March 2013 Newsletter

CPMS Invites You To Help Advance Practice

By Russ Labe, Chair, CPMS
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The mission of CPMS, the Practice Section of INFORMS, is to advance the general practice of OR/MS. Our core activities accomplish this across a broad range of applications and methods. CPMS serves the needs of OR/MS practitioners, full-time and part-time, regardless of industry focus or application area.

We sponsor or work closely with INFORMS to support the following activities:

- Spring Practice & Business Analytics Conference
- Edelman Award Gala held at the Practice & Business Analytics Conference
- Franz Edelman Award for excellence in the practice of OR/MS, with emphasis on beneficial impact
- Daniel H. Wagner Prize for excellence in OR/MS practice, with emphasis on innovative methods
- UPS George D. Smith Prize for excellence in the preparation of future OR/MS practitioners
- Isolated Practitioner Workshop, held at the fall Annual Meeting
- CPMS Practice Sessions, part of the Practice Track at the fall Annual Meeting

To get the most out of your CPMS membership, I strongly recommend volunteering to help out on any of the above activities. Deeper participation will provide opportunities to meet other practitioners, identify common practice-related challenges, share ideas for solutions, and discover new potential applications for OR/MS in your day job.

A good first step is to volunteer to help screen the applications submitted for the Edelman Award. After you gain some experience, volunteer to help verify the semi-finalists. With still more experience, volunteer to be an assistant coach for a finalist team. A bit more experience and you can be eligible to serve as a lead coach, a judge, or eventually chair of the competition. And all the
while you will have an inside track to observe and learn about some of the most impactful applications of OR/MS throughout the world.

Participation in any CPMS committee (or other practice-oriented committee within INFORMS) can be highly rewarding. Get engaged with us! Experience the personal benefits. At the same time, you will be contributing to the profession. Contact me if you have questions or want to learn more about volunteering. You can reach me at Russ.Labe@Bankofamerica.com.

Practice Update

By Jack Levis, INFORMS Vice President, Practice Activities
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INFORMS has been working hard to achieve the vision of being the premiere organization for advanced analytics professionals. To guide this initiative, the board adopted three strategic priorities:

- Develop and implement a certification program
- Develop and implement a continuing education program
- Develop and support external engagement with government and industry

Certification will be the first priority activity to be completed. This is so because it’s a differentiator in the marketplace and will show INFORMS’ leadership in the profession. The first certification test is planned to take place at the upcoming Analytics Conference in San Antonio.

Passing the test will open the way to a basic practitioner certification called a Certified Analytics Practitioner (CAP™). In order to receive a CAP™ certification, the candidate must not only pass the certification test but also have appropriate education, work experience, and demonstrated achievement.

The hardest part of creating a certification is coming up with appropriate, valid, and reliable test questions. The test-writing committee has been meeting multiple times per week for the last three months to pursue this effort.

After their extensive work, the committee finished the first-draft exam of 100 questions. The draft was sent out to eight “pilot” testers who are trusted INFORMS practitioners and thought leaders. As expected and planned for, the exam needs some “tweaking” to make it ready for the first real test.

The CAP™ exam covers the following domains of practice with appropriate weighting:

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Status Update from the Analytics Section

By Zahir Balaporia, President, INFORMS
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The Analytics Section, continuing to grow, has over 900 members at this time. The LinkedIn group has over 750 members with a steady stream of job postings and discussions. Over the last year we made some changes that were needed due to our fast growth in the first year. One of the main changes from a communications perspective was combining our section newsletter with the Analytics Magazine newsletter. This allowed us to focus the analytics message and consolidate quality content. The latest newsletters can be found here.

Our flagship award was renamed the Innovative Applications in Analytics Award. The format has expanded to include presentations at the INFORMS Annual Meeting in the fall, presentations that determine the three finalists who will compete at the Business Analytics Conference in the spring. The finalists get free registrations, and a full 50-minute session to present their work, at the spring conference. The 2013 finalists are:

- ConEdison, Columbia University, and MIT: Cynthia Rudin, PhD, Assistant Professor of Statistics
- General Electric Global Research: David S. Toledano, PhD, Business Systems Engineer
- IBM: Mark Grabau, MS, Associate Partner

The quantity and quality of submissions in the first two years were great; we look forward to selecting our 2013 winner in April.
News from CPMS

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Submission deadline for the 2014 competition will be announced soon.

