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Copies of papers abstracted in the meeting program are available only from the authors. Requests for papers should be sent to the authors at the addresses shown in the program. Published annually prior to the meeting by INFORMS. Individual issues of the program are available upon request. Please contact the INFORMS office for additional information, 800.446.3676. Orders must be prepaid.

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Dear INFORMS Friends and Colleagues,

Welcome to the 2015 INFORMS Annual Meeting! It is my great pleasure and privilege to welcome you to Philadelphia. The City of Brotherly Love is a vibrant city of rich history and a rapidly evolving city of diverse culture, where emerging industries are right at home alongside centuries-old universities. The conference program reflects the intellectual richness that the host city can offer. Its broad scope covers cutting-edge topics from data analytics to healthcare applications; from novel optimization methodologies to comprehensive analysis strategies; from powerful modeling and software tools to intriguing industrial applications.

The vibrant intellectual sphere of the conference offers endless opportunities to meet old and new friends, network, and build and enhance your career. Please take advantage of the many networking opportunities, including the Welcome Reception on Sunday evening, the General Reception on Tuesday evening, and mingling in the melting pot of the conference exhibition and job fair area.

The 2015 Annual Meeting offers captivating plenary and semi-plenary presentations, panel discussions, tutorials, and thousands of oral and poster presentations from leading academics and industry experts.

The presentations survey the state-of-the-art of the analytics movement as it penetrates industry and society. The plenary speakers set the tone: Margaret Brandeau reviews how O.R. creates impact in healthcare; Michael Jordan explores ways to think about big data; Bill Rouse sheds light on the complexity of healthcare; and Alfred Spector discusses the role of empiricism and optimization in the world of big data. Another highlight of the program is the Presidents' Panel, at which four university presidents discuss the role that analytics and data-driven decision making play in the rapidly changing landscape of higher education.

The prize winners' presentations are always a treat for the curious mind. Besides the numerous subdivision-supported award presentations, the winners of the Franz Edelman Award, the UPS George D. Smith Prize, and the Daniel H. Wagner Prize, and the finalists of the Nicholson Student Paper Competition, will give presentations. Please join those sessions to celebrate the exceptional achievements of the finalists and winners.

Organizing such a major event would not be possible without having a solid organization, and without the efforts of many people. My special appreciation goes to the highly professional and efficient INFORMS staff, who are always there to help and guide the organizing committee. The INFORMS Meetings Committee is dedicated to do all that is possible, and beyond, to ensure that the Annual Meeting is a sound success. Program co-chairs Larry Snyder and Jeff Linderoth were responsible for assembling a high-quality program overall. Gino Lim and Mohammad Oskoroouchi served as Invited Cluster Chairs; Noah Gans and Ted Ralphs worked with sections and societies as Sponsored Session Chairs; Contributed Session Chairs Hande Benson and Virginia Miori organized the overall submissions into coherent sessions; Wenjing Shen, Ming Wang, and Allen Holder organized the poster competition and poster sessions; Tutorial Chairs Dionne Aleman and Aurelie Thiele assembled a superb set of tutorials; Keynote Chairs Paul Griffin and Katya Scheinberg lined up an exceptional set of featured speakers; Practice Chairs Manoj Chari and Stefan Karish coordinated the industry contributions; and Neil Desnoyers organized plant tours and local arrangements. I would like to thank all who contributed to the success of this great meeting. Without your support and contribution, the general chair's job would have been impossible.

I would also like to thank to all of the sponsors for their generous support of the conference. Special thanks go to our Platinum sponsors: AIMMS, IBM and Seth Bonder Foundation. Finally, I acknowledge the tremendous support of Lehigh University, which celebrates its 150th anniversary this year. In addition to being a Platinum sponsor of the conference, the university, its College of Engineering, and the ISE Department generously supported the organizing committee and the student volunteers.

I thank you for your participation and continued support of INFORMS, and I hope you enjoy the conference and will have fond memories of the 2015 INFORMS Annual Meeting. I also encourage you to explore the rich history and vibrant cultural life that Philadelphia has to offer.

Tamás Terlaky, General Chair

BADGES REQUIRED FOR TECHNICAL SESSIONS

2015 INFORMS Annual Meeting badges must be worn to all sessions and events. Badges will be checked at the entrance to technical session areas, as well as the Exhibit Hall. Attendees without badges will be directed to the INFORMS registration desk to register and pick up their badges. *All attendees, including speakers and session chairs, must register and pay the registration fee. Lost badges can be replaced at the registration desk for a fee of $5.*

REGISTRATION FEE

Your registration fee includes admittance to the complete technical program, the Exhibit Hall, Career Center, Technology Center, and most special programs. The following social/food events are also included: Sunday evening Welcome Reception and Awards Ceremony, Tuesday evening General Reception, and all morning and afternoon coffee breaks. No other meals are included.

Guest Registration

If your guest would like to accompany you to the major social events, you can purchase a guest registration ($80) that covers admission to the Sunday Welcome Reception, Sunday Awards Ceremony, and Tuesday General Reception. Guests are not eligible to attend the technical sessions. You can register your guest at the INFORMS Registration Desk.

QUICK REFERENCE GUIDE

Including the Master Track Schedule & Maps

Don't miss this handy reference that was provided to you with your program!

KEY: M - Marriott C - Convention Center

FRIDAY, OCTOBER 30

Combined Colloquia		
Registration	M – Registration Desk, Level 5	5:30-6:30pm
Dinner	M – Salon I/J, Level 5	6-8pm
Executive Committee Working Dinner *(invite only)*	M – 501, Level 5	6:30-8:30pm

SATURDAY, OCTOBER 31

Registration	C – Exhibit Hall A, 200 Level	7am-5:30pm
CIST		
Breakfast/Welcome	M – Salon E, Level 5	7:15-8am
Sessions	M – Salons C & D, Level 5	8am-6:10pm
Coffee Break	M – Salon C/D Foyer, Level 5	9:45-10:15am
Lunch/Speaker	M – Salon E, Level 5	12:20-1:35pm
Refreshment Break	M – Salon C/D Foyer, Level 5	4:05-4:35pm
Combined Colloquia		
Breakfast	M – Salon H, Level 5	7-8am
Doctoral Student Colloquium	M – Salon G, Level 5	8am-4:30pm
New Faculty Colloquium	M – Salon J, Level 5	8am-4:30pm
Teaching Effectiveness Colloquium	M – Salon I, Level 5	8am-4:30pm
Coffee Break	M – Salon H, Level 5	9:30-10am
Lunch	M – Salon H, Level 5	11:30am-1pm
Coffee Break	M – Salon H, Level 5	2:30-3pm
Reception	M – Salon F, Level 5	5-6pm
INFORMS Board		
Breakfast	M – Salon A/B, Level 5	7:30-8:30am
Board Meeting	M – Salon A/B, Level 5	8:30am-4:30pm
Data Mining & Analytics Workshop		
Breakfast & Welcome	M – Franklin 3, Level 4	8-8:30am
Sessions	M – Franklin 1 & 2, Level 4	8:40am-4:50pm
Lunch/Speaker	M – Franklin 3, Level 4	12:10-1:10pm
ISR Editors	M – 501, Level 5	8am-2pm
Vendor Workshops		
AIMMS	C – 103A, 100 Level	9-7:30pm
Optimization Direct	C – 104A, 100 Level	9-11:30am
Maximal Software	C – 105A, 100 Level	9-11:30am
Do Analytics	C – 105B, 100 Level	9-11:30am
IBM	C – 107B, 100 Level	12noon-2:30pm
FICO	C – 104A, 100 Level	12noon-2:30pm
Forio Simulations	C – 106A, 100 Level	12noon-2:30pm
IBM	C – 107B, 100 Level	3-5:30pm
SigmaXL	C – 103B, 100 Level	3-5:30pm
AnyLogic	C – 103C, 100 Level	3-5:30pm
GAMS Development Corp	C – 104A, 100 Level	3-5:30pm
SAS	C – 104B, 100 Level	3-5:30pm
LINDO Systems	C – 105A, 100 Level	3-5:30pm
Gurobi Optimization	C – 105B, 100 Level	3-5:30pm
SAS JMP	C – 106B, 100 Level	3-5:30pm
Frontline Systems	C – 107A, 100 Level	3-5:30pm
INFORMS Membership Meeting/Reception	M – Salon H, Level 5	5-6pm
ISS Awards & ISR Editors Reception	M – Salon L, Level 5	6:30-8pm

SUNDAY, NOVEMBER 1

Registration	C – Exhibit Hall A, 200 Level	7am-5pm
New Member Breakfast *(invite only)*	M – Salon E, Level 5	7-8am
Career Center Breakfast & Meeting	M – Salon F, Level 5	7:30-9am
Technical Sessions (SA)	Convention Center & Marriott	8-9:30am
Organization Science Competition	M – 501, Level 5	8am-5pm
INFORMS Board	M – Salon A/B, Level 5	8:30am-5:30pm
CIST		
Breakfast	M – Salon E, Level 5	7:15-8:15am
Sessions	M – Salons C & D, Level 5	8:15am-3:30pm
Coffee Break	M – Salon C/D Foyer, Level 5	9:45-10:15am
Lunch/Awards Ceremony	M – Salon E, Level 5	12noon-2pm
Coffee Break	C – 100 Level Concourse	9:30-10am
	M – Franklin Foyer	
Welcome & Plenary: Margaret Brandeau	C – Grand Ballroom B, Upper 200 Level	10-10:50am
Technical Sessions (SB)	Convention Center & Marriott	11am-12:30pm
CIEADH	M – Salon I, Level 5	10am-5:45pm
Exhibits, Career Center, Technology Center	C – Exhibit Hall A, Level 200	12noon-5pm

KEY: M - Marriott C - Convention Center

Lunch Break (on your own)		12:30-1:30pm
Junior Faculty Interest Group Lunch *(ticketed event)*	M – Salon F, Level 5	12:30-1:30pm
M&SOM Associate Editors Lunch *(invite only)*	M – Salon L, Level 5	12:30-1:30pm
Service Science Editorial Board *(invite only)*	M – Salon J, Level 5	12:30-1:30pm
Omega Rho Committee Lunch & Meeting	M – 502, Level 5	12:30-3pm
Technical Sessions (SC)	Convention Center & Marriott	1:30-3pm
Keynote: Kavita Ramanan	C – Grand Ballroom A, Upper 200 Level	3:10-4pm
Keynote: Stephen Wright	C – Grand Ballroom B, Upper 200 Level	3:10-4pm
Keynote: 2015 Edelman Reprise	C – 201C, 200 Level	3:10-4pm
Coffee Break	C – Exhibit Hall A, 200 Level	4-4:30pm
	M – Franklin Foyer	
Technical Sessions (SD)	Convention Center & Marriott	4:30-6pm
INFORMS Community Meetings	See p. 9	
INFORMS Social Networking Reception	M – Salon L, Level 5	6:30-7:30pm
Welcome Reception-Exhibits Open	C – Exhibit Hall A, 200 Level	7:30-9pm
Minority Issues Forum Reception	M – Salon F, Level 5	8-9pm
Awards Ceremony & Dessert Reception	M – Salon G/H, Level 5	8:30-9:45pm
Awards ceremony open to all. Doors close at 8:45pm.		

