A Message from the Chair

Dear QSR section members,

Greetings! First of all, I would like to express my sincere appreciation for all of your support to the QSR section.

This year’s INFORMS annual meeting will be held in San Francisco, CA from November 9th – 12th. The QSR business meeting will take place on Monday, November 10th from 6:15pm to 7:15pm. On behalf of the QSR officers, I would like to welcome every one of you to the meeting. This will probably be the best time for us to get together, share our ideas and have a discussion on the QSR’s future efforts.

The QSR cluster continues to be one of the largest clusters in the INFORMS annual meetings! This year, the QSR cluster will hold 38 sponsored sessions. These sessions cover a broad spectrum of topics, such as data fusion, healthcare, SPC and monitoring, data analytics, reliability, maintainability, quality, game theory, Bayesian methods, and system modeling. Many of you would be interested in the three journal invited sessions: Technometrics, IIE Transactions, and Journal of Quality Technology. Moreover, QSR co-sponsored four sessions with other INFORMS clusters and non-INFORMS societies, one of which is the panel discussion on Funding Opportunities. I would like to thank all the session organizers and especially, the QSR cluster chair and chair-elect, Dr. Tirthankar Dasgupta, for putting together such a great program.

I would also like to particularly highlight the QSR Best Student Paper Competition session. This year, we have identified four finalists from a pool of 23 students. Thanks to Dr. Hui Yang for his hard work in overseeing the double-blinded review process involving nine referees. The finalists will present their papers on November 10th (Monday) at 8:00am. The winner will be selected by a panel of judges and will be announced at our business meeting.

It is always great to see new research findings of our students who are able to turn genius ideas into treasure. We are grateful to Drs. Kaibo Wang and Tirthankar Dasgupta who have organized the QSR Student Introductions and Interactions session (November 9th from 11:00am-12:30pm). In this session, Drs. Susan Albin and Jianjun Shi will interact with the students and lead a discussion on various topics related to research frontier and students’ career paths. This is the first time for the QSR, which could be the first among all the INFORMS sections, to initiate such student activities.

It is not a surprise that QSR continues to be a prominent professional organization of our discipline. In 2014, we have an appreciable increase in membership, and our financial status is quite healthy. Currently, we have 272 members, of which 81 are student members. This is record high in the QSR history. I am sure we will keep growing and playing an important role in both cutting-edge research and education in years to come. Undoubtedly, the QSR section will continue to be the leader on overcoming the technical challenges in data analytics, experimental design, reliability engineering, quality engineering, healthcare, and nanomanufacturing in the exciting time.

I look forward to seeing you all in San Francisco and thank each and every one of you for your dedication to QSR.

With Best Regards,
Haitao Liao

Minneapolis Conference Review

INFORMS Annual Meeting, October 6-9, 2013

The 2013 Annual Meeting in Minneapolis featured a QSR Sponsored Cluster with 39 sessions that spanned the entire duration of the conference. Our section’s relationship with leading relevant journals continued to be strong with invited sessions sponsored by IIE Transactions, and Technometrics. We also organized a panel discussion session together with DM on Funding Opportunities.

Our sessions covered a broad spectrum of topics related to QSR, such as data fusion, sensors, SPC and monitoring, data analysis, Big & Complex Data Problems, reliability, predictive and condition based maintenance, Bayesian methods and system modeling. We also had four sessions...
co-sponsored with other INFORMS clusters and non-INFORMS societies.

The Annual Meeting in Minneapolis also included finalist presentations for the 2013 QSR Best Student Paper Award. The winner was Linmiao Zhang from National University of Singapore for his article entitled “Monitoring Wafer Geometric Quality using Additive Gaussian Process Model”. Other 2013 finalists included Lulu Bao (Tsinghua University), Arash Pourhabib (Texas A & M University), and Arman Sabaaghi (Harvard University).

Here are this year’s finalists that will make presentations in Minneapolis, and be recognized at our business meeting:

- Dingguo Hua, Rutgers University, “Reliability of Systems with Spatially Distributed Units”.
  Advisor: Elsayed A. Elsayed
- Mingyang Li, University of Arizona, “Bayesian Modeling and Inferencing of Heterogeneous Time-to-event Data with an Unknown Number of Sub-populations”.
  Advisor: Jian Liu
- Dadi Xing, Purdue University, “Optimal Supersaturated Design via Lasso”.
  Advisor: Hong Wan
- Yuan Yuan, University of Wisconsin Madison, “Non-crossing Quantile Regression Processes based on Monotone B-splines”.
  Advisor: Shiyu Zhou

Member Updates

- **Honors and Awards Received**


  Qiang Huang and his student Lijuan Xu received 2013 IEEE Transactions on Automation Science and Engineering Best Paper Award.