We continue to partner with SAS on the Student Analytics Scholar Competition. In this competition, students read a case study about Floor-Mix Optimization at Lucky Duck Entertainment and then submit a Statement of Work (SOW) in response. The student who constructs the most effective argument in a SOW that is compelling and convincing gets to attend the Analytics Conference in April - all expenses paid! Thanks again to SAS for their generous support.

The Analytics Section is also involved in the Certified Analytics Professional (CAP™) program. I had the privilege of taking the exam in its pilot form and was impressed by the exam's breadth and challenge. The CAP™ committee has done a fantastic job. I am optimistic that CAP™ will be a great addition to the services that INFORMS brings to the entire analytics community.

We look forward to continued growth and to developing a vibrant section that brings more analytics professionals to INFORMS.

The 2013 Franz Edelman Award Competition to be Held at the INFORMS Conference on Business Analytics and Operations Research

By Peter C. Bell, Chair, 2013 Edelman Competition PBell@Ivey.ca

To see the best examples of high-impact OR work, attend the 42nd annual international competition for the Franz Edelman Award for Achievement in Operations Research that will be held at the INFORMS Conference on Business Analytics and Operations Research, San Antonio, Texas on April 8, 2013. Six finalists will make presentations showcasing outstanding work that had a major verified impact on their client organizations. The competition will conclude that evening with the gala awards ceremony and banquet, where the first-place winner and other finalists will be honored.

The Franz Edelman Award competition is jointly sponsored by INFORMS and CPMS. The purpose of the competition is to bring forward and recognize the very best examples of OR/MS and advanced analytics in practice. The award is named in honor of Franz Edelman, who established one of the earliest industrial OR/MS groups in North America.

This year's Edelman award process began with a call for abstracts in early September of 2012. Organizations were asked to provide a three-page summary of an operations research application and...
describe results that had significant, verifiable, impact on the performance of the client organization.

A committee of over three dozen experienced O.R. practitioners and academics reviewed the twenty-seven entries received and in early November selected 13 semifinalists. Each semifinalist entry was assigned a verification team whose role was to understand the application in sufficient depth to validate its claims. Each verification team communicated its findings to the rest of the committee in a written report prior to the finalist selection meeting; in the third week of December 2012, the six finalists were chosen.

The finalists this year were selected from entries covering a wide range of industries, functions, and countries around the globe. The six finalists (in alphabetical order) are:

**Baosteel**, with the University of Maryland, applied innovative O.R. techniques to streamline and transform their operations throughout their entire production process. The team developed various novel optimizations and tailored heuristics, and implemented several decision support systems, to replace rule-and-experience based manual-planning approaches. The result has been: significant improvements in plant operations and outbound logistics; reductions in production, inventory, and transportation costs; and increased revenues.

**Chevron**, with multiple internal companies, developed an O.R. decision support system that is used in all company-owned refineries to select the most profitable raw materials, evaluate product options, optimize refinery processes, and guide Chevron's related "downstream" capital investments. This O.R. system, in conjunction with efficient work processes, now generates $1 billion of value annually and has generated $10 billion of value since inception.

**Dell**, with Dell Global Analytics, embarked into the retail sales channel as part of a supply chain segmentation strategy but had to contend with challenges of high inventory and low margins. Collaborative planning, forecasting, and replenishment initiatives were started with key retailers as a solution. This resulted in more efficient planning, better inventory execution, lower mark-downs, and thus improved performance in the form of higher margins and enhanced market share.

**Dutch Delta Program Commissioner**, with Tilburg University, used O.R. to provide advice on efficient standards to protect the Netherlands against flooding. Flood protection is vital for the Netherlands. The 2nd Delta Committee had recommended increasing all protection standards by at least a factor of ten. Applying O.R. techniques, the team showed that it was more efficient to increase standards in only three critical regions. These results, accepted as a basis for policy by the State Secretary, lead to 7.8 billion euro less investment costs.

**Kroger**, with Wright State University, designed and implemented a simulation- and-optimization model for pharmacy inventory management. The resulting system, in use in all 1,900 pharmacy
stores nationwide, has yielded additional revenue of $70 million since October 2011. This intuitive and effective inventory system won support from Kroger's C-level executives, revealed O.R. to Kroger, and significantly contributed to the growth of O.R. in the Kroger Company.

**McKesson**, with the IBM T.J. Watson Center, developed an innovative Supply Chain Sustainability Management (SCSM) solution for McKesson to optimize its end-to-end supply chain policies. Through integrated O.R. models, SCSM optimizes distribution-network, supply flow, inventory, and transportation policies; it quantifies the impacts of business-change scenarios on financial, operational, and environmental metrics. McKesson attributes a $900 million working-capital-reduction benefit to SCSM.