MONDAY, NOVEMBER 2

Registration	C – Exhibit Hall A, 200 Level	7am-5pm
International Activities Breakfast	M – Conference Suite 1, Level 3	7-8am
Transportation Science Associate Editors Breakfast Meeting *(invite only)*	M – Salon K, Level 5	7:30-9am
ITE Editors & Editorial Board	M – Pubs Suite	7:30-9am
ACORD Breakfast & Meeting	M – Salon I, Level 5	7:30-9am
Technical Sessions (MA)	Convention Center & Marriott	8-9:30am
Chapters/Fora Committee	M – 502, Level 5	8:30-9:30am
Exhibits, Career Center, Technology Center	C – Exhibit Hall A, 200 Level	9am-5pm
Section/Societies Committee	M – Salon L, Level 5	9:30-10:30am
Decision Analysis Editors *(invite only)*	M – 501, Level 5	9:30-11am
Coffee Break	C – Exhibit Hall A, 200 Level	9:30-10am
	M – Franklin Foyer	
Plenary: Michael Jordan	C – Grand Ballroom B, Upper 200 Level	10-10:50am
Technical Sessions (MB)	Convention Center & Marriott	11am-12:30pm
Education Committee Meeting	M – Conference Suite 1, Level 3	11am-12noon
Lunch Break *(on your own)*		12noon-1:30pm
Sections/Societies Officers Lunch *(invite only)*	M – Salon L, Level 5	12noon-1:30pm
BYOL – Learn about INFORMS Connect	C – Exhibit Hall, Student Lounge	12:30-1:30pm
Bonder Scholarship Lunch	M – Salon J, Level 5	12:30-1:30pm
COIN-OR Members & Users	M – Franklin 9, Level 4	12:30-1:30pm
Service Science PhD Colloquium	M – Salon I, Level 5	12:30-1:30pm
PSOR Business Meeting & Lunch *(ticketed event)*	M – Salon C, Level 5	12:30-1:30pm
Poster Session	C – Exhibit Hall A, 200 Level	12:30-2:30pm
Publications/Editors-in-Chief	M – Salon K, Level 5	12:30-3:30pm
Fellows Lunch *(invite only)*	M – Salon H, Level 5	12:45-2:30pm
Technical Sessions (MC)	Convention Center & Marriott	1:30-3pm
Subdivisions Council	M – 501, Level 5	2:30-4:30pm
Keynote: President's Panel	C – Grand Ballroom A, Upper 200 Level	3:10-4pm
Keynote: John Glaser	C – Grand Ballroom B, Upper 200 Level	3:10-4pm
Keynote: 2015 UPS George D. Smith Prize	C – 201C, 200 Level	3:10-4pm
Coffee Break	C – Exhibit Hall A, 200 Level	4-4:30pm
	M – Franklin Foyer	
Technical Sessions (MD)	Convention Center & Marriott	4:30-6pm
INFORMS Community Meetings	See p. 9	
Interfaces Editorial Board Meeting *(invite only)*	M – Pubs Suite	6:15-7:15pm
International Activities Reception	M – Salon L, Level 5	7:30-9pm
Student Awards Ceremony & Reception	M – Salon E/F, Level 5	7:30-9:30pm
WORMS 20th Anniversary Networking & Dessert Reception	Maggiano's Little Italy	8-10pm

EXHIBITS, INTERNET, EMAIL

Name badges must be worn for admittance to the Exhibit Hall, located in the Pennsylvania Convention Center, 200 Level, during the following hours:

Sunday, Nov. 1	12noon–5pm
	(7:30–9pm Welcome Reception)
Monday, Nov. 2	9am–5pm
Tuesday, Nov. 3	9am–5pm
Wednesday, Nov. 4	9am–3pm

Free Wi-Fi is available in the Technology Center. Some computers are available if you do not have your own. Name badges should be worn for admittance.

UNIVERSITY RECEPTIONS

Saturday, October 31

University of Texas at Dallas Reception
M- Salon K, Level 5
6–8pm

Monday, November 2

Carnegie Mellon
M – Salon K, Level 5
6–8pm

University of Florida
M – Salon C, Level 5
6–7:30pm

University of Michigan
M - Salon A, Level 5
7–9pm

Cornell University
M – Salon J, Level 5
7:15–8:15pm

Northwestern University
M - Salon D, Level 5
7:30–9:30pm

University of Texas at Austin
M – Salon B, Level 5
7–9pm

University of North Carolina at Chapel Hill
Loews Hotel–PSFS Room
7:30–9:30pm

PROGRAM AND SPECIAL EVENT SCHEDULE

INFORMS CENTER

Visit the INFORMS Center in Exhibit Hall A for key Annual Meeting activities.

SUNDAY

12noon–2pm

Headshots taken for INFORMS Connect.

12noon–12:30pm

Trivia Challenge in the Student Lounge.

3:30–5pm

Crop Challenge/Syngenta/Analytics Section and **Bonder Scholarships.**

7:30–8:30pm

Meet the **INFORMS Board of Directors and Staff.**

MONDAY

9–10:30am

Meet the editors from ***INFORMS Journal on Computing, Math of OR***, and ***Information Systems Research***

9:30–10am

Come volunteer for **Pro Bono Analytics**

12:30–1:30pm

Do you need some pointers on **INFORMS Connect?** Meet in the Student Lounge for a tutorial.

3:30–5pm

Speak with editors from ***Organization Science*** and ***Editor's Cut***. See the website that the **History & Traditions Committee** built to celebrate the history of our profession. Meet with officers from the **SpORts** section.

TUESDAY

9–10:30am

Meet the editors from ***Management Science*** and ***INFORMS Transactions on Education.***

11am–1pm

Headshots taken for INFORMS Connect

3:30–5pm

Celebrate 40 years of **Omega Rho** and 20 years of Women in OR/MS **(WORMS).** Propose new **INFORMS initiatives.**

WEDNESDAY

9–10:30am

Health of INFORMS

11am–1pm

Headshots taken for INFORMS Connect.

KEY: M - Marriott C - Convention Center

TUESDAY, NOVEMBER 3

Registration	C – Exhibit Hall A, 200 Level	7am-5pm
Chapters/Fora Officers Breakfast	M – Salon I, Level 5	7-8am
IFORS Officer Breakfast Meeting	M – Salon J, Level 5	7:30-9am
Korea Chapter Breakfast	M – Salon F, Level 5	7:30-9am
Boathouse Sports Tour *(ticketed event)*	C – 12th & Arch St., West Side Tunnel	8-11am
Student Chapter Officers Meeting	M – Salon I, Level 5	8-8:45am
OR & Mathematical Analytics for H.S. Math Teachers *(registration required)*	Drexel University – Lebow Hall	8am-3:30pm
Technical Sessions (TA)	Convention Center & Marriott	8-9:30am
Exhibits, Career Center, Technology Center	C – Exhibit Hall A, 200 Level	9am-5pm
Coffee Break	C – Exhibit Hall A, 200 Level M – Franklin Foyer	9:30-10am
Plenary: Alfred Spector	C – Grand Ballroom B, Upper 200 Level	10-10:50am
Technical Sessions (TB)	Convention Center & Marriott	11am-12:30pm
Lunch Break *(on your own)*		12noon-1:30pm
Keynote: Sanjay Mehrotra	C – Grand Ballroom B, Upper 200 Level	12:30-1:20pm
IJOC Editorial Board Meeting *(invite only)*	M – Salon L, Level 5	12:30-1:30pm
Women in OR/MS Lunch *(ticketed event)*	M – Salon H, Level 5	12:30-1:30pm
Poster Session	C – Exhibit Hall A, 200 Level	12:30-2:30pm
Technical Sessions (TC)	Convention Center & Marriott	1:30-3pm
Keynote: Alper Atamturk	C – Grand Ballroom A, Upper 200 Level	3:10-4pm
Keynote: Mihai Anitescu	C – Grand Ballroom B, Upper 200 Level	3:10-4pm
Keynote: 2015 Wagner Prize Winner	C – 201C, 200 Level	3:10-4pm
Coffee Break	C – Exhibit Hall A, 200 Level M – Franklin Foyer	4-4:30pm
Technical Sessions (TD)	Convention Center & Marriott	4:30-6pm
Exhibitor & Organizing Committee Reception	M – Salon J, Level 5	5-6pm
INFORMS Community Meetings	See p. 9	
Certified Analytics Professional Reception	M – Salon K, Level 5	5-6:30pm
General Reception	C – Grand Hall, 200 Level	7:30-9:30pm

WEDNESDAY, NOVEMBER 4

Registration	C – Exhibit Hall A, 200 Level	7am-4:30pm
Technical Sessions (WA)	Convention Center & Marriott	8-9:30am
Exhibits, Career Center, Technology Center	C – Exhibit Hall A, 200 Level	9am-3pm
Coffee Break	C – Exhibit Hall A, 200 Level M – Franklin Foyer	9:30-10am
Plenary: William Rouse	C – Grand Ballroom B, Upper 200 Level	10-10:50am
Technical Sessions (WB)	Convention Center & Marriott	11-12:30pm
Technical Sessions (WC)	Convention Center & Marriott	12:45-2:15pm
Coffee Break	C – Exhibit Hall A, 200 Level M – Franklin Foyer	2:15-2:45pm
Technical Sessions (WD)	Convention Center & Marriott	2:45-4:15pm
Technical Sessions (WE)	Convention Center & Marriott	4:30-6pm
CAP Exam	M – 501, Level 5	6-9pm

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Business, Receptions, and Networking…All Welcome!
KEY: M - Marriott C - Convention Center

SUNDAY, NOVEMBER 1

Information Systems	M – Salon J, Level 5	4:15–5:15pm
Aviation Applications	C – 113C, 100 Level	6:15–7:15pm
Data Mining & Artificial Intelligence	C – 203B, 200 Level	6:15–7:30pm
Decision Analysis Society Council	C – 113A, 100 Level	6:15–7:15pm
Energy, Natural Resources, & Environment	C – 111B, 100 Level	6:15–7:15pm
Forum on Education (INFORM-ED)	C – 111A, 100 Level	6:15–7:15pm
Location Analysis Section (SOLA)	C – 109A, 100 Level	6:15–7:15pm
Manufacturing & Service Ops. Mgt.	C – Ballroom A, Upper 200 Level	6:15–7:15pm
Military Applications Society Board	C – 204B, 200 Level	6:15–7:15pm
Minority Issues Forum	C – 201B, 200 Level	6:15–7:15pm
Multiple Criteria Decision Making	C – 201A, 200 Level	6:15–7:15pm
Optimization	C – 204A, 200 Level	6:15–7:15pm
Railway Applications	C – 202A, 200 Level	6:15–7:15pm
Revenue Management & Pricing	C – 103B, 100 Level	6:15–7:15pm
Simulation	C – 204C, 200 Level	6:15–7:15pm
Telecommunications	C – 203A, 200 Level	6:15–7:15pm
Transportation Science & Logistics Board	C – 201C, 200 Level	6:15–7:15pm
Women in OR/MS	C – 108B, 100 Level	6:15–7:15pm
Revenue Management & Pricing Board	C – 103B, 100 Level	7:15–8:15pm

MONDAY, NOVEMBER 2

Public Sector OR (PSOR)	M – Salon C, Level 5	12:30–1:30pm
Analytics	C – 105B, 100 Level	6:15–7:15pm
Applied Probability	C – 203B, 200 Level	6:15–7:15pm
Computing	C – 201A, 200 Level	6:15–7:15pm
CPMS Isolated Practitioners	C – 104A, 100 Level	6:15–7:15pm
Decision Analysis	C – 113A, 100 Level	6:15–7:15pm
eBusiness	C – 202B, 200 Level	6:15–7:15pm
Financial Services	C – 106A, 100 Level	6:15–7:15pm
Health Applications	C – 201B, 200 Level	6:15–7:15pm
Military Applications	C – 204B, 200 Level	6:15–7:15pm
Quality, Statistics & Reliability	C – 106B, 100 Level	6:15–7:15pm
Social Media Analytics	C – 202A, 200 Level	6:15–7:15pm
Tech, Innovation Mgmt, & Entrepreneurship	C – 204A, 200 Level	6:15–7:15pm
Transportation Science & Logistics	C – Ballroom A, Upper 200 Level	6:15–7:15pm
Behavioral Operations Management	C – 107B, 100 Level	7:15–8:15pm
Military Applications Reception	C – 204B, 200 Level	7:15–10:15pm

TUESDAY, NOVEMBER 3

SpORts	C – 107B, 100 Level	6–7pm
CPMS Section Membership Reception	C – 104A, 100 Level	6:15–7:15pm
Service Science	C – 107A, 100 Level	6:15–7:15pm

INFORMS COMMUNITIES FUTURE MEETINGS

Winter Simulation Conference
December 6-9, 2015
Hyatt Huntington Beach
Huntington Beach, California
Chair: Charles M. Macal, Argonne National Laboratory
http://www.wintersim.org/2015/

2016 INFORMS Organization Science Workshop
February 4-7, 2016
Canyon Resort, Park City, Utah
Chair: Zur Shapira, NYU Stern
http://pubsonline.informs.org/page/orsc/winter-conference

2016 INFORMS Optimization Society Workshop
March 17-19, 2016
Princeton University, Princeton, NJ
Chair: Warren Powell, Princeton University

2016 INFORMS Telecommunications Conference
March 20-22, 2016
Renaissance Hotel, Boca Raton, Florida
Chair: Michael R. Bartolacci, Penn State Berks
https://sites.psu.edu/informstelecom2016/

2016 INFORMS Revenue Management and Pricing
June 16-17, 2016
New York University, New York
Chairs: Ilan Lobel, Srikanth Jagabathula and Gustavo Vulcano, New York University

2016 INFORMS Marketing Science Conference
June 16-18, 2016
Shanghai, China
Chair: Icey Han, Fudan University

2016 INFORMS TSL Conference
June 20-22, 2016
George Tech, Atlanta, GA
Chair: Alejandro Toriello, Georga Tech.

2016 INFORMS Revenue Management and Pricing
June 29-30, 2016
CWI, Amsterdam
Chair: Arnoud Den Boer, Centrum Wiskunde & Informatica

INFORMS Southeastern Chapter Conference
October 7-8, 2016
Myrtle Beach Hilton Resort
Myrtle Beach, SC

Winter Simulation Conference 2016
December 11-14, 2016
Crystal Gateway Marriott
Arlington, VA
Chair: Todd R. Huschka, Mayo Clinic

SATURDAY, OCTOBER 31

INFORMS Membership Meeting & Reception

5–6pm
Salon H, Level 5, Marriott

The INFORMS Board of Directors encourages all members to bring their ideas, opinions, and suggestions to this annual meeting. Current business and future directions for INFORMS are on the agenda. Wine and cheese will be served.

