PSOR Newsletter

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The BRIEFING

Welcome from the President

Words from Nan Kong, President of PSOR in 2019

My name is Nan Kong from Purdue University. I am the President of the PSOR section in 2019. As the outgoing President, I am so grateful to all the PSOR colleagues for your great support in the year 2019. This year's PSOR paper competition again had a record-setting number of submissions. We were so happy to see so many old friends and new friends attending the business breakfast at the INFORMS annual meeting in Seattle. The room was simply packed. The sky on that morning was a bit gloomy, but the discussion was so lively. I look forward to the continued expansion of our section. I expect our section to work more closely with peer INFORMS societies/sections to tackle public sector problems of imminent needs. Finally, I would like to send my special thanks to the 2019 PSOR officers for their great work.

Words from Shengfan Zhang, President of PSOR in 2020

It is my great honor to be able to continue serving the PSOR community as the President in 2020. I would like to thank Nan Kong for his leadership in 2019 as well as the outgoing officer Jagpreet Chhatwal for all his work as the Senior VP of Programs. I am glad I have the opportunity to continue working with Jessica Heier Stamm, Ronald McGarvey, Muer Yang and welcome our new officers Ashlea Bennett Milburn and Xiaolei Xie. As we look forward to 2020, I welcome any ideas and suggestions to promote our section and improve our activities. Please also feel free to contact one of our PSOR officers if you any news of interest to our members and ideas for new initiatives. Thank you and Happy New Year to everyone!

2019 PSOR Best Paper Competition Results

We received 51 high-quality submissions for the 2019 best paper competition. The judging committee is co-chaired by Fernanda Bravo (UCLA) and Elisa Long (UCLA). Four finalists have been identified by the judging committee. The first-place and second-place prizes were announced and awarded during the business meeting at the 2019 INFORMS Annual Meeting in Seattle, WA.

First Place: *An Efficient Frontier Approach to Scoring and Ranking Hospital Performance*, by Dan Adelman (University of Chicago)

Abstract
The Centers for Medicare and Medicaid Services (CMS) Star Ratings methodology for publicly evaluating hospitals uses a latent variable model that is based on the presumption of a single, but unobservable, hospital-specific quality factor shared across a group of performance measures. Performance measures are given higher weight if they statistically appear to be more strongly correlated with this hidden factor. We show how this

approach, when applied to measures that are weakly or not correlated with each other, can effectively ignore measures and can exhibit "knife-edge" instability, so that even if hospitals improve relative to all other hospitals, they may nonetheless score lower overall due to weight shifting onto different measures than before.

In contrast, we provide an approach to scoring and ranking hospitals that, under reasonable conditions, ensures hospitals that improve relative to all other hospitals obtain higher scores, while also having the capability to autonomously adjust weights as measures are added or subtracted over time. Rather than exploit statistical correlation, we propose a conic optimization framework that offers a new integrated approach in Data Envelopment Analysis (DEA) for simultaneous efficiency analysis and performance evaluation. We develop theory that explains the behavior of our approach, including various properties satisfied by hospital scores at optimality. Using data we apply our approach to score and rank nearly every hospital in the United States, and demonstrate the extent to which it agrees or disagrees with the existing approach to the CMS Star Ratings.

From left to right: Fernanda Bravo, Elisa Long, Dan Adelman

Second Place: *Show or Tell? Improving Agent Decision Making in a Tanzanian Mobile Money Field Experiment*, by Jason Acimovic (Penn State), Christopher Parker (American University), David Drake (Colorado), and Karthik Balasubramanian (Howard University)

From left to right: Christopher Parker, Jason Acimovic

From left to right: Nan Kong, Elisa Long, Christopher Parker, Jason Acimovic, Dan Adelman, Edward Kaplan, Andrew Davis, Scott Rodilitz, Yao Cui, Fernanda Bravo

2020 PSOR Officers

PSOR officers include President, President-Elect, Secretary/ Treasurer, Senior Vice President of Programs, Junior Vice President of Programs, and Vice President of Communications. The officers for the year of 2020 are listed in below.