Each finalist team has been assigned a coaching team of two O.R. professionals with experience on the Edelman committee. The coaching teams are working closely with their respective entries to advise them throughout the process so that their papers and presentations convey the work most effectively for a general O.R. audience. A team of nine judges from industry and academia will study the papers, attend the finalist presentations on April 8, 2013 and select the winner in time for announcement during the Edelman gala that evening.

If you attend the conference, you are invited to be in the audience for all or some of the Edelman competition. Each finalist team, assisted by high-quality slides and videos, presents its case in a 40-minute interval. Then, for 10 more minutes, the team answers questions from the judges.

Audience members and conference attendees are invited to network with the teams at the various conference events and take this opportunity to learn more about outstanding O.R. practice.

**USC/USCG Team Wins the 2012 Wagner Prize; Call for 2013 Entries**

By C. Allen Butler, Chair, 2013 Wagner Prize Committee
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**The Daniel H. Wagner Prize** for Excellence in Operations Research Practice is an INFORMS prize administered by CPMS, the Practice Section of INFORMS. The first place award of $1,000 is made possible by endowments from Metron Inc., Daniel H. Wagner Associates, Inc., and Applied Mathematics, Inc.

The prize is in memory of the late Dr. Daniel H. Wagner. While president of his own practice-oriented consulting firm, Dr. Wagner brought many high-quality mathematicians into the operations research community, leading to significant applications for the U.S. Navy, U.S. Coast Guard, and many other organizations. The prize
honors Dr. Wagner by emphasizing qualities he respected in his colleagues: the ability to innovate and to communicate clearly and effectively.

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**2013 Wagner Prize - Call for Abstracts**

The 2013 Daniel H. Wagner Prize for Excellence in Operations Research Practice has issued a Call for Abstracts closing on May 1, 2013. The competition will be held at the 2013 INFORMS Annual Meeting in Minneapolis, Minnesota. The prize is awarded for a previously unpublished paper describing a real-world application of analytics and operations research. The criteria for selection emphasize mathematical innovation and clarity of exposition, in contrast to the Franz Edelman Award which emphasizes beneficial impact on client organizations.

For details on the application process, please visit [http://www.informs.org/wagnerprize](http://www.informs.org/wagnerprize), and follow the Application Process link on the right side of the page. You may also contact me, the prize chair and president of Daniel H. Wagner Associates, Dr. C. Allen Butler, at [Allen.Butler@va.wagner.com](mailto:Allen.Butler@va.wagner.com).

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The winners of the 2012 Wagner Prize Competition were: Bo An, Milind Tambe, Eric Shieh, and Rong Yang, University of Southern California; Fernando Ordóñez, Universidad de Chile; Craig Baldwin, Joseph DiRenzo, Ben Maule, Garrett Meyer, and Kathryn Moretti, United States Coast Guard. Their paper, *A Deployed Quantal Response Based Patrol Planning System for the U.S. Coast Guard*, describes the model, theory developed for, and deployment of PROTECT, a game-theoretic system in use by the United States Coast Guard (USCG) in the Port of Boston for scheduling patrols. PROTECT (Port Resilience Operational/Tactical Enforcement to Combat Terrorism) makes optimal use of limited patrolling resources, while taking into account the relative importance of the different targets to be protected and the presence of adversaries that can observe security measures before deciding to attack.

Recent research and applications have applied what are known as Stackelberg security games to model the interaction between a security provider and attackers. The optimal defensive strategies in these games are mixed strategies over the different patrolling actions, making the optimal decisions unpredictable to the attacker while taking into account the relative importance of the different targets and the strategic behavior of the attackers. Previous work on security games assumes the human attackers are perfectly rational. PROTECT addresses this limitation by drawing from what is known as quantal response (QR) theory to represent the adversary's behavior.