SUNDAY, NOVEMBER 1

New Member Welcome Breakfast

7–8am
By Invitation Only
Salon E, Level 5, Marriott

New INFORMS members received an invitation for this welcome breakfast. The session will feature a presentation on member benefits, a brief orientation to navigating the meeting, and a chance to relax and connect with colleagues. Representatives from INFORMS Communities will facilitate networking tables where you can meet other members who share your professional interests.

Junior Faculty Interest Group Luncheon

12:30–1:30pm
Salon F, Level 5, Marriott
$35 ($25 students, $45 nonmember)

A limited number of tickets may be available on-site. Go to INFORMS Registration for information on availability. ***No tickets*** **will be sold at the door.**

The winners of the 2015 JFIG Paper Competition will be presented with awards. All junior faculty are invited to participate. This event gives junior faculty in engineering and business schools the opportunity to discuss career development and exchange ideas.

Sponsored by *University of Arkansas, Department of Industrial Engineering; North Carolina State University, Department of Industrial Systems Engineering, Georgia Southern University; Iowa State University, Department of Industrial and Manufacturing Systems Engineering; and University of Tennessee, Knoxville*

INFORMS Connect and Social Networking Reception

6:30–7:30pm
Salon L, Level 5, Marriott

What's your social networking strategy for yourself or for INFORMS? We invite all contributors to INFORMS social networking sites to come and meet face-to-face. Join us for refreshments and drinks - we are your INFORMS Online community!

Minority Issues Forum Reception

8–9pm
Salon F, Level 5, Marriott

Come meet old friends and make new ones while talking about minority issues, other intellectual issues, and opportunities. Posters submitted to the Minority Issues Forum Poster Competition will be on display during the reception.

Sponsored by *North Carolina Agricultural and Technical State University, Department of Industrial and Systems Engineering; Texas A&M University, Industrial and Systems Engineering; North Carolina State University, Industrial and Systems Engineering; University of Michigan; University of Maryland, Department of Operations and Information Technology; and Cornell University*

MONDAY, NOVEMBER 2

BYOL - Bring Your Own Laptop and Learn About INFORMS Connect

12:30–1:30pm
Exhibit Hall A, Student Lounge, Convention Center

Bring your laptop, your INFORMS username and password, and a lunch. We will cover frequently asked questions about this INFORMS member benefit. Prepare your questions and enjoy the chance to Connect with members both virtually and IRL (in real life).

COIN-OR Members & Users Meeting – (Bring Your Own) Bag Lunch

12:30–1:30pm
Franklin 9, Level 4, Marriott

Anyone interested in open-source software tools, open standards, and data/model repositories for any aspect of operations research are encouraged to attend this Computational Infrastructure for OR (COIN-OR) meeting. Please bring your own lunch and ideas.

PSOR Business Meeting/Lunch

12:30–1:30pm
Salon C, Level 5, Marriott
$15 Section member ($25 nonmember)

A limited number of tickets may be available on-site. Go to INFORMS Registration Desk for information on availability. ***No tickets*** **will be sold at the door.**

This lunch and business meeting is open to members of the INFORMS Section on Public Programs, Service and Needs, and those who are interested in joining the section.

PSOR Lunch sponsored by *George Washington University, Department of Engineering Management and Systems Engineering; and University of Michigan, Department of Industrial and Operations Engineering*

INFORMS Fellows Luncheon

12:45–2:30pm
By Invitation Only
Salon H, Level 5, Marriott

This luncheon honors INFORMS Fellows, examples of outstanding lifetime achievement in operations research and the management sciences. These individuals have demonstrated exceptional accomplishments and made significant contributions to the advancement of OR/MS over a period of time. Their service to the profession and to INFORMS has culminated in election to the INFORMS Fellow Award.

Class of 2015 Newly-Elected INFORMS Fellows

C. Allen Butler
Gérard Cachon
Pinar Keskinocak
Eva K. Lee
Jack Levis
Pitu Mirchandani
Benjamin Van Roy
Rakesh V. Vohra

Student Awards Ceremony & Student Reception

Awards Ceremony: 7:30–8pm
Reception: 8-9:30pm
Salon E/F, Level 5, Marriott

All students registered for the meeting are invited to attend the Student Awards Ceremony. The Chapters/Fora Committee will present the winners of the Student Chapter Annual Awards and the Judith Liebman Awards. Join us to recognize the great contributions of our most dynamic student volunteers. Plan to stay for the Student Reception, which immediately follows the ceremony.

The reception that follows the Student Awards Ceremony is open to all students – join us for an evening of food and drink, fun and networking. Come relax after a busy day of sessions and mingle with fellow students from universities around the world.

Thank You

The Seth Bonder Foundation

WORMS 20th Anniversary Networking Dessert Reception

8–10pm
Maggiano's Little Italy, 1201 Filbert St., Philadelphia, PA 19107

Come celebrate the 20th anniversary of the Forum for Women in OR/MS with a buffet of delicious Italian desserts. Make new connections in an informal setting. Open to all INFORMS members (members of WORMS or not), female and male! Soft drinks are complimentary. One free alcoholic drink for the first 50 guests.

TUESDAY, NOVEMBER 3

Women in OR/MS Forum Luncheon

12:30–1:30pm
Salon H, Level 5, Marriott
$28 ($18 students) ***SOLD OUT. No Tickets will be sold at the door.***

All those interested in issues related to women professionals in OR/MS are invited to join us.

Sponsored by *University of Southern California, Marshall School of Business; Gilbert Laporte, Ph.D., University of Michigan, Industrial and Operations Engineering Department; The Department of Operations & Decision Technologies at the Kelley School of Business; Eindhoven University of Technology; Inverse Limit, LLC; UCLA Anderson School of Management; University of Texas at Austin; University of Texas at Dallas; Texas A&M University; Harvey Mudd College; European Business School (ICSM); The Ohio State University, Integrated Systems Engineering; University of Arizona, Systems and Industrial Engineering; New York University; University of Chicago, Booth School of Business; California State University, Long Beach; H. Milton Stewart School of Industrial and System Engineering, Georgia Institute of Technology; University of Illinois at Urbana-Champaign, ISE Department; Candace Yano; University of Florida, College of Engineering; Southern Methodist University, Cox School of Business; Southern Methodist University, Lyle School of Business; Duke University, Fuqua School of Business; Pennsylvania State University, Supply Chain and Information Systems Department; University of Florida, Warrington College of Business; and The University of Texas at Arlington, Department of Industrial, Manufacturing, and Systems Engineering*

ESPECIALLY FOR STUDENTS

Coffee with a Member

This wonderful program connects INFORMS students with some of INFORMS most enthusiastic members for 15-minute impromptu meetings and some sage INFORMS advice. We know the Annual Meeting can be a bit overwhelming and hope these casual meetings will make students more comfortable, knowledgeable, and enthusiastic about both the meeting and INFORMS. Student attendees were offered the opportunity to sign up before the meeting on a first-come, first-served basis (it is not possible to sign up in Philadelphia.) We will follow up after the meeting with a short survey to the students and members who participated to help us improve the program for future meetings.



SUNDAY

WELCOME RECEPTION & EXHIBITS

7:30–9pm
Exhibit Hall A, 200 Level, Convention Center

The Welcome Reception is the perfect venue to meet with colleagues and visit the exhibits. Light snacks will be served. Soft drinks are complimentary, with a cash bar for other beverages.

INFORMS AWARDS CEREMONY & DESSERT RECEPTION

8:30–9:45pm (Doors close at 8:45pm)
Salon G/H, Level 5, Marriott

The INFORMS Board of Directors invites you to honor and celebrate the achievements of our colleagues at the annual Awards Ceremony. You can attend the Welcome Reception first and then proceed to Salon G/H in the Marriott for the Awards Ceremony. Following the ceremony, you'll have an opportunity to congratulate the awardees at a special dessert reception. Please note that the reception is part of the ceremony event, open to the awardees, their friends and colleagues, and all those who attend the Award Ceremony itself. We are sorry we cannot accommodate guests at the reception who do not also attend the ceremony.

These prestigious awards will be presented during the ceremony:

Saul Gass Expository Writing Award
Martin Lariviere, Northwestern University

INFORMS President's Award
To Be Announced at Awards Ceremony

Frederick W. Lanchester Award
To Be Announced at Awards Ceremony

Prize for the Teaching of OR/MS Practice
Thomas W. Lucas, Naval Postgraduate School

George E. Kimball Medal
Jack Levis, UPS
Anne G. Robinson, Verizon Wireless

John von Neumann Theory Prize
To Be Announced at Awards Ceremony

Bonder Scholarship for Applied Operations Research in Health Services
Hadi El-Amine, Virginia Tech

Bonder Scholarship for Applied Operations Research in Military Applications
Major Ross Schuchard, George Mason University

Four student awards will also be announced during the ceremony: George E. Nicholson Student Paper Competition, George B. Dantzig Dissertation Prize, Doing Good with Good OR Student Competition, and Undergraduate Operations Research Prize.

TUESDAY

GENERAL RECEPTION

7:30-9:30pm
Grand Hall, 200 Level,
Convention Center

Philadelphia is the home of many culinary institutions, both gourmet and local. Join us as we serve up a fun, locally inspired menu including the Philly cheesesteaks created in Philadelphia in the 1930s. This year's General Reception will also feature a traditional Mummers string band for entertainment. Complimentary soft drinks and a cash bar will be available. This reception provides the perfect atmosphere for fellowship and networking, while also having a bit of fun after a long day of sessions.



informs® EDITOR'S CUT

INFORMS Editor's Cut is a comprehensive online multimedia portal designed to enrich the knowledge base of those interested in analytics and operations research applied across a variety of topics. These unique collections, curated by recognized thought leaders, provide users with a simple and effective way to access the vast wealth of INFORMS content.

Current volumes include Healthcare in the Age of Analytics and Analytics in Sports.
Visit the INFORMS Center on Monday, 3:30-5pm to meet editors and learn about Editor's Cut.

http://pubsonline.informs.org/editorscut

MOBILE APP

The INFORMS Meetings App is available for iOS and Android devices. Detailed information, including the schedule of sessions, session abstracts, meeting locations maps, exhibit details, and much more can be found on the app. This dynamic app can be downloaded directly to your device by visiting the iTunes Store or the Google Play Store and searching for "INFORMS Meetings."

When you view the meeting program in the app, you can either browse through the parallel sessions and special events or search for a specific speaker or keywords. As you locate the events, sessions and presentations you are interested in, click on the star button, which bookmarks it to the My Schedule itinerary. Use My Schedule for a quick reference tool.

One of the great features of the conference app is that it allows you to use the Badge Scanner - located in the top-right of the user menu - to send another member a contact request through INFORMS Connect. Simply scan the QR code on their meeting badge, click "Add Friend" and it will send them a contact request.

