

# THE BRIEFING

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The Newsletter of the INFORMS Section on Public Programs, Service, and Needs (SPPSN)  
Volume 3, No. 2 • October 2012

## Welcome from the President

I am very excited about serving the SPPSN and INFORMS communities this year, along with our broader audiences! I'm sure that you'll agree that the activities that SPPSN members and section have ongoing are quite exciting. This year, I would also like us to see what we (as a section) can do to enable others in the INFORMS community to contribute to areas that are close to the heart of SPPSN around public impact. I look forward to discussing that further with you at our business meeting at INFORMS and to hearing your comments and feedback. Please feel free to contact me at [jswann@isye.gatech.edu](mailto:jswann@isye.gatech.edu) with your ideas or suggestions.

— *Julie Swann*

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## SPPSN Membership

Please remember to renew your SPPSN membership for this year and for 2013. You need to be a current member to be able to post to the SPPSN list and continue receiving e-mails from SPPSN. There are several ways to renew:

1. Renew **online** at <http://www.informs.org/Membership/Renew-Your-Membership> and, check “Public Programs and Special Needs” under Section.
2. If you have already renewed your membership but forgot to sign up for SPPSN, you can join an INFORM community here: <http://www.informs.org/Membership/Join-INFORMS-and-or-INFORMS-Communities>
3. Renew by **phone** by calling INFORMS member services ([800-446-3676](tel:800-446-3676)).
4. Renew by **mail or fax** using the form [pdf]:  
<http://www.informs.org/content/download/261802/2462392/file/2013%20INFORMS%20Membership%20Application.pdf>

## SPPSN at the 2012 INFORMS National Meeting

The 2012 INFORMS Annual Meeting will be held at the Phoenix Convention Center October 14 – 17. The theme is “Informatics Rising”. SPPSN is sponsoring or co-sponsoring a total of 34 sessions at the meeting on a wide range of topics, including voting and election processes, sustainability, homeland security, and humanitarian logistics. Session times, titles, and chairs are provided in the list below.

Cluster co-chairs, Jessica Heier Stamm and Mariel Lavieri, would like to extend a sincere thank you to the topic area coordinators (listed below), session chairs, and presenters for their efforts in assembling an outstanding group of sessions for this year’s meeting.

### [2012 INFORMS Annual Meeting Sessions](#)

[Sunday Oct 14, 08:00 - 09:30 : Inventory Management for Global Health](#)

**Track 8, Chair: Jeremie Gallien**, London Business School

[Sunday Oct 14, 08:00 - 09:30 : Joint Session Healthcare Logistics/SPPSN: Vehicle Routing in Healthcare Applications](#)

**Track 19, Chair: Ali Ekici**, University of Houston

[Sunday Oct 14, 08:00 - 09:30 : Joint Session TSL/SPPSN: Geographic, Building and Pedestrian Evacuation Modeling](#)

**Track 49, Chair: Douglas Bish**, Virginia Tech

[Sunday Oct 14, 08:00 - 09:30 : Joint Session: SPPSN/ENRE-Environment: Energy Policy and Sustainability](#)

**Track 20, Chair: Erin Baker**, University of Massachusetts Amherst

[Sunday Oct 14, 11:00 - 12:30 : Joint Session Doing Good with Good OR/SPPSN: Doing Good with Good OR Competition: Finalist Presentations I](#)

**Track 8, Chair: Sila Cetinkaya**, Texas A&M University

[Sunday Oct 14, 11:00 - 12:30 : Joint Session HAS/SPPSN: Pandemic Modeling and Planning](#)

**Track 24, Chair: Dionne Aleman**, University of Toronto

[Sunday Oct 14, 11:00 - 12:30 : Joint Session Healthcare Logistics/SPPSN: Routing Problems in Healthcare Operations I](#)

**Track 19, Chair: Burcu Keskin**, University of Alabama

[Sunday Oct 14, 11:00 - 12:30 : Joint Session TSL/SPPSN: Networks and Emergency Response](#)

**Track 49, Chair: Halit Uster**, Texas A&M University

[Sunday Oct 14, 13:30 - 15:00 : Joint Session Doing Good with Good OR/SPPSN: Doing Good with Good OR Competition: Finalist Presentations II](#)