The USCG evaluated the deployment of PROTECT in the Port of Boston as a success and is currently evaluating the system in the Port of New York, with the potential for nationwide deployment.
The winning authors will reprise their presentation at the upcoming INFORMS Conference on Business Analytics and Operations Research in April 2013, in San Antonio, Texas; they will receive their $1,000 award at the Edelman Gala during that meeting. Video of the winning presentation, as well as of the other finalist presentations, can be seen at the INFORMS Video Learning Center: a brief login is required. A special issue of Interfaces will publish the winning paper, along with those of the other five finalists:

- **For the Duke Cancer Institute**: *Improving Patient Access to Chemotherapy Treatment at Duke Cancer Institute*, Jonathan C. Woodall, Duke University Health System; Tracy Gosselin, Amy Boswell, Duke Cancer Institute; Michael Murr, Brian Denton, North Carolina State University
- **For The City of Philadelphia**: *The Philadelphia Districting Contest: Designing Territories for City Council Based upon the 2010 Census*, Ram Gopalan, Rutgers University; Steven O. Kimbrough, University of Pennsylvania; Frederic H. Murphy, Temple University; Nicholas Quintus, Philadelphia Water Department
- **For Mount Sinai Medical Center**: *Automated Bed Assignments in a Complex and Dynamic Hospital Environment*, Bex George Thomas, Srinivas Bollapragada, Kunter Akbay, David Toledano, Peter Katlic, Onur Dulgeroglu, Dan Yang, General Electric Global Research
- **For Multiple Clients**: *Incorporating Stochastic Lead Times into the Guaranteed Service Model of Safety Stock Optimization*, Salal Humair, Harvard School of Public Health; John Ruark, Logility, Inc.; Brian Tomlin, Dartmouth University; Sean P. Willems, Boston University
- **For the Rush University Medical Center**: *Biological Planning for High_Dose Rate Brachytherapy: Application to Cervical Cancer Treatment*, Eva K. Lee, Fan Yuan, Georgia Institute of Technology; Alistair Templeton, Rui Yao, Krystyna Liel, Jame CH Chu, Rush University Medical Center

### The Academic Preparation of Practitioners: A View from the UPS George D. Smith Prize Committee

By Donald R. (Bob) Smith, Chair, 2013 UPS Smith Prize
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Since the early days of operations research, opinion about how well our universities prepare students to be effective practitioners has varied widely. From the perspective of the committee charged with managing the UPS George D. Smith Prize for the first two years, strong evidence suggests that overall our universities are doing very well in...
The UPS George D. Smith Prize, an INFORMS prize administered by CPMS and accompanied by a $10,000 cash award, will be granted annually to an academic department or program for effective and innovative preparation of students to be good practitioners of operations research.

The committee is well underway in the process that will determine the second winner, to be announced at the INFORMS Analytics Conference in San Antonio, Texas on April 8. We continue to be surprised, very pleasantly, by the quantity (nine this year) and outstanding quality of the programs applying for the award. We can guarantee that there will be a truly outstanding winner this year and for many years to come! Unfortunately, we can have only one winner every year.

Seeing the diversity, quality, and innovation of these entries has given the committee a unique and encouraging picture of how well we, as a profession, are preparing future practitioners.

We hope that you will be able to attend the conference gala to hear who the winner is, and then attend the special conference presentation in which the winner describes their program in more detail. All of us undoubtedly will learn something about how to better prepare practitioners. And we also will experience a taste of the many reasons that the committee is so excited about the overall state of academic practitioner training!

INFORMS Prize Winner to be Announced at the INFORMS Conference on Business Analytics and Operations Research

By Stefan Karisch, Chair, 2013 INFORMS Prize Committee
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The winner of the 2013 INFORMS Prize will be announced during the Edelman Gala at the INFORMS Conference on Business Analytics and Operations Research to be held in San Antonio, Texas in April. The Edelman Gala will be on Monday evening, April 8.

The INFORMS Prize is given annually for effective and sustained integration of operations research into organizational decision-making. The award is granted to an organization that has repeatedly applied the principles of operations research in pioneering, varied, novel, and lasting ways. Recent winners include Memorial Sloan-Kettering Cancer Center, Jeppesen, Intel, General Electric Global Research Group, Schneider National, and Procter and Gamble.

I hope to see you in San Antonio where we will congratulate this
Innovative Applications in Analytics Award Winner to be Selected at the INFORMS Analytics Conference

By Michael F. Gorman, Chair, 2013 IAA Award Committee
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Winner of the second annual Innovative Applications in Analytics Award (formerly Innovation in Analytics Award) will be announced at the Edelman Gala in San Antonio on April 8. This year we had over 40 submissions. Nine semifinalists gave presentations at the INFORMS fall Annual Meeting in Phoenix; the three remaining finalists will give presentations at the analytics conference in San Antonio.