New This Year: INFORMS Walking Leaderboard

Who can accumulate the most steps over the course of the Annual Meeting? Log into "My Profile" found in the user menu of the app, select INFORMS Walking Leaderboard, and enter in the number of steps you walked that day by checking your phone or fitness tracker for steps. To be a leader for a particular day, you must enter your steps by 11:59pm EST. If you forget to track a day's steps, you can still enter your steps to be added to your cumulative total. We will award daily prizes, in addition to a FitBit sponsored by the **INFORMS SpORtS section** for the cumulative total champion.

SELF-SERVICE KIOSKS

Receipts – Print your conference receipt on demand by going to Exhibit Hall A, 200 Level, Convention Center, located near INFORMS Registration.

Program Flip Books – Three kiosks are available for full program information. Two are located in Exhibit Hall A and the third kiosk will be located in the Marriott on Level 4.

Express On-site Registration – Avoid the lines and make use of the two express kiosks that are available for express on-site registration in Exhibit Hall A, 200 Level, Convention Center near INFORMS Registration.

Ribbons – Are you a Session Chair, Cluster Chair or an attendee that is "Going Green" and need your ribbons? New this year we have a 'ribbon wall' where you can select a ribbon or ribbons that can be added to your badge holder!

ENGAGE WITH ONLINE TOOLS

Blogs

Check out the Philadelphia 2015 website for posts from our talented group of bloggers during and after the meeting:

Ana-Iulia Alexandrescu
John Angelis
Aaron Burciaga, CAP
C. Allen Butler
Sertalp Çay
James Cochran
Walt DeGrange
Neil Desnoyers
Burcu Keskin
S. Phil Kim
Marco Lübbecke
Laura McLay
Polly Mitchell-Guthrie
David Morrison
Anna Nagurney
Scott Nestler, CAP
Patrick Noonan
Paul Rubin
Matt Saltzman
Harrison Schramm, CAP
Thiago Serra
Bismark Singh
Francis Sneddon
Shivaram Subramanian
Aurelie Thiele
Michael Trick

All attendees are welcome to blog. For instructions, email mary.leszczynski@informs.org or drop by the INFORMS Center in Exhibit Hall A, 200 Level.

Join the Twitter Conversation

Add the hashtag #informs2015 to your tweets to associate them with the meeting. Tweets with #informs2015 will be displayed in the Attendee Twitter Feed on the homepage, along with official conference tweets that will alert you to late-breaking information. If you haven't become a Twitter-ite but would like an introduction, stop by the INFORMS booths for a quick lesson. Follow @INFORMS2015 for official meeting announcements.

LinkedIn

Connect with other attendees on the Annual Meeting LinkedIn group to discuss key topics. Go to the Annual Meeting website homepage to find a link leading to the Annual Meeting LinkedIn group.

Pinterest

Visit our Pinterest Annual Meeting Board to view a collection of fun things to do and see while visiting Philadelphia: https://www.pinterest.com/informs/2015-informs-annual-meeting-philadelphia/.

Share Your Conference Photos

Attendees are encouraged to take photos and videos at the meeting. Send your photos to photosandvideo@mail.informs.org so we can post them in our Flickr album and on the meeting blog.

eNews Daily

INFORMS is publishing the eighth volume of its popular Annual Meeting eNews Daily in Philadelphia. This official record of the Annual Meeting is delivered each day to your inbox, providing a recap of the previous day's happenings and a preview of the upcoming can't-miss events. There are links to each issue on the Annual Meeting website. If you would like to advertise in eNews Daily, visit the sponsor page on the Annual Meeting website.

All Plenary & Keynote Presentations will take place in the Convention Center.

SUNDAY, NOVEMBER 1

WELCOME & PLENARY

10–10:50am
Grand Ballroom B, Upper 200 Level

Welcome
Tamás Terlaky, General Chair, INFORMS Annual Meeting Chair: Department of Industrial and Systems Engineering, Lehigh University

Edward H. Kaplan, President-Elect, INFORMS William N. and Marie A. Beach Professor of Operations Research, Professor of Public Health & Professor of Engineering, Yale University

PLENARY

Omega Rho Distinguished Lecture

Creating Impact with Operations Research in Health
Margaret L. Brandeau, Coleman F. Fung Professor of Engineering and Professor of Medicine (by Courtesy), Stanford University

OR-based analyses have the potential to improve decision making for many important problems in healthcare. However, scholars – particularly junior scholars – often avoid working on practical applications in health because promotion and tenure processes tend to value theoretical studies more highly than applied studies. This talk discusses the speaker's experiences in using OR to inform and influence decisions in health, and provides a blueprint for researchers who wish to find success by taking a similar path. We also suggest how journals, funding agencies, and senior academics can encourage such work by taking a broader and more informed view of the potential role and contributions of OR to solving healthcare problems.



Margaret L. Brandeau is Coleman F. Fung Professor of Engineering and Professor of Medicine (by Courtesy) at Stanford University. Her research focuses on the development of applied mathematical and economic models to support health policy decisions. Her recent work has focused on HIV prevention and treatment programs, programs to control the spread of hepatitis B virus, and preparedness plans for bioterror response. She has published extensively in the areas of health policy modeling, operations management, management science applications, and bioterrorism preparedness planning. She is an INFORMS Fellow, and has received the INFORMS President's Award (recognizing important contributions to the welfare of society), the Pierskalla Award from INFORMS (for research excellence in healthcare management science), the Award for Excellence in Application of Pharmacoeconomics and Health Outcomes Research from the International Society for Pharmacoeconomics and Outcomes Research (ISPOR), and a Presidential Young Investigator Award from the National Science Foundation, among other awards. Professor Brandeau earned a BS in mathematics and an MS in operations research from MIT, and a PhD in engineering-economic systems from Stanford University.

OMEGA RHO

OMEGA RHO, the official Honor Society of INFORMS, was founded in 1976 to recognize superior scholarship and encourage leadership in operations research, management science, and related disciplines. The society has 40 active collegiate chapters, more than 5,000 student and faculty members, and is a member of the Association of College Honor Societies. In addition to sponsoring OMEGA RHO Distinguished Lectures at INFORMS Annual and International meetings, OMEGA RHO provides financial support to the annual INFORMS Colloquium. Honorary membership in OMEGA RHO is bestowed upon individuals who provide leadership and extraordinary support for the encouragement of operations research and management science through their professional activities. Prior to delivering the OMEGA RHO Distinguished Lecture, Margaret L. Brandeau will be inducted as an Honorary Member of OMEGA RHO.

KEYNOTE

3:10–4pm
Grand Ballroom A, Upper 200 Level

Stochastic Networks: Scaling Limits, Performance Analysis and Optimization
Kavita Ramanan, Professor, Division of Applied Mathematics, Brown University

Stochastic networks are ubiquitous and arise in diverse fields including telecommunications, service systems for call centers and healthcare, computer networks, and biological systems. These networks are typically too complex to admit an exact analysis. However, it is often possible to obtain tractable approximations of both transient and equilibrium behavior that can provide key insight into network performance. These include both deterministic or fluid approximations that describe mean behavior and diffusion approximations that capture stochastic variability. The accuracy of these approximations in a suitable network parameter regime can be rigorously justified through "limit theorems." While the mathematical methods required to justify these approximations are fairly well developed for some classes of single-server networks that use so-called head-of-the-line scheduling policies, new approaches are required to analyze many other classes of networks that are of relevance for applications, such as large-scale load-balancing networks used, for example, in distributed memory machines and Web servers. We provide a survey of these mathematical methods and the associated scaling limits, with an emphasis on recent developments, and illustrate through a number of concrete examples how these approximations can be used to develop new algorithms and optimize network design.



Kavita Ramanan is a professor in the Division of Applied Mathematics at Brown University. She was a professor at the Mathematical Sciences Department at Carnegie Mellon University and a member of technical staff at the Mathematical Sciences Research Center at Bell Laboratories. Her research lies in the area of probability theory, stochastic processes, and their applications, including the study of stochastic networks that arise in telecommunications and operations research. She has served on numerous editorial boards including the *Annals of Probability, Annals of Applied Probability, and Mathematics of Operations Research and Queueing Systems.* She is a recipient of the Erlang Prize of the INFORMS Applied Probability Society (2006), was elected fellow of the Institute for Mathematics and Statistics (IMS) in 2013, and was an IMS Medallion Lecturer in 2015.

All Plenary & Keynote Presentations will take place in the Convention Center.

KEYNOTE

3:10–4pm
Grand Ballroom B, Upper 200 Level

Optimization Techniques in Data Analysis
Stephen J. Wright, Professor of Computer Sciences, University of Wisconsin-Madison

Optimization perspectives have provided valuable insights into machine learning and data analysis problems, and optimization formulations have led to practical algorithms with good theoretical properties. In turn, the rich collection of problems arising in learning and data analysis is driving new fundamental research in optimization, reviving interest in well-established techniques and stimulating development of new methods. We discuss research on several areas of learning and data analysis, including regression/classification, signal and image reconstruction, and manifold learning, in each case describing problem areas in which optimization algorithms have been developed and successfully applied.



Stephen J. Wright is a professor of computer sciences at the University of Wisconsin-Madison. His research focuses on computational optimization and its applications to many areas of science and engineering. Prior to joining UW-Madison in 2001, Wright was a senior computer scientist at Argonne National Laboratory (1990–2001), and a professor of computer science at the University of Chicago (2000–2001). He has served as chair of the Mathematical Optimization Society and as a Trustee of the Society for Industrial and Applied Mathematics (SIAM). He is a Fellow of SIAM. In 2014, he won the W.R.G. Baker Award from IEEE. Wright is the author or coauthor of widely used text/reference books in optimization including *Primal Dual Interior-Point Methods* (SIAM 1997) and *Numerical Optimization* (2nd ed., Springer 2006, with J. Nocedal). He has published on optimization theory, algorithms, software, and applications. Wright is editor-in-chief of the *SIAM Journal on Optimization* and has served as editor-in-chief or associate editor of *Mathematical Programming: Series A and B*, *SIAM Review,* and *Applied Mathematics and Computation*.

KEYNOTE

3:10–4pm
201C, 200 Level

Reprise of 2015 Edelman Award-Winning Presentation
Joseph Byrum, Craig Davis, Gregory Doonan, Tracy Doubler, David Foster, Bruce Luzzi, Ronald Mowers, Chris Zinselmeier

Syngenta, a leading developer of crop varieties (seeds) that provide food for human and livestock consumption, is committed to bringing greater food security to an increasingly populous world by creating a transformational shift in farm productivity. Syngenta Soybean Research & Development (R&D) is leading Syngenta's corporate plant-breeding strategy by developing and implementing a new product development model that is enabling the creation of an efficient and effective soybean breeding strategy. Key to the new strategy is the combination of advanced analytics and plant-breeding knowledge to find opportunities to increase crop productivity and optimize plant-breeding processes. Syngenta uses discrete-event and Monte Carlo simulation models to codify Syngenta Soybean R&D best practices, and uses stochastic optimization to create the best soybean breeding plans and strategically align its research efforts. As a result of using these new analytical tools, Syngenta estimates that it will save more than $287 million between 2012 and 2016.

FRANZ EDELMAN AWARD

The Franz Edelman Award for Achievement in Operations Research and the Management Sciences calls out, recognizes, and rewards outstanding, high impact applications of OR/MS. Each year, six finalists compete in the "Super Bowl" of O.R. in practice. The 2015 finalists include IBM, Ingram Micro, LMI/ Defense Logistics Agency, Saudi Arabia Ministry of Municipal and Rural Affairs, Sygenta, and U.S. Army. In this keynote, the first-place Syngenta will reprise their winning presentation.

MONDAY, NOVEMBER 2

PLENARY

10–10:50am
Grand Ballroom B, Upper 200 Level

Computational Thinking, Inferential Thinking and Big Data
Michael I. Jordan, Pehong Chen Distinguished Professor in the Department of Electrical Engineering and Computer Science, Department of Statistics, University of California, Berkeley

The rapid growth in the size and scope of datasets in science and technology has created a need for novel foundational perspectives on data analysis that blend the inferential and computational sciences. The fact that classical perspectives from these fields are not adequate to address emerging problems in "Big Data" is apparent from their sharply divergent nature at an elementary level—in computational science, the growth of the number of data points is a source of "complexity" that must be tamed via algorithms or hardware, whereas in statistics, the growth of the number of data points is a source of "simplicity" in that inferences are generally stronger and asymptotic results can be invoked. On a formal level, the gap is made evident by the lack of a role for computational concepts such as "runtime" in core statistical theory and the lack of a role for statistical concepts such as "risk" in core computational theory. I present several research vignettes aimed at bridging computation and statistics, including the problem of inference under privacy and communication constraints, algorithm weakening as a tool for trading off the speed and accuracy of inference, and the theoretical study of lower bounds that embody computational and statistical constraints.