PRESIDENT: Shengfan Zhang. Associate professor in the Department of Industrial Engineering at the University of Arkansas.

PRESIDENT-ELECT: Jessica Heier Stamm. Associate professor and the Gisela and Warren Kennedy Cornerstone Teaching Scholar in the Industrial

and Manufacturing Systems Engineering Department at Kansas State University.

SENIOR VICE-PRESIDENT OF PROGRAMS: Ronald McGarvey. Associate Professor in Industrial and Systems Engineering and PhD Program Coordinator, Truman School, University of Missouri.

JUNIOR VICE-PRESIDENT OF PROGRAMS: Muer Yang. Associate professor at the Opus College of Business in the University of St. Thomas.

SECRETARY-TREASURER: Ashlea Bennett Milburn. Associate Professor in the Department of Industrial Engineering at the University of Arkansas.

VICE PRESIDENT OF COMMUNICATIONS: Xiaolei Xie. Associate Professor in the Department of Industrial Engineering at Tsinghua University.
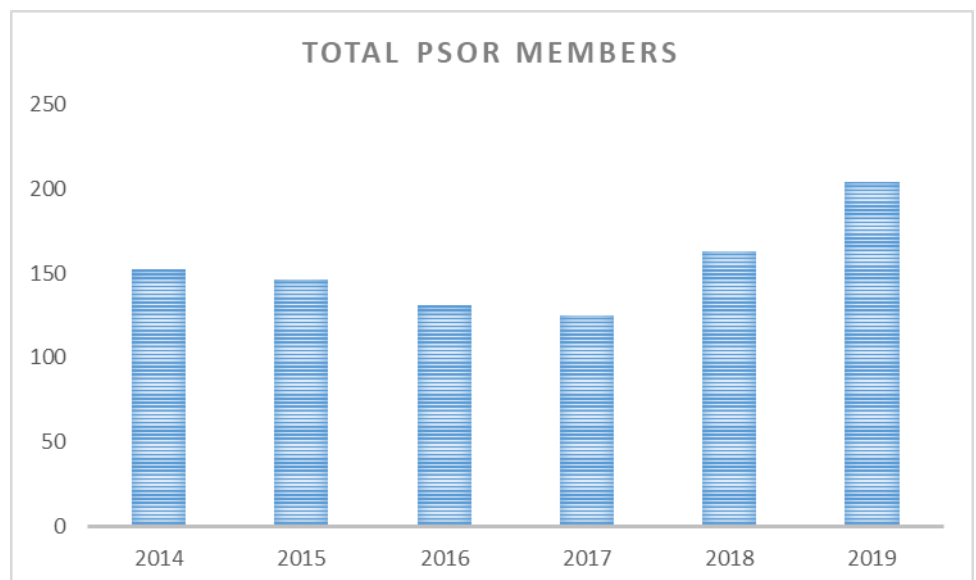
PSOR Business Meeting

Our Breakfast/Business Meeting was sponsored by the Department of Industrial and Operations Engineering, the University of Michigan. The breakfast/business meeting at INFORMS were well attended and we were glad to see many old friends and new faces. We had lively discussions on the future directions of the PSOR section, and we would like to pursue clearer definition of the field of PSOR.

Our section has been growing in the past year. The number of our members has exceeded 200 in 2019, 23% of which are student members. We have maintained a healthy financial status in PSOR and the membership dues ($10 regular, $5 student) in 2019 are not increased.

From the Editor

Dear members,

I hope 2019 has been a great year for you both personally and professionally. Please consider letting the VP of Communications know about your successes (e.g., awards, milestones, publications, calls for papers) so that future issues of "The Briefing" can highlight your accomplishments.

Please also consider letting our board members know how we can make the section truly a professional forum for you, our dearest members, to showcase operations research as a scientific approach to public sector issues and problems.

See you next year at INFORMS!

Best,

Muer Yang
VP of Communications, PSOR
yangmuer@stthomas.edu