The purpose of the Innovative Applications in Analytics Award is to recognize creative and unique application of a combination of analytical techniques in a new area. The prize promotes the awareness of the value of creative combinations of analytics techniques in unusual applications to provide insights and business value. The prize is not meant to recognize strictly theoretical advances, though theoretical advances might be an enabler of innovative applications. Similarly, the prize is not focused on implementation value created, but such value creation might add credibility to the innovation.

Applicants can submit proposals that span application of descriptive, predictive, or prescriptive analytics, as well as application of an approach to data creation, collection, and dissemination, where the foregoing supports or enables implementation of novel analytical methods. Descriptive innovation could entail novel measures, visualization methods, or creative approaches to analytics-process improvement, among others. Predictive innovation might be statistical analysis, text analytics, or simulation, among others. Prescriptive innovation might include, for example, game theory or optimization. New sources of data creation and collection, and new avenues for dissemination of analytical approaches, can also help demonstrate the innovativeness of the submission. The lists above are not meant to be exhaustive, but rather illustrative examples of areas of innovation.

This year’s finalists and their projects are shown below. Make sure to put their Monday conference presentations on your calendar!

"Machine Learning for Power Grid Reliability--Predicting Manhole Events in New York"
Cynthia Rudin, Massachusetts Institute of Technology;
Steve Ierome, Delfina Isaac, Con Edison;
Rebecca Passonneau, Axinia Radeva, Columbia University. The authors present innovations in proactive power grid maintenance stemming from a collaboration between Columbia University and Con Edison, NYC’s power utility company. Specifically, they will describe the Manhole Events Project, where the goal is to predict electrical failures, including manhole fires and explosions, in New York City. They will discuss the data mining process by which they transformed extremely raw historical data into a ranking model that predicts manhole vulnerability. Their ranked lists are currently assisting with the prioritization of future inspections and repairs in Manhattan, Brooklyn, and the Bronx.

"Whole-Hospital Operational Forecasting System"
David S. Toledano, Kunter S. Akbay, Onur I. Dulgeroglu, Peter L. Katlic, Bex G. Thomas, General Electric Global Research Center. Hospitals make complex patient-flow decisions throughout the day to manage admissions from Emergency, Surgery and elsewhere into a scarce supply of inpatient beds, with relatively little decision support to identify those beds likely to be over-subscribed. In partnership with the Mount Sinai Medical Center (MSMC) in New York, they are prototyping a novel whole-hospital forecasting system that accurately estimates patient-flow movements and bed shortages over the next 24 hours and then displays operational feedback through interactive dashboards. Their system utilizes real-time data and historical patterns within a discrete-event simulation; it currently achieves better than 98% forecasting accuracy at the hospital level.

"Insurance Agency Productivity, Efficiency, and Prospecting"
Mark Grabau, IBM; Elizabeth Riczko, Westfield Insurance. Insurance companies desire a fact-based, decision-making process for managing their agency distribution channel such that it is productive and profitable. They present an approach that combines data envelopment analysis, predictive modeling, collaborative filtering, and reporting to objectively meet that need. Results are discussed, as well as areas for future research and on-going improvements.

2013 Edelman Gala: A Night to Remember

By Ann Bixby, Chair, 2013 Edelman Gala Committee
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The Edelman Gala banquet and award ceremony has been one of the highlights of the INFORMS practice conference for several years. This year’s Gala will be no exception. The Gala will take place on the evening of April 8, 2013 in the Grand Hyatt in San Antonio. It will be a celebration of achievement in operations research and analytics.
Jeff Camm will be our master of ceremonies. He is a professor of quantitative analysis, head of the Department of Operations, Business Analytics, and Information Systems, and Fellow of the Graduate School, at the University of Cincinnati. Jeff has had extensive involvement with the Edelman Award, including being part of the finalist team with Proctor & Gamble in 1996. That work with P&G is credited with saving over $250 million annually in their North American supply chain. We look forward to his participation in this special night.

This year’s Gala will start a little earlier, with an anticipated earlier completion, than in years past. Authors of the 2012 Wagner-Prize-winning paper will be recognized for their strong analytical content, clear exposition, and verifiable practice success. The 2013 INFORMS Prize will be awarded to an organization in recognition of their having repeatedly applied the principles of advanced analytics and OR/MS in pioneering, varied, novel, and lasting ways. The 2013 UPS George D. Smith Prize will be awarded to an academic department or program for effective and innovative preparation of students to be good OR/MS-analytics practitioners. The winner of the 2013 Innovative Applications of Analytics Award will also be announced.