Michael I. Jordan is the Pehong Chen Distinguished Professor in the Department of Electrical Engineering and Computer Science and the Department of Statistics at the University of California, Berkeley. His research interests bridge the computational, statistical, cognitive, and biological sciences, and have focused in recent years on Bayesian nonparametric analysis, probabilistic graphical models, spectral methods, kernel machines, and applications to problems in distributed computing systems, natural language

All Plenary & Keynote Presentations will take place in the Convention Center.

MONDAY CONTINUED

processing, signal processing, and statistical genetics. Professor Jordan is a member of the National Academy of Sciences, National Academy of Engineering, and American Academy of Arts and Sciences. He is a Fellow of the American Association for the Advancement of Science. He has been named a Neyman Lecturer and a Medallion Lecturer by the Institute of Mathematical Statistics. He received the David E. Rumelhart Prize in 2015 and the ACM/AAAI Allen Newell Award in 2009. He is a Fellow of the AAAI, ACM, ASA, CSS, IEEE, IMS, ISBA, and SIAM.

KEYNOTE

3:10–4pm
Grand Ballroom A, Upper 200 Level

President's Panel

Moderated by Tamás Terlaky, General Chair, INFORMS Annual Meeting Chair: Department of Industrial and Systems Engineering, Lehigh University

Panelists: Mark C. Reed, Saint Joseph's University; Dr. Ali A. Houshmand, Rowan University; Stephen Klasko, Thomas Jefferson University and Jefferson Health System; John D. Simon, Lehigh University



Mark C. Reed, Ed.D., began his tenure as the 28th president of Saint Joseph's University, and the first lay president in the University's 164-year history, on July 1, 2015. Formerly, Dr. Reed served as senior vice president and chief of staff at Fairfield University, in Fairfield, CT.

A 1992 graduate of St. Joseph's Preparatory School in Philadelphia, Reed received a B.S. in mathematics from Fairfield University in 1996, a Master of Education in secondary educational administration from Boston College in 1999, an MBA from Fairfield in 2002, and a Doctorate of Education in higher education management from the University of Pennsylvania in 2008.

During his 15-year career at Fairfield and prior to his most recent position as senior vice president and chief of staff, Reed served as the institution's interim vice president for university advancement; vice president for administration and student affairs; vice president for student affairs; associate vice president and dean of students; and dean of students. He is a past president of the Jesuit Student Affairs Association, and also taught mathematics as an adjunct faculty member at Fairfield. He recently received Fairfield's Distinguished Faculty/Administrator Award. Preceding his career in higher education, Dr. Reed worked as a teacher and administrator in Catholic secondary education.



Dr. Ali A. Houshmand became Rowan University's seventh president in June 2012 after serving approximately six years as provost/senior vice president, CEO, and interim president. His vision and leadership have set the University on a path of unprecedented transformation, most recently earning Rowan regard as New Jersey's second comprehensive research university.

In just the past three years under Dr. Houshmand's leadership, Rowan opened Cooper Medical School of Rowan University and integrated the School of Osteopathic Medicine from the former University of Medicine and Dentistry of New Jersey. Rowan is now just the second university in the nation to offer M.D. and D.O. degree programs.

Dr. Houshmand remains steadfast in believing the University must stay loyal to its core mission: top-quality, affordable, undergraduate education. To that end, he committed to not raising undergraduate tuition beyond the cost of inflation during his tenure.

Dr. Houshmand is an active partner in economic development. A hallmark of this commitment is the Rowan Boulevard project—a $300-million collaboration of private developers, the Borough of Glassboro, and the University to create an educational and economic corridor that is reinventing the historic downtown and changing the definition of "town-gown" relations.

He has broadened this philosophy to make the University more entrepreneurial, with a goal of increasing research and academic offerings at the intersection of science, technology, business, engineering, and medicine. Plans are under way to expand the University's technology park and introduce several Ph.D. programs.

Determined to address the severe shortage of access to high-quality undergraduate education in New Jersey's southern half, Dr. Houshmand has committed to increase Rowan's enrollment from 15,000 to 25,000 students by 2023, increase annual research funding from $25 million to $100 million, and increase Rowan's operating budget from $400 million to $1 billion, making Rowan one of the region's most important economic engines.

Dr. Houshmand earned his bachelor's and master's degrees in mathematics and mathematical statistics from the University of Essex, United Kingdom. He earned a second master's degree and a doctoral degree in industrial and operations engineering from the University of Michigan, Ann Arbor. He then worked as a staff analyst for United Airlines, developing large-scale optimization and forecasting models. Leaving industry for academia, he joined the University of Cincinnati and, later, Drexel University, where he taught and held several academic administrative positions before coming to Rowan.



Stephen Klasko is president of Thomas Jefferson University and CEO of Jefferson Health System after serving as CEO of USF Health and dean of the University of South Florida College of Medicine. A board certified OB-GYN, he is bridging the art and science of medicine and healthcare information technology through an entrepreneurial-academic model. After receiving his M.D. and completing his obstetrics and gynecology residency, he completed his M.B.A. at the Wharton School of Business, University of Pennsylvania.

At Jefferson, Dr. Klasko leads an academic medical center that consistently ranks among the top academic health systems in the country with 19,000 employees, five hospitals, and over 2,000,000 patient visits. In 2015, he led the merger of Thomas Jefferson University and Health System and Abington Health Network in one of the nation's first shared governance, "hub and hub" academic medical center mergers.

Over the last several years, he has led the development of the first medical school choosing students based on emotional intelligence, led the team that built the country's largest assessment of technical and teamwork competence center, and created an innovative primary care-driven, patient-centric, Medicare-based accountable care model within the country's largest retirement community and created Jeff Connect: Medicine Without Walls, a unique telehealth and unscheduled care innovation entity.

Dr. Klasko has been on the boards of several national nonprofit hospital systems and is currently on the corporate board of Teleflex (TFX: NYSE), a global medical device company. He has recently been named as a trustee of Lehigh University. He has written extensively on the need to change the "DNA of healthcare" by transforming the selection and education of health professionals. To that end, he has received over two million dollars in grants researching the biases affecting physicians' willingness to accept change. He has written over 200 peer-reviewed articles and books including *The Phantom Stethoscope* (Hillsboro Press 1999) and "Mamas Don't Let Your Babies Grow Up to Be OB-GYNs."

All Plenary & Keynote Presentations will take place in the Convention Center.



John D. Simon became the 14th president of Lehigh University in July 2015. He previously was executive vice president and provost of the University of Virginia, where he oversaw the academic activities of more than 20,000 undergraduate and graduate students as well as 2,200 faculty. Under his leadership, the University of Virginia launched several important programs including UVA's Data Science Institute; he created a new physical presence in Asia and established an Endowment for the Arts, among many other notable accomplishments. Before arriving at the University of Virginia, John served as vice provost of academic affairs at Duke University and chairman of Duke's chemistry department. He received his B.A. in chemistry from Williams College and Ph.D. from Harvard University. He is a fellow of the American Physical Society and the American Association for the Advancement of Science. He is the author of more than 250 scientific papers and three textbooks. His most recent research focuses on the chemical properties of pigments preserved in the fossil record.

KEYNOTE

3:10–4pm
Grand Ballroom B, Upper 200 Level

The Advent of the Intelligent Electronic Health Record

John Glaser, Executive Vice President, Cerner

We have made great progress in embedding the electronic health record (EHR) in our healthcare processes, with use reaching unprecedented rates. Now, we are poised to take it the next level with the intelligent EHR. The intelligent EHR will look very similar to the traditional system – one can still look up patient results and history and write prescriptions but the application will move past transactional functions. The intelligent EHR will be characterized by sophisticated and flexible decision support, rules engines, process monitoring engines, intelligent displays of important patient data, access to knowledge resources, the ability to collect data from multiple care settings through a health information exchange, and tools that enable provider collaboration.

The advent of the intelligent EHR will be necessary if healthcare is to effectively address challenges such as those generated by payment reform and managing the care of chronically ill populations.



John Glaser, executive vice president at Cerner, is responsible for driving technology and product strategies, interoperability, and government policy development. Glaser has devoted his career to furthering healthcare through innovation. He is committed to helping clients maximize their investment in HIT. Prior to joining Cerner, Glaser was CEO of the Health Services business unit of Siemens Healthcare, where he was responsible for heading Siemens' global healthcare IT business. Cerner acquired Siemens Health Services in February 2015. Formerly, Glaser was vice president and chief information officer at Partners HealthCare, Inc. Prior to that, he was vice president of information systems at Brigham and Women's Hospital. Glaser is a well-respected industry thought leader. He was the founding chair of the College of Healthcare Information Management Executives (CHIME), the past president of the Healthcare Information & Management Systems Society (HIMSS), and has served on numerous boards including the eHealth Initiative, National Alliance for Health Information Technology, and American Medical Informatics Association (AMIA). Additionally, Glaser is a fellow of HIMSS, CHIME, and the American College of Medical Informatics. He is also a former senior advisor to the Office of the National Coordinator for Health Information Technology (ONC). Glaser has published more than 150 articles and three books on the strategic application of information technology in healthcare, including the most widely used textbook on the topic, *Healthcare Information Systems: A Practical Approach for Health Care Management*. Glaser is on the faculty of the Wharton School at the University of Pennsylvania, the Medical University of South Carolina, and the Harvard School of Public Health. He received his PhD in healthcare information systems from the University of Minnesota.

KEYNOTE

3:10–4pm
201C, 200 Level



Reprise of the 2015 UPS George D. Smith Prize

The Centre for Operations Excellence and the Master of Management in Operations Research program at the Sauder School of Business, University of British Columbia, provides rigorous practical training in the quantitative analysis of business problems. We will present an overview of the program, starting with a look back at its history, outlining details of how the program is structured (focusing in particular on the "industry project"), and sharing ideas about what has helped the program succeed.

UPS SMITH PRIZE

The UPS George D. Smith Prize recognizes an academic department or program for effective and innovative preparation of students to be good practitioners of O.R., management science, or analytics. The UPS George D. Smith Prize is created in the spirit of strengthening ties between industry and the schools of higher education that graduate young practitioners of operations research. INFORMS, with the help of CPMS, awards the prize annually to an academic department or program for effective and innovative preparation of students to be good practitioners of operations research, management science, or analytics. The UPS George D. Smith Prize is named in honor of the late UPS chief executive officer who was a champion of operations researchers at a leading Fortune 500 corporation. UPS has generously underwritten the award in his memory.

All Plenary & Keynote Presentations will take place in the Convention Center.

TUESDAY, NOVEMBER 3

PLENARY

10–10:50am
Grand Ballroom B, Upper 200 Level

Empiricism and Optimization in the World of Big Data

Alfred Z. Spector, (retired) Vice President of Research and Special Initiatives, Google

In its first decades, computer science combined mathematical analysis (e.g., the study of computability and algorithms) and engineering (e.g., abstraction, encapsulation, and re-use). However, empiricism became an equally important third leg in the 1980s. This happened because of the (1) growth in computer usage and data availability, (2) exponential growth in communications, computation, and storage capabilities, (3) progress in machine learning and optimization, and (4) significant economic and scientific rewards. This presentation will cover the growth and benefits of empirical computer science to date but will focus on key challenges moving forward, particularly considering the advantages, and consequences, of various forms of optimization. In particular, I will discuss open questions regarding big data and artificial intelligence, issues in big data and science (including a discussion of the role of the hypothesis), and some fascinating, if not problematic, societal implications.



Alfred Z. Spector recently retired as vice president of Research and Special Initiatives at Google. There, he was responsible for research at Google and also Google's open source, university relations, internationalization, and various education initiatives. He was also the executive engineering lead for Google.org. Previously, Dr. Spector was vice president of strategy and technology at IBM's Software Business, and prior to that, he was vice president of services and software research across IBM. He was also founder and CEO of Transarc Corporation, a pioneer in distributed computing, and was a professor of computer science at Carnegie Mellon University. Beginning in 2004, Dr. Spector has been the lead proponent of "CS+X" – a short-hand for the need to infuse computer science into the study and practice of every discipline, X. Dr. Spector received his Ph.D. in computer science from Stanford and a bachelor's degree in applied mathematics from Harvard. He is a member of the National Academy of Engineering and a Fellow of IEEE, ACM, and American Academy of Arts and Sciences. Dr. Spector is also the recipient of the 2001 IEEE Computer Society's Tsutomu Kanai Award for work in scalable architectures and distributed systems.