  Haitao Liao and Huairui Guo received the 2013 William A.J. Golomski Award. This award is bestowed to honor the outstanding paper published in the proceedings of the Annual Reliability and Maintainability Symposium (RAMS).

  Kaibo Liu received the Pritsker Doctoral Dissertation Award (2nd place). This award recognizes the dissertation as one of the year's best dissertations in the field of industrial engineering, IIE.

  Kamran Paynabar received the CETL/BP Junior Faculty Teaching Excellence Award, a Georgia Tech award to recognize excellent teaching and educational innovation that Junior Faculty bring to campus.

  Kamran Paynabar has been selected to take part in the National Academy of Engineering’s (NAE) sixth Frontiers of Engineering Education symposium. He is one of the nation’s seventy-seven innovative, young engineering educators who were selected from a highly competitive pool of applicants.

  Lawrence M. Seiford received the 2014 Albert G. Holzman Distinguished Educator Award from the Institute of Industrial Engineers (IIE). The award recognizes educators who contributed significantly to the profession through teaching, research and publication, extension, innovation, or administration.

  Ying Hung received the 2014 Tweedie Award of Institute of Mathematical Statistics.

  Li Zeng received the Best Paper Award in the Healthcare Systems Track at The 4th International Conference on Industrial Engineering and Operations Management (IEOM 2014) sponsored by IIE and INFORMS.

- **Grants Received**

Hugh Medal and Linkan Bian received $107,156 from FedEx Express, for the proposal entitled “Investigate New Uses of GPS data”.

Lesley Strawderman, Kari Babski-Reeves and Linkan Bian received $156,901 from FedEx Express, for the proposal entitled “Form Factor Effects on Worker Productivity”.

Eunshin Byon received a grant from National Science Foundation, for the proposal entitled “Regularized Learning Enabled Monitoring and Control for Wind Power Systems”.

Nan Chen received SGD177,100 from Singapore AcRF Tier 1 funding for the proposal entitled “Statistical Modelling, Monitoring and Control of Wafer Profile Quality”, 2014-2017.

Justin Chimka received $74,729 from Department of Transportation via Mack-Blackwell Maritime Transportation Research & Education Center for the proposal entitled “Economic Impacts of Lock Usage and Unavailability”, 2014-2016.

Justin Chimka received $11,000 from Arkansas Economic Development Commission for the proposal entitled “Multimodal Transport and TransLoad Facilities in Arkansas”, 2014.

Heather Nachtmann, and Justin Chimka received $158,000 from Department of Transportation via Mack-Blackwell Maritime Transportation Research & Education Center for the proposal entitled “Supporting Secure and Resilient Inland Waterways”, 2014-2017.

David Coit received $116,000 of U.S. Navy NAVAIR grant, for the proposal entitled “Development of Reliability Models to Support the Recovery Gear Service Life Analysis Program - Phase 5”.


Kaibo Liu received $150,729 from National Science Foundation, for the collaborative research entitled “Online Monitoring of High-Dimensional Streaming Data Using Adaptive Order Shrinkage”, 2014-2017.

Kamran Paynabar received $300,000 from National Science Foundation, for the proposal entitled “Big Data Analytics for Advanced Manufacturing Improvement”.

Kaibo Wang received RMBY600,000 from the National Natural Science Foundation of China, for the proposal entitled “Quality and Yield Prediction based on 2-D Spatial Discrete Data”, 2015-2018.

Qingyu Yang and Xin Wu received $350,000 from National Science Foundation, for the proposal entitled "GOALI: Failure Prediction and Reliability Analysis of Ultra-High Strength Steel Autobody Manufacturing Systems by Utilizing Material Microstructure Properties”.


Jay Rosenberger, Victoria Chen, and Li Zeng received $375,000 from National Science Foundation, for the proposal entitled “Statistics-based Optimization Methods for Adaptive Interdisciplinary Pain Management”.

- Ph.D. Degrees Earned


- Promotions and News

Jian Liu was promoted to Associate Professor in the Department of Systems and Industrial Engineering at University of Arizona.

Pralhad Rao joined the Department of Systems Science and Industrial Engineering, Thomas Watson school of Engineering and Applied Science at Binghamton University (SUNY), as a tenure track Assistant Professor.

Ying Hung was promoted to Associate Professor in the Department of Statistics at Rutgers University.

Tao Yuan was promoted to Associate Professor in the Department of Industrial and Systems Engineering at Ohio University.

- Announcements

- Job Opening

Oklahoma State University

The School of Industrial Engineering and Management seeks talented and motivated candidates for a tenure-track position, starting in Fall 2015. Appointment level and salary will be commensurate with qualifications and accomplishments. Candidates must have a Ph.D. in industrial engineering or a related discipline. Performance expectations include leadership and creativity in undergraduate and graduate education, funded research, scholarship, and professional service.