As always, a high point of the evening is recognition of the Edelman Award. During the ceremony our audience will have the chance to hear summaries of the work done by the six Edelman Award finalists. At the end of the evening, the president of INFORMS will open the envelope that contains the announcement everyone has been waiting for - the first-place winner of the 2013 Edelman Award.

This will be another great event, spotlighting highly effective applications of OR/MS/analytics. We will recognize a variety of examples of true excellence in practice and in the training of practitioners. Let's join together at the Gala to be reenergized as we are reminded of what members of this profession can accomplish to help organizations get better results!

Spring Conference Rides Into San Antonio, Texas

By Jim Williams, Chair, 2013 Conference on Business Analytics and Operations Research
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Continuing the momentum of linking business analytics with INFORMS, last year's spring conference had participation at an all-time high. We anticipate that interest in the upcoming 13th annual Conference on Business Analytics and Operations Research will surpass the interest shown last year, and we hope that you will join us April 7-9 in San Antonio, Texas at the Grand Hyatt San Antonio.

This year we are pleased to feature two distinguished keynote
speakers. Nicole Piasecki, Vice President, Business Development and Strategic Integration, Boeing Commercial Airplanes, will provide a unique view of strategic planning and analysis in the aviation industry. Sandy Carter, Vice President, IBM Social Business Evangelism and Sales, IBM, will highlight the opportunities and challenges of social media and analytics.

We'll also welcome back popular focused tracks -

**Marketing Analytics:** Developed by Elea McDonnell Feit, Research Director of Wharton Customer Analytics Initiative at The Wharton School; Doug Bowman, Senior Associate Dean and Co-Director of Marketing Analytics Center at Emory University; P.K. Kannan, Ralph J. Tyser Professor of Marketing Science and Chair of the Dept of Marketing at the University of Maryland; Maher Lahmar, Business Development Consultant at Target Corporation; Jeremy Bloom, Senior Product Marketing Manager, Optimization at IBM; Robin Lougee, Manager, Smarter Commerce Solutions and Platforms at IBM; and Mary Helander, Math Scientist at IBM. Example topics include pricing optimization, marketing ROI analytics, and assortment analytics.

**Supply Chain Management:** Developed by Mani Janakiram, Director of Supply Chain Intelligence and Analytics at Intel; and Kean Chew, Senior Business Analytics Manager at HAVI Global Solutions. Example topics include optimization usage trends in supply chain management, and unique distribution network design.

**Analytics Process:** Developed by Manoj Chari, Senior Director of Operations Research R&D at SAS; Drew Pulvermacher, Strategic Financial Analyst at ShopBop.com; Doug Meiser, Manager of Operations Research and Simulation at The Kroger Company; and Amie Greenland, Office of the Public Sector CTO at IBM. The track offers executive insights on how to incorporate and get the best value out of analytics teams within organizations.

**Decision Analysis:** Developed by Jack Kloeber at Kromite; Dave Leonhardi, Business Strategist at Boeing; and Drew Pulvermacher, Strategic Financial Analyst at ShopBop.com. Example topics include the intersection of big data and decision analysis, and the soft side of decision analysis and operations research.

**Forecasting:** Developed by Karl Kempf, Director of Decision Engineering at Intel; and Kean Chew, Senior Business Analytics Manager at HAVI Global Solutions. Example topics include applying statistical mechanics to economic forecasting problems, and linking weather forecasts to business opportunities.

For those wanting to complement their technical skills with enhanced soft skills, we are continuing both the **Soft Skills Workshop** on Sunday and the **Soft Skills for Analysts** track. This track includes such topics as visualizing information, eliciting from subject matter experts, and partnering with clients. Freeman Marvin, Executive Principal at Innovative Decisions; Paul Wicker, Senior Consultant at Decision Strategies; and Bill Klimack, Decision Analysis Consultant at Chevron are leading the track and the workshop.
In the spirit of experimentation, this year's conference includes three new focused tracks -

**Big Data**: Developed by Kean Chew, Senior Business Analytics Manager at HAVI Global Solutions; Maher Lahmar, Business Development Consultant at Target Corporation; Manoj Chari, Senior Director of Operations Research R&D at SAS; and Arnie Greenland, Office of the Public Sector CTO at IBM. Example topics include finding value combining big data and analytics, with challenges and approaches.

**Analytics for Human Resources**: Developed by Diego Klabjan, Associate Professor in the Dept of Industrial Engineering and Management Sciences at Northwestern University; and Mary Helander, Math Scientist at IBM. Example topics include predicting workforce success characteristics, and other key elements of human resource management.