**Track 8, Chair: Susan Martonosi**, Harvey Mudd College

[Sunday Oct 14, 13:30 - 15:00 : Joint Session Healthcare Logistics/SPPSN: Routing Problems in Healthcare Operations II](#)

**Track 19, Chair: Burcu Keskin**, University of Alabama

[Sunday Oct 14, 13:30 - 15:00 : Joint Session MAS/SPPSN: Defense Operations and Homeland Security I](#)

**Track 51, Chair: Anna Doro-on**, Water, Tunnel & Infrastructure Concepts, Inc.

[Sunday Oct 14, 13:30 - 15:00 : Joint Session TSL/SPPSN: From Emergency Preparedness to Debris Cleanup](#)

**Track 49, Chair: Changhyun Kwon**, University at Buffalo

[Sunday Oct 14, 16:30 - 18:00 : Joint Session Healthcare Logistics/SPPSN: Routing and](#)

[Resource Allocation Applications in Disaster Relief](#)

**Track 19, Chair: Ashlea Bennett Milburn**, University of Arkansas

[Sunday Oct 14, 16:30 - 18:00 : Joint Session MAS/SPPSN: Defense Operations and Homeland Security II](#)

**Track 51, Chair: Anna Doro-on**, Water, Tunnel & Infrastructure Concepts, Inc.

[Sunday Oct 14, 16:30 - 18:00 : Joint Session SPPSN/MAS: Humanitarian Logistics and Disaster Response I](#)

**Track 8, Chair: Jarrod Goentzel**, Massachusetts Institute of Technology

[Monday Oct 15, 08:00 - 09:30 : Joint Session HAS/SPPSN: Resource Allocation in Screening and Treatment Decisions](#)

**Track 25, Chair: Mariel Lavieri**, University of Michigan

[Monday Oct 15, 08:00 - 09:30 : Joint Session SPPSN/MAS: Humanitarian Logistics and Disaster Response II](#)

**Track 8, Chair: Jarrod Goentzel**, Massachusetts Institute of Technology

[Monday Oct 15, 11:00 - 12:30 : Joint Session SPPSN/MAS: Humanitarian Logistics and Disaster Response III](#)

**Track 8, Chair: John Coles**, University at Buffalo

[Monday Oct 15, 13:30 - 15:00 : Joint Session AA/SPPSN: Airline Scheduling under Competition and Collaboration](#)

**Track 61, Chair: Luis Cadarso**, Technical University of Madrid

[Monday Oct 15, 13:30 - 15:00 : Nonprofit Supply Chains](#)

**Track 8, Chair: Gemma Berenguer**, Purdue University

[Monday Oct 15, 16:30 - 18:00 : Joint Session SPPSN/MIF: Managing Operations in Non-profit Food Distribution](#)

**Track 8, Chair: Lauren Davis**, North Carolina A&T State University

[Monday Oct 15, 16:30 - 18:00 : Joint Session TSL/SPPSN: Emergency Preparedness, Disaster Cleanup and Relief](#)

**Track 49, Chair: Irina Dolinskaya**, Northwestern University

[Tuesday Oct 16, 08:00 - 09:30 : Emergency Medical Services](#)

**Track 8, Chair: Laura McLay**, Virginia Commonwealth University

[Tuesday Oct 16, 08:00 - 09:30 : Joint Session TSL/SPPSN: Evacuation Planning](#)

**Track 49, Chair: Yue Liu**, University of Wisconsin-Milwaukee

[Tuesday Oct 16, 11:00 - 12:30 : Joint Session ENRE/SPPSN: Carbon Abatement Policies](#)

**Track 40, Chair: Xu (Cissy) Yang**, Massachusetts Institute of Technology

[Tuesday Oct 16, 11:00 - 12:30 : Joint Session PPSN/HAS: Optimization in Health Policy](#)

**Track 8, Chair: David Hutton**, University of Michigan

[Tuesday Oct 16, 13:30 - 15:00 : Community-Based Operations Research](#)

**Track 8, Chair: Michael Johnson**, University of Massachusetts Boston

[Tuesday Oct 16, 16:30 - 18:00 : Joint Session MSOM/SPPSN: Emergency Medical Services \(EMS\) Operations](#)