Candidates with a strong methodological background and potential to attract funded research as well as curricular interests and experience in quality, statistics and reliability are sought. Candidates with research, curricular and service interests in manufacturing systems and processes, production planning and control, logistics and supply chain management, ergonomics and human factors, energy and engineering management, service systems, healthcare systems, optimization, stochastic modeling, or simulation will also be considered.

Interested applicants should apply online at https://jobs.okstate.edu. Applicants should submit a curriculum vitae, a list of three to five references, a cover letter and a statement of capabilities, qualifications, and interest. Any inquiries may be sent to Sunderesh Heragu, Professor and Head, School of Industrial Engineering and Management, Oklahoma State University, Stillwater, OK 74078 (sunderesh.heragu@okstate.edu). More information about the School can be found at iem.okstate.edu.


Eindhoven University of Technology

The Department of Industrial Engineering and Innovation Sciences (IE&IS) seeks two Assistant Professors (tenure track) for the Operations Planning, Accounting & Control group (OPAC), starting no later than September 1st, 2015 (Starting earlier is open for discussion). The two positions are open to any relevant research area in Operations Management that is rigorous and relevant to industry, and one of the two positions is to be filled with a candidate who works on the interface between operations and finance & accounting. Women are strongly encouraged to apply for this position. Each assistant professor need to perform active, take part in and acquire funded research projects, co-advising one or more PhD students, and publish in academic journals. Furthermore, each assistant professor need to teach 2-3 courses per year in the undergraduate, master, and/or PhD programs, and supervise BSc and MSc students on their thesis work.

Successful candidates must possess a Ph.D. in Operations Management, Industrial Engineering, Econometrics, Operations Research, or a comparable domain. They should have i) demonstrable ability to conduct academic research of high quality on relevant problems, demonstrated for instance by a relevant PhD thesis and/or publications; ii) demonstrable ability to teach, shown for instance by experience or assistant in teaching and positive evaluations of these teaching efforts; iii) excellent mastering of the English language, good communication and leadership skills. Note that there is not a Dutch language requirement.

More information about the OPAC group can be found at opac.ieis.tue.nl. More information about these positions should be addressed to: Professor Geert-Jan van Houtum, phone +31 40 2475163, e-mail: g.j.v.houtum@tue.nl. Applications must contain the following documents (all in English): i) Cover letter (2 page max.), where you motivate your interest in this vacancy and explicitly explain in which ways you represent a good match; ii) an extensive curriculum vitae including a publication list and teaching evaluations (if any); iii) a teaching statement; iv) a research
Hong Kong University of Science and Technology

The Department of Industrial Engineering and Logistics Management at HKUST invites applications for visiting/teaching position at Lecturer II level to teach courses in the area of Applied Statistics and Quality. Applicants should have a Ph.D. in Industrial Engineering or related disciplines and a good record in teaching in tertiary institutions. Starting salary will be commensurate with qualifications and experience. Fringe benefits including annual leave, medical and dental benefits will be provided. (Duration: 6 months; renewable)

Applicants should send their curriculum vitae, teaching records, and transcript to the Faculty Search Committee by email to <ielm@ust.hk>. More information about the Department can be found at http://www.ielm.ust.hk.

Virginia Tech

The Grado Department of Industrial and Systems Engineering at Virginia Tech invites applications for a full-time tenure-track position in the emerging frontiers of industrial engineering. The research specialties of interest include, but are not limited to, advanced manufacturing systems and technologies, big data analytics, cybersecurity, bio-manufacturing, and renewable energy. The appointment is at the assistant professor level and begins in the 2015-2016 academic year.

Applicants should have achieved, or show potential to develop, a strong program of research and scholarship. The position requires a Ph.D. degree, with at least one degree in industrial engineering or a closely related field. We are seeking candidates with exceptional potential for leadership in research and education, and strong commitment to high quality research. The successful applicant will also be expected to provide skilled teaching of foundational and advanced courses at both the undergraduate and graduate levels.

Applications must be submitted online at http://jobs.vt.edu (posting number TR0140105) and include i) a current curriculum vitae with evidence of teaching ability in English, ii) a concise (up to 1 page) statement of research interests and teaching philosophy, and iii) at least three references. Nominations can be sent directly to Head, Department of Systems Engineering and Engineering Management, or e-mail to “sehead@cityu.edu.hk”.

Applications and nominations will receive full consideration until the positions are filled and only shortlisted applicants will be contacted. The University’s privacy policy is available on the homepage.
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University of Arizona

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Harvard University

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Yu Ding (2008)
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Zachary Stoumbos (2005)
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Bruce Ankenman (2002)
Northwestern University

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