A dedicated **Prize Track** will showcase the finalist competition for the Innovative Applications in Analytics Award and the Spreadsheet Guru Award, as well as the reprise presentations from winners of the INFORMS Prize, Wagner Prize, and UPS George D. Smith Prize.

While many conference speakers are invited by the committee, we also feature 31 selected speakers for talks on a variety of topics, covering best practices, case studies, and practice-oriented methodologies. The popular poster presentations will return on both Monday and Tuesday during the dessert break.

Two of the highlights of this conference are the Edelman competition presentations on Monday and the Edelman Gala on Monday evening, where the Edelman winner is announced. These events demonstrate and celebrate the major impact that analytics and O.R. can have in today's world.

Our Executive Forum provides executives an understanding of the strategic use of analytics and O.R., and how they are used to drive better decisions and healthy bottom lines in organizations large and small. The Forum features a networking reception hosted by the INFORMS Board of Directors on Sunday evening. Be sure to register your executives for this outstanding event.

INFORMS is excited to be offering the first analytics certification exam at this conference, on Sunday morning. Be among the first to earn the CAP™ (Certified Analytics Professional) credential. For more information, visit: [http://www.informs.org/Build-Your-Career/Analytics-Certification](http://www.informs.org/Build-Your-Career/Analytics-Certification)

For complete conference information, visit: [http://meetings.informs.org/Analytics2013](http://meetings.informs.org/Analytics2013)

**Share Your Definition for Analytics on LinkedIn**
Analytics has become a widely used word. Companies have created analytics service divisions. Universities have created analytics programs. Authors have written books on analytics. Even INFORMS has created an Analytics Section, developed an Analytics certification, and rebranded its applied conference as an Analytics Conference.

As the word analytics has grown in use, some organizations and authors have offered definitions for the term. For example, INFORMS defines analytics as "the scientific process of transforming data into insight for making better decisions." In their book *Competing on Analytics*, Davenport and Harris defined analytics as "the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decision and actions."

As these two definitions suggest, people can interpret the word analytics in different ways. For example, some people view analytics as a business problem-solving and decision-making process, whereas others view analytics as a broad set of analytical methodologies. Still others view analytics as the use of analytical methodologies to inform decision-making processes.

Which definition of analytics resonates with you? Do you define analytics in a substantially different way? Many members of the CPMS Group on LinkedIn perform work that falls under the analytics umbrella, so they are likely to be interested in your perspective on analytics. Please take a few minutes to visit the CPMS Group on LinkedIn and share your viewpoint on analytics with the group.

**INFORMS Marketing Department Helps Make INFORMS' Slice of the Analytics Pie a Big One**

By Gary Bennett, INFORMS Director of Marketing
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There is great opportunity in analytics practice right now. The INFORMS Marketing Department is doing all it can to capitalize on this so as to help our members.

At the forefront of our efforts, of course, stands analytics certification. Over two years in the making, we are now very close to bringing this to reality and offering it to the general
analytics marketplace. Excitement and interest in earning the CAP™ credential grows every day. Over 200 potential candidates made inquiries to us over the last couple of months. On January 28 we began accepting applications for our first exam in April at our Conference on Business Analytics and Operations Research and already we have 18 applications. Organizations as diverse as Gartner, Marine Corps Logistics Command, Boeing, and Booz Allen Hamilton have expressed intense interest. Question writers, reviewers and pilot testers - all INFORMS and CPMS volunteers - have devoted thousands of hours to this endeavor that will undoubtedly make INFORMS the leading organization and standard-setter in the analytics arena.

Marketing has also helped to create the Getting Started with Analytics website that will become the cornerstone of our outreach efforts to organizations with less mature analytics programs. VP Marketing, Communications, and Outreach Andy Boyd led a small group of INFORMS staff in the migration and rewriting of the old Science-of-Better site to IOL and EZ Publish, not only to provide clear INFORMS branding for this important information but also to recast the site as appropriate for the general analytics audience. Andy edited most of the site to make it more analytics-centric. I provided 30 new one-page case studies culled from the last five years of Edelman finalist cases that never appeared on the Science-of-Better site. Shirley Mohr on staff gave the site a nice new look and feel.

Our department has been deeply involved in marketing the spring INFORMS Conference on Business Analytics and Operations Research, positioning it as the most rigorous, "how-to-do-it" analytics conference in a growing marketplace. Together with our Meetings Department and an extraordinary volunteer conference-organizing committee, we've helped drive record attendance in 2011 and 2012. Marketing's overall goal again this year is to help attract record attendance, including especially substantial numbers of analytics professionals who have never been to the conference before. We are off to a promising start. The submission deadline for "select presentations" recently passed with 94 submissions received. That is 10% above last year's figure and surpasses our goal of attracting 75 submissions. The number of select-presentation submissions usually is a leading indicator of overall attendance.