**Track 29, Chair: Alex Mills**, Indiana University

[Tuesday Oct 16, 16:30 - 18:00 : Joint Session PPSN/HAS: Health Care Policy Analysis](#)

**Track 8, Chair: David Hutton**, University of Michigan

[Tuesday Oct 16, 16:30 - 18:00 : Joint Session: MAS/SPPSN/CPMS/SS: Tutorial: Transforming Military Supply Chains - Management Innovation in DoD](#)

**Track 51, Chair: Greg Parlier**, Institute for Defense Analyses

[Wednesday Oct 17, 08:00 - 09:30 : Policy Models](#)

**Track 8, Chair: Paul Kerl**, Georgia Institute of Technology

[Wednesday Oct 17, 11:00 - 12:30 : Joint Session SPPSN/ENRE-Environment: Sustainability Planning](#)

**Track 8, Chair: Erin Baker**, University of Massachusetts Amherst

[Wednesday Oct 17, 13:30 - 15:00 : Joint Session SPPSN/MAS: Law Enforcement and Homeland Security I](#)

**Track 8, Chair: John Hollywood**, RAND Corporation

[Wednesday Oct 17, 15:20 - 16:50 : Applications of OR/MS in Voting and Election Processes](#)

**Track 8, Chairs: Michael Fry**, University of Cincinnati, and **Muer Yang**, University of St. Thomas

**SPPSN Business meeting**

**Monday, October 15, 12.30 - 1.30**, in the Hyatt conference hotel, room **Regency D**

Thanks are due to several topic area coordinators for their efforts in putting together sessions:

- Nonprofit supply chains (Gemma Berenguer, [gemmabf@berkeley.edu](mailto:gemmabf@berkeley.edu))
- Fire and EMS (Laura McLay, [lamclay@vcu.edu](mailto:lamclay@vcu.edu))
- Community service (Karen Smilowitz, [ksmilowitz@northwestern.edu](mailto:ksmilowitz@northwestern.edu))
- Criminal justice (John Hollywood, [jshollywood@gmail.com](mailto:jshollywood@gmail.com))
- Homeland security (John Hollywood, [jshollywood@gmail.com](mailto:jshollywood@gmail.com))
- Voting and elections (Michael Fry, [fryml@ucmail.uc.edu](mailto:fryml@ucmail.uc.edu) and Muer Yang, [yangmuer@stthomas.edu](mailto:yangmuer@stthomas.edu))
- Global health (Jeremie Gallien, [jgallien@london.edu](mailto:jgallien@london.edu))
- Sustainability, energy policy, and the environment (Erin Baker, [edbaker@ecs.umass.edu](mailto:edbaker@ecs.umass.edu))
- Disaster relief and humanitarian logistics (Jessica Heier Stamm, [jlhs@k-state.edu](mailto:jlhs@k-state.edu))
- Health policy (David Hutton, [dwhutton@umich.edu](mailto:dwhutton@umich.edu))

## SPPSN Best Paper Award Finalists

The second SPPSN best paper award competition is underway. The winner will be announced at the SPPSN business meeting at the 2012 INFORMS Annual Meeting.

I would like to acknowledge **Michael Johnson** and **Julie Swann** for chairing the committee this year, as well as the judging committee:

- Renata Konrad, School of Business, Worcester Polytechnic Institute
- Jun Zhuang, Department of Industrial and Systems Engineering, University at Buffalo
- Michael Fry, Carl H. Lindner College of Business, University of Cincinnati

They agreed on the following finalists:

- Krishnan Anand and Francois Giraud-Carrier (University of Utah): “Pollution Regulation and Production”
- Luyi Gui, Atalay Atas, Ozlem Ergun, L. Beril Toktay (Georgia Institute of Technology): “Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation”
- Prem Swaroop, Michael Ball (University of Maryland): A Consensus-Building Mechanism for Setting Service Expectations in Air Traffic Flow Management”
- Douglas King, Sheldon Jacobson (University of Illinois at Urbana-Champaign), Edward Sewell (Southern Illinois University): The Geo-Graph in Practice: Creating United States Congressional Districts from Census Blocks”
- Jeremie Gaillen (London Business School), Zachary Leung (Massachusetts Institute of Technology), Prashant Yadav (University of Michigan): “Rationality and Transparency in the Distribution of Essential Drugs in Sub-Saharan Africa: Analysis and Design of an Inventory Control System for Zambia”
- Timothy Chan, Derya Demirtas, Roy Kwon (University of Toronto): “Optimizing the Deployment of Public Access Defibrillators”

The committee will choose first-place, second-place and honorable mention awardees.