KEYNOTE

12:30–1:20pm
Grand Ballroom B, Upper 200 Level

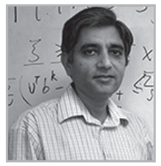
Optimizing Healthcare and Using Healthcare to Motivate the Development of New Optimization Models, Methods, and Tools

Sanjay Mehrotra, Director, Center for Engineering at Health, Northwestern University

Healthcare globally is a significantly underoptimized system. Policies are determined based on legislated priorities, and decisions are often made without scientific rigor. There is a growing interest in optimal resource utilization while achieving greater equity and access in healthcare. Solutions require a transdisciplinary collaborative approach, where members of the INFORMS community are making significant contributions by developing increasingly realistic data-driven modeling approaches to promote evidence-based decision making and informing policy changes. The need to bring greater realism to the decision models also motivates new methodological developments that can then benefit application in areas other than health.

The central consideration in developing innovative strategies to improve the health system is to save and improve the quality of life of patients. This must be balanced against risks and cost to individuals and society. It leads to problems with multiple objectives, and input from multiple experts weighing in on these objectives. The parameters of the functions modeling the objectives and constraints are uncertain as model recommendations have implications on an unknown future.

In this presentation, after briefly reviewing the global healthcare landscape, we will focus on a few specific examples from our research illustrating how close interactions with transplant surgeons and nephrologists led to the development of alternative strategic models for improving geographical disparity in waiting time for kidney transplant; consideration of a budgeting problem arising in diabetes prevention programs provided insights toward developing new concepts of weight-robustness in multiobjective decision making; and the need for solving realistic staffing and scheduling problems under demand uncertainty led to the development of a highly efficient computational tool for solving a general class of stochastic mixed-integer programs.



Sanjay Mehrotra is the director of Center for Engineering at Health at Northwestern University. He received his PhD in operations research from Columbia University. Mehrotra is known for his methodology research in optimization that has spanned from linear, convex, mixed integer, stochastic, multiobjective, distributionally robust, and risk-adjusted optimization. His healthcare research includes topics in predictive modeling, budgeting, hospital operations, and policy modeling using modern operations research tools. He is the immediate past chair of the INFORMS Optimization Society. He has also been an INFORMS vice president representing Chapters/Fora. He is the current Healthcare Department editor of the Institute of Industrial Engineers journal *IIE Transactions,* and also held the role of Optimization Department editor for the same journal.

KEYNOTE

3:10–4pm
Grand Ballroom A, Upper 200 Level

Conic Integer Optimization

Alper Atamturk, Professor of Industrial Engineering and Operations Research, University of California, Berkeley

In the last 25 years we have experienced significant advances in conic optimization. Polynomial interior point algorithms that have already been developed for linear optimization are extended to second-order cone optimization and semidefinite optimization. The availability of efficient algorithms for convex conic optimization spurred many novel optimization and control applications in diverse areas ranging from medical imaging to statistical learning, from finance to truss design. However, the advances in convex conic optimization and linear integer optimization have, until recently, not translated into major improvements in conic integer optimization, i.e., conic optimization problems with integer variables. In this talk, we will review the recent progress in conic integer optimization. We will discuss cuts, lifting methods, and conic reformulations for improving computations for general as well as special structured problems and connections to submodular optimization for the 0-1 case. We will present applications of conic integer optimization in probabilistic optimization, portfolio optimization, and location/inventory optimization with risk pooling.



Alper Atamturk is a professor of industrial engineering and operations research at the University of California, Berkeley. He received his Ph.D. from the Georgia Institute of Technology in 1998 with a major in operations research and minor in computer science. His current research interests are in discrete optimization and optimization under uncertainty with applications to energy, finance and operations interface, cancer therapy, and defense. He serves on the editorial boards of *Discrete Optimization, Journal of Risk, Mathematical Programming Computation, Networks,* and *Operations Research*. He served on the organizing committees of INFORMS, IPCO, MIP, among others. He served as vice chair-integer programming of the INFORMS Optimization Society during 2008–2009. Dr. Atamturk is a U.S. Department of Defense National Security Science and Engineering Fellow.

KEYNOTE

3:10–4pm
Grand Ballroom B, Upper 200 Level

Getting More Out of a Modern Power Grid: The Role of Mathematical Modeling and Optimization

Mihai Anitescu, Senior Computational Mathematician, Mathematics and Computer Science Division, Argonne National Laboratory, and Professor, Department of Statistics, University of Chicago

The electrical power grid (the electricity transmission and distribution system) is one of the most complex engineering achievements of the 20th century. It is also at the center of massive changes in the way we create and consume energy. Such changes are brought about by many drivers, including an increasing use of renewable energy and natural gas. Moreover, the power grid exhibits persistent conceptual difficulties that, while generally successfully contained by engineering practice, have never been fully resolved. In this talk, we discuss some of these difficulties and the important role that mathematical modeling and optimization can play in solving them. We argue that in some cases a change of the problem framework may be desirable and that this may be made while keeping the solution computationally achievable. We outline a number of existing and emerging fundamental research challenges and discuss some recent promising avenues in the area. A distinguishing feature of power grid applications is that optimization is ubiquitous and it must accommodate simultaneously multiple complexity drivers. These include not only discrete variables, nonconvexity, or stochasticity, but also ordinary and—with the increased usage of natural gas—partial differential equations. We discuss the productivity and performance implications of this fact for the modeling and computational environments.

Mihai Anitescu is a senior computational mathematician in the Mathematics and Computer Science Division at Argonne National Laboratory and a professor in the Department of Statistics at the University of Chicago. His research interests are in the areas of numerical optimization, computational science, numerical analysis, and uncertainty quantification. He has used techniques from these areas in key applications in power grid and related infrastructure, nuclear engineering, materials science, geosciences, chemistry, chemical engineering, and signal processing. He has co-authored more than 100 peer-reviewed papers in scholarly journals, book chapters, and conference proceedings, and he is on the editorial board of *Mathematical Programming A and B, SIAM Journal on Optimization, Optimization Methods and Software, SIAM Journal on Scientific Computing,* and *SIAM/ASA Journal on Uncertainty Quantification*.

All Plenary & Keynote Presentations will take place in the Convention Center.

KEYNOTE

3:10–4pm
201C, 200 Level

2015 Daniel H. Wagner Prize Winner Announcement and Reprise



Daniel H. Wagner earned his PhD in mathematics in 1951 from Brown University. He began his career in the U.S. Navy's Operations Evaluation Group (OEG) at the Pentagon, where he worked on operations research for naval warfare. In 1963, he created the firm of Daniel H. Wagner Associates, Inc., which is still in existence today. During his years as president and principal owner of Wagner Associates, Dan brought many high-quality mathematicians into the operations research community. This led to significant advances in the firm's fields of endeavor and delivery of significant applications to the Navy, Coast Guard, and other clients; many of these applications are still in service today. After retirement from his eponymous company, Dan Wagner continued his commitment to the field of operations research, serving in various teaching and research positions with the U.S. Naval Postgraduate School and the U.S. Naval Academy. He was an active member of ORSA, and then INFORMS, for more than 40 years.

WAGNER PRIZE

The Daniel H. Wagner Prize is awarded for a paper and presentation that describe a real-world, successful application of operations research or advanced analytics. The prize criteria emphasize innovative, elegant mathematical modeling and clear exposition.

All Plenary & Keynote Presentations will take place in the Convention Center.

WEDNESDAY, NOVEMBER 4

PLENARY

10–10:50am
Grand Ballroom B, Upper 200 Level

Understanding and Managing the Complexity of Healthcare

William Rouse, Alexander Crombie Humphreys Chair, School of Systems & Enterprises, and Director, Center for Complex Systems and Enterprises, Stevens Institute of Technology

The overall nature of the healthcare system is considered. It is argued that this enterprise is best modeled as a complex adaptive system. The stakeholders in this enterprise and their interests and objectives are outlined. This provides the basis for discussion of five case studies. The first presents an analysis of the complexity of healthcare using information theoretic metrics. The second case study uses production learning theory to determine how efficient the system would have to be to keep healthcare costs from rising faster than GDP. The third derives providers' optimal response to Medicare price controls. The fourth case study develops a multilevel model of the healthcare enterprise and uses this model to project the economic benefits of employer-based prevention and wellness programs. The final case study considers how providers in New York City have responded to the Affordable Care Act.



William Rouse is the Alexander Crombie Humphreys Chair within the School of Systems & Enterprises, and Director of the Center for Complex Systems and Enterprises at Stevens Institute of Technology. He is also professor emeritus, and former chair, of the School of Industrial and Systems Engineering at the Georgia Institute of Technology. His research focuses on understanding and managing complex public-private systems such as healthcare delivery, urban systems, and national security, with emphasis on mathematical and computational modeling of these systems for the purpose of policy design and analysis. Rouse has written hundreds of articles and book chapters, and has authored many books, including, most recently, *Modeling and Visualization of Complex Systems and Enterprises* (Wiley 2015), *Understanding and Managing the Complexity of Healthcare* (MIT Press 2014), *Economic Systems Analysis and Assessment* (Wiley 2011), *People and Organizations: Explorations of Human-Centered Design* (Wiley 2007), *Essential Challenges of Strategic Management* (Wiley 2001), and the award-winning *Don't Jump to Solutions* (Jossey-Bass 1998). He has edited or co-edited numerous books including *Engineering the System of Healthcare Delivery* (IOS Press 2010), *The Economics of Human Systems Integration* (Wiley 2010), *Enterprise Transformation: Understanding and Enabling Fundamental Change* (Wiley 2006), *Organizational Simulation: From Modeling & Simulation to Games & Entertainment* (Wiley 2005), the best-selling *Handbook of Systems Engineering and Management* (Wiley 1999, 2009), and the eight-volume series *Human/Technology Interaction in Complex Systems* (Elsevier). Among many advisory roles, he has served as chair of the Committee on Human Factors of the National Research Council, a member of the U.S. Air Force Scientific Advisory Board, and a member of the DoD Senior Advisory Group on Modeling and Simulation. He has been designated a lifetime National Associate of the National Research Council and National Academies. Rouse is a member of the National Academy of Engineering and has been elected a fellow of four professional societies: Institute of Electrical and Electronics Engineers (IEEE), International Council on Systems Engineering (INCOSE), Institute for Operations Research and the Management Sciences (INFORMS), and Human Factors and Ergonomics Society (HFES). Rouse received his B.S. from the University of Rhode Island, and his S.M. and Ph.D. from Massachusetts Institute of Technology.

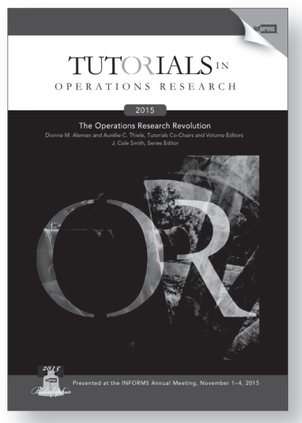
TUTORIALS IN OPERATIONS RESEARCH

The Operations Research Revolution
Dionne M. Aleman and Aurélie C. Thiele, Tutorials Co-Chairs and Volume Editors

J. Cole Smith, Series Editor

INFORMS 2015 edition of the *TutORials in Operations Research* series will be available online to registrants of the 2015 INFORMS Annual Meeting on November 1, 2015.

Access the 2015 *TutORials* at:
http://pubsonline.informs.org/series/educ



All tutorials are located in the Convention Center, 108A, 100 Level.