Marketing coordinates and promotes the call for entries for INFORMS key practice prizes. With such a robust and popular array, INFORMS practice awards set us apart from other analytics associations. The Edelman Award attracted 24 qualified entries, topping our goal by a wide margin. The UPS George D. Smith Prize attracted nine entries, which nearly matched our goal of ten. The super-exclusive INFORMS Prize attracted two entries. We helped the Innovative Applications in Analytics Award attract over 20 semi-finalists who presented their projects at the 2012 Annual Meeting; three finalists will present at the upcoming Analytics Conference. Soon we will turn our attention to the 2013 Wagner Prize, which rewards outstanding methods and clear exposition. We will heavily promote this key prize; the deadline for applications is May 1.
The practice-oriented INFORMS Video Learning Center in early December added all six Wagner Prize presentations from the 2012 Annual Meeting. The Center, which is hosted by our vendor Blue Sky Broadcast but is clearly branded as an INFORMS property, now includes a total of 41 presentations - mostly Edelman and Wagner videos - going back to 2009. The Center is doing well. To date, after about 3 years of operation, the 41 videos have received 18,903 total views from 13,282 distinct viewers. The 2012 Annual Meeting videos clearly helped a lot. We've also added over 30 analytics process videos to the Analytics Section web sites. If you have not reviewed these outstanding presentations, please do so to take advantage of this great member benefit.

Finally, later this year the INFORMS Job Placement Service (JPS) will undergo a face-lift and revitalization that will make it more amenable to analytics jobs that are exploding in the market place. A vendor will be brought in to transform this online job board to a truly full-service analytics career center. Stay tuned for more information to come about JPS.

Analytics and Management Science Make News

By Barry List, INFORMS Director of Communications, barry.list@informs.org

INFORMS continues outreach to those who may join our association and the clients, internal and external, that we serve. INFORMS has introduced several new online resources: an explanation of analytics for newcomers; an adaptation of the explanatory material traditionally housed in the Science-of-Better website; and, from the Public Awareness Committee (PAC) and INFORMS Vice President Andy Boyd, an introductory site for high school students and undergraduates who are considering a career in analytics and management science.

O.R. and analytics continue to catch the eye of readers and the media.

The shortage of trained analytics/O.R. professionals and the value of a career in the field has caught the attention of the press. In a recent article Fortune listed Head of Analytics/Big Data as one of the top ten hot management jobs of 2013. Sloan Management Review wrote that 85% of Fortune 500 companies have current or pending Big Data/Analytics projects in the works. Bulldog Reporter, a publication for public relations professionals, gave a word of caution, noting that CIO's are not gathering enough customer data to feed to analytics experts.

Fast Company did a profile of INFORMS Practice VP Jack Levis, explaining the huge role that analytics and math modeling have been playing at UPS.
O.R., management science, and analytics are showing their presence at the huge annual meeting of The American Academy for the Advancement of Science, with INFORMS members Anna Nagurney and Laura McIay among the presenters at the AAAS annual meeting this month.

Read more in the INFORMS News Room.

The INFORMS Science of Better Podcast Series continues to offer practitioners and academics a forum for extended discussion of their work. Among recent contributions are:

- Max Tsvetovat of Deepmile Networks discussed sentiment analytics
- Decision scientist Ralph Keeney provided an improved way to generate ideas through brainstorming
- Veteran Gary Lilien discussed the way that marketing analytics help businesses grow
- IBM's Michael Schroech gave the analytics giant's view on ways to extract value from Big Data
- MIT's Arnie Barnett explained new terrorist threats to America's transportation system
- Forecasters Allan Lichtman and Sheldon Jacobson correctly predicted the outcome of the U.S. Presidential and senatorial elections

Analytics, O.R., and management science have been making lots of news since the ascendance of advanced analytics. Read more in the INFORMS Newsroom. You can contact INFORMS Communications Director Barry List about ways of doing outreach for analytics and O.R. at barry.list@informs.org.

Note From the Newsletter Editor

By Randy Robinson, Chair, CPMS Newsletter Committee randy.robinson@mac.com

Please send your article ideas, announcements, or comments, to be considered for future issues to randy.robinson@mac.com.

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