## SPPSN at other conferences

### EURO/INFORMS Joint International Conference which will be held in Rome, Italy, July 1-4, 2013

This conference is the first joint EURO/INFORMS conference to be organized since 2003, so this could be a very interesting venue. There is an opportunity for the SPPSN section to organize then one or several sponsored “Streams” which usually consists of 3 sessions of 4 talks (that is essentially what INFORMS calls a track). A natural Area (cluster) in which to organize this could be “OR for Developing Countries, Humanitarian Applications”, which Jérémie Gallien co-chairs with Steef Van de Velde, and the other conference areas which also seem relevant include “Emerging Applications of OR” or “Energy/Environment and Climate” “OR in Natural Resources”, and “OR in Health & Life Sciences”. If you are interested in a SPPSN stream, send the names of the individual(s) you would like to appoint as chair(s), and the Area(s) from the above in which the SPPSN stream(s) should be scheduled.

Send your recommendations to

Jérémie Gallien, London Business School, [jgallien@london.edu](mailto:jgallien@london.edu)

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## Journal Announcements

### Socio Economic Planning Sciences:

Socio Economic Planning Sciences (SEPS) focuses on the use of quantitative methods for tackling decision problems in the public sector. SEPS recently announced two special issues on "Green Transportation and Logistics" and "Data Envelopment Analysis in the Public Sector". The call for papers for these two special issues are available at the journal homepage:

<http://www.journals.elsevier.com/socio-economic-planning-sciences/>

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## Member Announcements

### Jim Smith – University of Massachusetts at Amherst

At the 25th European Conference on Operational Research (8-11th July, Vilnius, Lithuania), EURO presented the first of its annual best paper awards for papers published in European Journal of Operational Research. The best review paper, best innovative application paper, and best theory and methodology paper were selected by a jury. Professor **James MacGregor Smith** and his former Ph.D student **Alexander Stepanov** (now of Campus Planning) won the award for best paper in the theory and methodology category for the paper: *Multi-objective evacuation routing in transportation networks*, A. Stepanov, J. MacGregor Smith **EJOR** Volume 198, Issue 2, October 2009, Pages 435-446. They also won 1000 euros to boot. The picture shows Professor Smith receiving the award from one of the jury members Jose Olivera from Portugal.



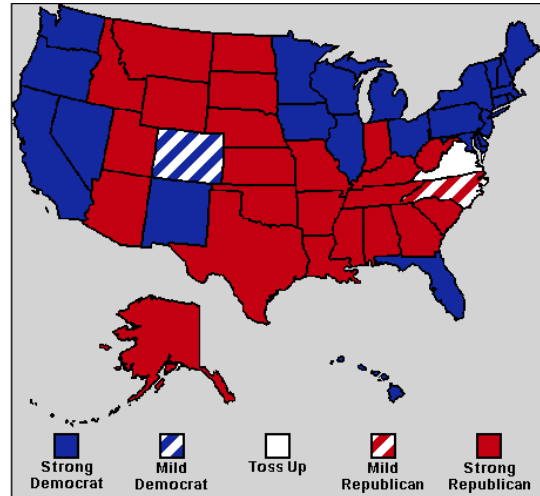
### Jag Chhatwal, University of Pittsburgh

Jag Chhatwal recently won an NIH KL2 Career Development Award to evaluate the optimal treatment strategies for hepatitis C infection. The main objective of this research is to identify patients who will benefit from immediate treatment with recently launched direct-acting antiviral agents, and those who may be appropriate candidates for future drug therapies (at least 30 of them are undergoing clinical trials).