SUNDAY

Data-Driven Stochastic Programming using Phi-Divergences

SA54
8–9:30am

Guzin Bayraksan, Ohio State University & David K. Love, The American Express Company

Pricing Inspired by Data and Practice

SB54
11am–12:30pm

Georgia Perakis; Lennart Baardman; Maxime Cohen; Swati Gupta and Jeremy Kalas, Massachusetts Institute of Technology; Zachary Leung, Carnegie Mellon University; Kiran Panchamgam, Oracle Retail Science R&D; Danny Segev, University of Haifa; Anthony Smith

Uncertainty in Demand Response-Identification, Estimation, and Learning

SC54
1:30–3pm

Josh Taylor, University of Toronto & Johanna Mathieu, University of Michigan

Robust Optimization, Risk Ambiguity

SD54
4:30–6pm

Erick Delage, HEC Montréal & Dan A. Iancu, Stanford University

MONDAY

A Practical Guide to Ranking and Selection Methods

MA54
8–9:30am

David Goldsman, Georgia Institute of Technology

Markov Decision Processes in Healthcare

MB54
11am–12:30pm

Andrew J. Schaefer, University of Pittsburgh

Equilibrium Routing and its Paradoxes

MC54
1:30–3pm

Asu Ozdaglar, Massachusetts Institute of Technology

Computational Optimization and Statistical Methods for Big Data Analytics: Applications in Neuroimaging

MD54
4:30–6pm

W. Art Chaovalitwongse & Shuai Huang, University of Washington

TUESDAY

Applying Machine Learning in Online Revenue Management

TA54
8–9:30am

David Simchi-Levi, Massachusetts Institute of Technology

Approximations of Queueing Performance for Rapid Systems Design

TB54
11am–12:30pm

Ton Dieker, Columbia University & Steve Hackman, Georgia Institute of Technology

Discrete Optimization Models for Homeland Security and Disaster Management

TC54
1:30–3pm

Laura A. McLay, University of Wisconsin–Madison

Meta-Algorithms: From Algorithm Tuning and Configuration to Algorithm Portfolios

TD54
4:30–6pm

Meinolf Sellmann, IBM Thomas J. Watson Research Center

All attendees receive free online access to the INFORMS 2015 ***TutORials in Operations Research: The Operations Research Revolution*** *series volume concurrently with the meeting. The new TutORials volume will be available on November 1, 2015. Go to INFORMS PubsOnLine to access your content and view previous years' volumes. You will need your INFORMS customer account or your username and password. You can order the 2015 book or previous volumes through the TutORials website: http://pubsonline.informs.org/series/educ. For more information, visit the INFORMS Center in the Exhibit Hall.*

2015 INFORMS Prize Presentation
Peter Buczkowski
Disney Parks & Resorts

Advanced Manufacturing
Yuan-Shin Lee
North Carolina State University

Auctions
Robert Day
University of Connecticut

Big Data Analytics in Computational Biology/Medicine
Kiavash Kianfar
Texas A&M University

Business Model Innovations
Jose Guajardo
University of California

Cloud Computing
Cathy Xia
Ohio State University

Data Envelopment Analysis
Andrew Johnson
Texas A&M University

Daniel H. Wagner Prize for Excellence in Operations Research Practice
C. Allen Butler
Daniel H. Wagner Associates, Inc.

Doing Good with Good OR
Lisa Maillart
University of Pittsburgh

Itai Ashlagi
Massachusetts Institute of Technology

Energy Systems: Design, Operation, Reliability and Maintenance
Bo Zeng
University of South Florida

Qianmei Feng
University of Houston

Funding Opportunities at NSF
Diwakar Gupta
National Science Foundation

George B. Dantzig Dissertation Award
Nils Rudi
INSEAD

Global and International Activities
Grace Lin
Institute for Information Industry

Homeland Security
Jeffrey Herrmann
University of Maryland

Hospitality, Tourism, and Healthcare
Alex Susskind
Cornell University

INFORMS Career Center
Neil Geismar
Texas A&M University

INFORMS Social Media Analytics
Les Servi
The Mitre Corporation

INFORMS Undergraduate Operations Research Prize
Aurelie Thiele
Lehigh University

Modeling and Methodologies in Big Data
Jiming Peng
University of Houston

W. Art Chaovalitwongse
University of Washington

New Product Development
Sanjiv Erat
University of California

Jurgen Mihm
INSEAD

Nicholson Student Paper Prize
Illya Hicks
Rice University

Mark Squillante
IBM Research

Operations/Marketing Interface
Kathy Stecke
University of Texas at Dallas

Xuying Zhao
University of Notre Dame

Risk Management
Agostino Capponi
Columbia University

Scheduling & Project Management
Nicholas G. Hall
Ohio State University

Marc Posner
Ohio State University

Stochastic Models: Theory and Applications
Ananth Krishnamurthy
University of Wisconsin-Madison

Strategy Science
Dan Levinthal
University of Pennsylvania

Tutorials
Dionne Aleman
University of Toronto

Aurelie Thiele
Lehigh University

Analytics
Tarun Mohan Lal
Mayo Clinic

Harrison Schramm, CAP
Navy Headquarters

Applied Probability
Tolga Telzcan
London Business School

Neil Walton
University of Amsterdam

Artificial Intelligence
Yilu Zhou
Fordham University

Aviation Application
Stephen Maher
Zuse Institute Berlin

Behavioral Operations Management
Tony Haitao Cui
University of Minnesota

Computing Society
Matthew Saltzman
Clemson University

CPMS
Yanni Papadakis
Dun & Bradstreet

Doug Samuelson
InfoLogix

Data Mining
Cynthia Rudin
Massachusetts Institute of Technology

Decision Analysis
Debarun Bhattacharjya
IBM T.J. Watson Research Center

Melissa Kenney
University of Maryland

Mazen Skaf
Strategic Decisions Group

Energy, Natural Resources & the Environment

Electricity
Andy Sun
Georgia Institute of Technology

Policy, Natural Gas, Climate Change
Andrew Liu
Purdue University

Forestry
Matthew Thompson
U.S. Forest Service

Natural Resources I-Mining
Alexandra Newman
Colorado School of Mines

Natural Resources II-Petrochemicals and Petroleum
Marlize Meyer
Sasol

Sustainability & Environment
Sandra Eksioglu
Clemson University

e-Business
Lin Hao
University of Notre Dame

Chris Parker
Pennsylvania State University

Mingfeng Lin
University of Arizona

Financial Services
Bo Zhang
IBM Research

Health Applications
Turgay Ayer
Georgia Institute of Technology

Information Systems
Anjana Susarla
Michigan State University

Param Vir Singh
Carnegie Mellon University

INFORM-ED
Susan Martonosi
Harvey Mudd College

INFORMS Practice
Stefan Karisch
Boeing

Manoj Chari
SAS

Junior Faculty Interest Group
Shengfan Zhang
University of Arkansas

KINFORMS (Korea Chapter INFORMS)
Chang Won Lee
Hanyang University

Location Analysis
Alan Murray
Drexel University

Manufacturing & Service Operations Management
Xuanming Su
University of Pennsylvania

Cheryl Druehl
George Mason University

Senthil Veeraraghavan
University of Pennsylvania

Healthcare Operations
Murat Kurt
Merck Research Labs

iForm
Yasin Alan
Vanderbilt University

Onur Boyabatli
Singapore Management University

Service Operations
Santiago Gallino
Tuck School of Business

Antonio Moreno-Garcia
Northwestern University

Supply Chain
Aydin Alptekinoglu
Pennsylvania State University

Vinayak Deshpande
University of North Carolina

Sustainable Operations
Gilvan Souza
Indiana University

Marketing Science
Olivier Toubia
Columbia Business School

Military Applications Society
Andrew Hall
U.S. Army

Minority Issues Forum
Emmett Lodree
University of Alabama

Multiple Criteria Decision Making
Matthias Ehrgott
Lancaster University

Optimization
Suvrajeet Sen
University of Southern California

Healthcare
Omid Nohadani
Northwestern University

Integer and Discrete Optimization
Juan Pablo Vielma
Massachusetts Institute of Technology

Mixed Integer Nonlinear Optimization and Global Optimization
Aida Khajavirad
University of Texas

Linear & Conic Optimization
John Mitchell
Rensselaer Polytechnic Institute

Network Optimization
Vladimir Boginski
University of Florida

Nonlinear Programming
Daniel Robinson
Johns Hopkins University

Optimization Under Uncertainty
Warren Powell
Princeton University

Mengdi Wang
Princeton University

Organization Science
Jared Harris
University of Virginia

Public Sector OR
Vedat Verter
McGill University

Burcu Balcik
Ozyegin University

Quality, Statistics & Reliability
Hui Yang
Pennsylvania State University

Ran Jin
Virginia Tech

Railway Applications
Jeremiah Dirnberger
CSX

Revenue Management & Pricing
Bora Keskin
Duke University

So Yeon Chun
Georgetown University

Service Science
Tor W. Andreassen
Norwegian School of Economics

Simulation
John Shortle
George Mason University

Technology, Innovation Management & Entrepreneurship
Gulru Ozkan-Seely
Georgia Institute of Technology

Telecommunications
Timothy Matis
Texas Tech University

Fabio D'Andreagiovanni
Konrad-Zuse-Zentrum

Stanko Dimitrov
University of Waterloo

Transportation Science & Logistics
Irina Dolinskaya
Northwestern University

Facility Logistics
Sadan Kulturel-Konak
Pennsylvania State University-Berks

Pratik Parikh
Wright State University

Freight Transportation & Logistics
Tom Van Woensel
Eindhoven University of Technology

Kevin Furman
ExxonMobil

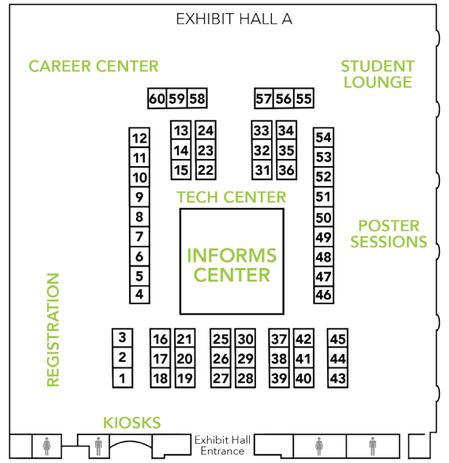
Intelligent Transportation Systems (ITS)
Steve Boyles
University of Texas at Austin

Yingyan Lou
Arizona State University

Urban Transportation
Song Gao
University of Massachusetts

Women in OR/MS
Renata Konrad
Worcester Polytechnic Institute

CONVENTION CENTER - EXHIBIT HALL - 200 LEVEL



INFORMS CENTER
New this year at the Annual Meeting, INFORMS Center will be located in the center of the Exhibit Hall. This dynamic space is the hub for your Annual Meeting activities. Be sure to stop by and see key INFORMS leadership and staff, and learn more about the many programs and activities taking place both at the Annual Meeting and throughout the year. Make sure to check the Mobile App or the website for an up-to-date schedule of INFORMS Center activities.

STUDENT LOUNGE
A space in the Exhibit Hall for our students to relax, hang out, meet other members, and take advantage of free Wi-Fi. Make sure to follow @INFORMS2015 for special pop-up events in the Student Lounge.

TECHNOLOGY CENTER
Free Wi-Fi
The Technology Center will be open during the following hours:

Sunday	12noon–5pm
Monday	9am–5pm
Tuesday	9am–5pm
Wednesday	9am–3pm

Free wireless internet and a Technology Center are located in the Exhibit Hall. There are a limited number of computers available in the Technology Center if you do not have your own computer. Name badges must be worn for admittance.

INFORMS CAREER CENTER
INFORMS Career Center (ICC) is the largest source of operations research and analytics jobs and resumes. It's where job seekers go to land the right job in academia or industry and where employers post their jobs and search our resume database for qualified candidates.

This service provides employers and applicants with a convenient venue for on-site interviews to explore opportunities in academia, industry, and government. In addition, the job placement service offers:

- Online access to job listings and applicant files
- Expanded information about jobs and applicants
- Daily updates of the database
- Improved database search capabilities
- Online data entry for applicants and employers
- Extended availability of the database at http://careercenter.informs.org

Career Fair
Sunday, 12noon–5pm
Exhibit Hall A, 200 Level, Convention Center

The Career Fair provides an opportunity for job seekers to meet the participating employers in an informal atmosphere and discuss employment opportunities within those organizations. Employers meet and collect resumes from many job seekers in a short period of time early in the meeting, giving them the chance to set up interviews during the Annual Meeting.

ICC On-site Interviews
Monday & Tuesday, 9am–5pm
Wednesday, 9am–3pm
Exhibit Hall A, 200 Level, Convention Center

ICC On-site Resume Review
(Must have previously scheduled appointment.)

