always a Path toward Sustainability?" in another PSU class (ESM 507), and a workshop about agent-based modeling for The American Society for Photogrammetry and Remote Sensing (ASPRS) PSU chapter.

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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.

Please send your submission by email to Jennifer Miller ([Jennifer.miller@austin.utexas.edu](mailto:Jennifer.miller@austin.utexas.edu)) in text or rich text format. Photos or other images, with captions, are also welcome (GIF, JPG, or PNG).

### SAM Newsletter Editor

**Jennifer Miller**

Department of Geography and the Environment

University of Texas at Austin

305 E. 23<sup>rd</sup> St A3100

Austin, TX 78712

Email: [Jennifer.miller@austin.utexas.edu](mailto:Jennifer.miller@austin.utexas.edu)

### Officers

#### Chair

**Li An**

Department of Geography

San Diego State University

5500 Campanile University,

San Diego, CA 92182

Email: [lan@mail.sdsu.edu](mailto:lan@mail.sdsu.edu)

Term expires: 2015

Vice Chair/Treasurer

**Tony Grubestic**

Drexel University

3141 Chestnut Street

Philadelphia, PA 19104

Email: [grubestic@drexel.edu](mailto:grubestic@drexel.edu)

Term expires: 2016

Board Members

**Jennifer Miller**

Department of Geography and the  
Environment

University of Texas at Austin

305 E. 23rd St A3100

Austin, TX 78712

Email: [Jennifer.miller@austin.utexas.edu](mailto:Jennifer.miller@austin.utexas.edu)

Term expires: 2016

**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

**Yongwan Chun**

School of Economic, Political and Policy  
Sciences

University of Texas at Dallas

800 W Campbell Rd, (GR 31)

Richardson, TX 75080

Email: [ywchun@utdallas.edu](mailto:ywchun@utdallas.edu)

Term expires: 2015

Student Representative

**Yolanda J. McDonald**

Department of Geography

Texas A&M University

College Station, TX 77840

Email: [ydonald77@neo.tamu.edu](mailto:ydonald77@neo.tamu.edu)

Term expires: 2017