### Sheldon Jacobson, University of Illinois at Urbana-Champaign

Sheldon Jacobson, along with a group of computer science and industrial engineering students, created [electionanalytics.cs.illinois.edu](http://electionanalytics.cs.illinois.edu), a sophisticated computer model that takes an advanced computing approach to predict the outcome of the election. Jacobson's model instead uses a mathematical model based on state polling data; it then runs the results through a dynamic programming algorithm to determine electoral results.

Jacobson's mathematical model employs Bayesian estimators (working with collaborator Steven Rigdon, St. Louis University) that use available state poll results to determine the probability that each candidate will win each of the states. These state-by-state probabilities are then used in a dynamic programming algorithm (working with Edward C. Sewell, Southern Illinois University Edwardsville) to determine a probability distribution for the number of Electoral College votes that each candidate will win in the 2012 presidential election.



University of Illinois Computer Science graduate student Jason Sauppe (Ph.D. Candidate), and undergraduate students (Calvin Shipplett, Dimitriy Zavelevich, Taylor Fairbank, and Bhargava Manja) maintain a website that displays the latest predictions at [electionanalytics.cs.illinois.edu](http://electionanalytics.cs.illinois.edu). Industrial Engineering student Angela Ding also participates in the project. The web site forecasts will be updated daily as we approach election day.

Jacobson will be chairing a [session on Presidential election forecasting](#) at the 2012 INFORMS Annual Meeting (Sunday at 4:30pm).

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## About the INFORMS Section on Public Programs, Services and Needs

The Section for Public Programs, Service, and Needs (SPPSN) is the INFORMS subdivision dedicated to, in the words of the INFORMS slogan, “doing good with good OR.” The section furthers the use of operations research and management science in the following areas:

- *Public Policy* – improving governmental decision-making at the legislative and strategic levels.
- *Public Programs* – improving the management of government programs, services and operations.
- *Public Safety* – improving decision-making in support of homeland security, law enforcement, emergency preparedness, and disaster response.
- *Public Service* – supporting community development and public service organizations, and encouraging members of the ORMS



professions to volunteer their know-how in public service causes.

- *Public Needs* – Improving logistics and other national and international programs to address humanitarian needs.

The section carries out its mission by sponsoring presentations at INFORMS national meetings and providing publicity for ORMS conducted in the public and civic spheres.

SPPSN was formed from a 2009 merger of three efforts devoted to “doing good with good OR”. The first was the Public Programs and Processes Section (PPPS), which was the INFORMS section devoted to OR conducted in the areas of public policy, public programs and public safety. The second was an initiative to start an INFORMS forum devoted to community operations research and the third was an initiative to start an INFORMS forum devoted to supporting humanitarian assistance. The three groups, in consultation with the INFORMS Subdivision Council, decided that the best approach was to have a single expanded section that would broadly address ORMS conducted in the public and civic spheres.

Membership is \$10 for INFORMS members, \$15 for non-members, and \$5 for students.

2012 Officers:

- *President:* **Julie Swann**, Georgia Institute of Technology, jswann@isye.gatech.edu
- *President-Elect:* **Ozlem Ergun**, Georgia Institute of Technology, oergun@isye.gatech.edu
- *Secretary/ Treasurer:* **Dionne Aleman**, University of Toronto, aleman@mie.utoronto.ca
- *Senior Vice President of Programs:* **Karen Smilowitz**, Northwestern University, ksmilowitz@northwestern.edu
- *Junior Vice President of Programs:* **Jessica Heier-Stamm**, Kansas State University, jlhs@k-state.edu
- *Vice President of Communications:* **Laura A. McLay**, Virginia Commonwealth University, lamclay@vcu.edu

Cluster chairs for the 2012 INFORMS Annual Meeting include **Jessica Heier-Stamm** and **Mariel Lavieri**.

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## From the editor

Dear SPPSN members,

This newsletter provides an opportunity to share information about news of interest to our members. The newsletter can also be expanded to share the news of member achievements, milestones, awards, publications (particularly those in non-OR journals), calls for papers in journal focus issues, and non-OR conferences of interest to our members. Please share your accomplishments, publications, calls for papers in journal focus issues, and conferences announcements so that we may expand the newsletter. We cannot do this without your help. The newsletter will be available on a semi-annual basis. The next addition of the newsletter will be available in April.



[We are at @INFORMS\\_SPPSN.](#)

Sincerely,  
Laura A. McLay  
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