Sunday, 12noon–5pm
Monday, 9am–5pm

Panel Discussions
Select panels will lead informal discussions about the industry and academic interview process.

Industry Job Search (SD26)
Sunday, 4:30–6pm
403, Level 4, Marriott

Academic Job Search (MC26)
Monday, 1:30–3pm
403, Level 4, Marriott

POSTER SESSIONS
Monday & Tuesday, 12:30–2:30pm
Exhibit Hall A, 200 Level, Convention Center

Researchers, practitioners, and students share their O.R. and analytics projects in these special sessions presented as poster displays, laptop demonstrations, and other creative formats.

Abstracts and authors for posters are listed in the chronological program under the day and time for each interactive session.

Monday, page 139
Tuesday, page 210

Competition
INFORMS places a special emphasis on high quality poster presentations. All poster session presenters were invited to submit their posters to the competition. In Round 1 of the process, submitters sent a PDF of their finished poster to the judging panel for review. The judges have evaluated these submissions and selected a group of semifinalists. The judging panel is made up of distinguished OR/MS professionals, both academics and practitioners, many of whom are INFORMS leaders.

In Round 2, the judging panel will review the semifinalist presentations during the Poster Sessions in Philadelphia. In Round 3, also held during the Poster Sessions, the judges will name the 1st, 2nd, and 3rd place winners. These winners will also be identified and awarded each day. Recognition includes a certificate, a monetary award, and announcements on the INFORMS website, newsletters, and in *OR/MS Today*.

EXHIBIT HOURS

Sunday	12noon–5pm *(7:30–9pm Welcome Reception)*
Monday	9am–5pm
Tuesday	9am–5pm
Wednesday	9am–3pm

All Software Demonstrations will take place in the Convention Center, 300 Level.

ACT Operations Research 46
http://www.act-operationsresearch.com

ACT OR is a company of mathematicians and engineers dedicated to improving customer businesses by creating Executive Decision Support Systems based on forecasting, mathematical optimization, and statistical models, and using "big data." The purpose of our software toolsets and solutions are to assist customers in improving processes, assets, and labor – utilization by optimization or simulation models that can offer the most efficient policies or systems to help customers cut operating costs. Our tools are "prescriptive and predictive" analytical by design, for risk reduction capabilities for business investments.

http://www.act-operationsresearch.com/Products/Before_Predictive_Analytics.html

AIMMS 27
www.aimms.com

AIMMS is an innovative technology company with offices in Europe, United States, and Asia. Half of the global Fortune top 20 corporations rely on AIMMS because of its unique analytics, modeling, and optimization platform that supports complex business decision making at every organizational level. AIMMS customers can quickly create high business impact with optimization apps to support both strategic and daily operational challenges on a single platform that works seamlessly with your ERP system. AIMMS is trusted by companies like Alstom, BP, Kroger, Nike, Unilever, Shell, and many others. Visit www.aimms.com to learn more.

Software Tutorial:
Experience Optimization Modeling in Real Time, Deanne Zhang, Optimization Specialist, AIMMS, deanne.zhang@aimms.com

Monday, 1:30–2:15pm, Room 302 (MC79)

What can you do in 45 minutes? Attend a lecture? Watch a TED Talk online? Maybe go on a 5-mile run? There is a lot that can be accomplished in 45 minutes that can provide both a sense of achievement and generate new ideas. We invite you to experience this same kind of feeling in a 45-minute journey with AIMMS! We are going to build an optimization model in real time and publish it on AIMMS PRO, an enterprise level app store. This 45-minute software demo will provide you with a fresh view of how AIMMS delivers broader usage and greater benefits for business users.

AMPL Optimization Inc. 28
www.ampl.com

AMPL's modeling language and system give you an exceptionally powerful and natural tool for developing and deploying the complex optimization models that arise in diverse business applications. AMPL lets you formulate problems the way you think of them, while providing access to the advanced algorithmic alternatives that you need to find good solutions fast. It features an integrated scripting language for automating analyses and building iterative optimization schemes; access to spreadsheet and database files; and application programming interfaces for embedding within larger systems. AMPL works with more than 30 powerful optimization engines including all of the most widely used large-scale solvers.

Software Tutorial: *Developing Optimization Applications Quickly and Reliably with Algebraic Modeling, Robert Fourer, President, AMPL Optimization Inc., 4er@ampl.com*

Monday, 11–11:45am, Room 302 (MB79)

Can you negotiate the complexities of the optimization modeling lifecycle, and deliver a working application before the problem owner loses interest? Algebraic languages were invented to streamline the key steps of model formulation, testing, and revision. Today, they are supported by powerful facilities for embedding models into larger systems and deploying them to users. This presentation introduces algebraic modeling for optimization through examples using classic and recently introduced features of the AMPL language and system.

AnyLogic North America, LLC 22-23
www.anylogic.com

The AnyLogic Company along with AnyLogic Software is a global organization with headquarters in Chicago, St. Petersburg, and Paris, comprising consulting, sales, and marketing professionals. Founded in 1992, the AnyLogic team that design, develop, and market AnyLogic Software - the first and only tool that brings together System Dynamics, process-centric (Discrete Event), and Agent-Based methods within one modeling language and one model development environment - have been the leading provider of dynamic simulation tools, technologies, and consulting services for business applications. The language of AnyLogic has unmatched flexibility enabling modelers to capture the complexity of business, economy, and social systems at any level of detail to gain deeper insight into interdependent processes inside and around an organization.

Software Tutorial: *anyLogistix – Every Supply Chain is Unique, Capture Yours!, Timofey Popkov, Director of Business Development and Co-owner, AnyLogic North America, tim@anylogic.com*

Monday, 8:45–9:30am, Room 302 (MA79)
Supply chain optimization software must capture the uniqueness of your supply chain as well as produce fast results. The supply chain is the backbone of your business; it is what distinguishes you from competitors and enables you to win business. Experience a complete solution, anyLogistix, which allows you to carefully design, continuously analyze, and adjust to environmental changes. Learn how to maintain a competitive advantage in your industry through supply chain optimization.

Aptech Systems, Inc. 36
www.aptech.com

GAUSS is a powerful, highly adaptive suite of analytical software and tools that maximize the probability of success, giving analysts the ability to dig deeper into data to unlock actionable results. GAUSS is the product of decades of innovation and enhancement by Aptech Systems, a supportive team of experts dedicated to the success of the worldwide GAUSS user community. From physics to finance, Aptech is committed to helping people achieve their goals by offering flexible products and applications that define the leading edge of statistical analysis capabilities.

Artelys 21
www.artelys.com

Artelys is internationally known as an expert in the field of optimization and analytics and continues its growth with the recent acquisition of Ziena Optimization, author of KNITRO.

Dedicated to provide sound decision making through technology, operations research, and statistics with top international engineers, Artelys also develops, distributes, and supports a comprehensive portfolio of efficient and robust tools: Artelys Kalis, FICO® Xpress Optimization Suite, KNITRO, and AMPL. Relying on these tools and a high level of expertise in quantitative methods, Artelys has been successful in delivering 100+ efficient solutions to the most complex business problems. Located in France, United States, and Canada.

Software Tutorial: *See the Artelys KNITRO 10.0 Optimization Solver in Action, Richard Waltz, Senior Scientist, Artelys Corp., waltz@ziena.com*

Sunday, 4:30–6pm, Room 302 (SD79)

KNITRO is the premier solver for nonlinear optimization and recent winner of the GECCO 2015 Black Box Optimization Competition, finishing first among 28 solvers. This software demonstration will highlight the latest KNITRO features, including a new object-oriented interface and SQP algorithm for derivative-free optimization (DFO). The demo will also provide an overview of how to effectively use KNITRO in a variety of environments and applications, and present recent benchmarking results for DFO and nonlinear optimization.

Cambridge University Press 31
http://www.cambridge.org/us/academic

Cambridge publishes books and journals combining state-of-the-art content with the highest standards of scholarship, writing, and production. Visit our booth to browse new titles, available at a 20% discount, and to pick up sample issues of our journals. Visit our website to see everything we do: www.cambridge.org/us/academic.

COIN-OR 10
www.coin-or.org

The Computational Infrastructure for Operations Research publishes high quality, free, open-source tools for OR professionals and students, suitable for commercial, educational, and personal use. COIN-OR is the place to go when you need a "white box" for algorithm research and development. COIN-OR is a strategic partner of the INFORMS Computing Society.

Darden Business Publishing 15
http://store.darden.virginia.edu

Darden Business Publishing produces and markets case-based materials written by the renowned faculty at the University of Virginia Darden School of Business. Darden maintains a catalogue of student-centered learning materials that energize classrooms around the world with dynamic interactive multimedia cases, innovative simulations, and thought-provoking paper cases.

Do Analytics 12
www.doanalytics.net

OPTEX Mathematical Modeling System represents the new paradigm to make mathematical models. OPTEX separates the algebraic formulation from the source code of the models, and generates computer programs in multiple optimization technologies (C, GAMS, IBM-OPL, MOSEL, AIMMS, and AMPL). It is based on its own unique database algebraic language that supports MS-EXCEL algebraic formulation. OPTEX supports every stage of mathematical modeling process (data model definition, data validation, SQL connection, graphic user interface generation, algebraic model formulation, numerical model generation, problem solution, and results visualization). Easy and fast, OPTEX represents the new generation to DO ANALYTICS. (http://www.doanalytics.net/Documents/OPTEX-Presentation.pdf)

Software Tutorial: *OPTEX Mathematical Modeling System: The New Paradigm, Jesus Maria Velasquez, Chief Scientist, Do Analytics LLC, jesus.velasquez@decisionware.net*

Monday, 5:15–6pm, Room 302 (MD79)

Do Analytics presents OPTEX Mathematical Modeling System, a powerful expert system that is changing the way to make large-scale mathematical programming models. OPTEX:

- Generates programming codes in the most powerful optimization technologies, including the SQL statements to connect any DBMS
- Mixes the power of an optimization technology with the ease of EXCEL
- Works as a client and as an optimization server in the cloud.

Dynamic Ideas, LLC 33
www.dynamic-ideas.com

Dynamic Ideas is a publisher of scientific books that have quality and originality in the areas of operations research and applied mathematics. The key objective of our titles is to "educate the next generation." Many of our books are currently being used as the main textbook in academic courses in some of the finest universities and research institutions in the world.

Elsevier 13
www.elsevier.com

Elsevier is a leading publisher in the Operations Research and Decision Sciences fields, with over 25 high-quality peer-reviewed journals, including *European Journal of Operational Research*, *Omega*, and the newly launched *Operations Research Perspectives*. Elsevier's OR/MS journals occupy 8 of the Top 10 positions in the Operations Research & Management Science category of Thomson Reuters' Science Citation Index.Visit us to sign up for one-to-one feedback on your research from top journal editors.

FICO 55-56
www.fico.com

FICO is a leading analytics software company, helping businesses around the world make better decisions that accelerate growth, profitability, and customer satisfaction. FICO's optimization tools, which include FICO® Xpress Optimization Suite, feature high-performance solvers, flexible modeling, and application development tools. FICO's optimization capabilities are now available on the FICO® Analytic Cloud and the FICO® Decision Management Suite, providing an easy, cost-effective way to evaluate, customize, deploy, and scale state-of-the-art analytics and decision management solutions.

Join us for the workshop to learn about the latest Xpress features and visit our exhibition area booth. Learn more at www.fico.com.

Software Tutorial: *Turnkey Optimization on the Cloud, Oliver Bastert, Ph.D., oliver.bastert@fico.com*

Wednesday, 11:45am–12:30pm,
Room 302 (WB79)

In this workshop, we will demonstrate enhancements for modeling and solving linear, mixed integer and nonlinear optimization problems using the latest release of FICO® Xpress version 7.9. We will show how to rapidly turn optimization models into collaborative applications deployed on the FICO® Analytic Cloud. Also, learn how these capabilities can be combined with analytic modeling and decision rules to deliver powerful cloud-based or on-premises decision management solutions via the FICO® Decision Management Suite.

Forio Simulations 40
www.forio.com

Forio builds and hosts online business simulation games used by Harvard Business School, Wharton, MIT Sloan, and other universities and major corporations. Learners are actively engaged because they play a role, not just reading and analyzing. More than 60% of all MBAs currently enrolled at business schools worldwide will play a Forio simulation game before they graduate. We also build multiplayer collaborative or competitive simulation games with several Fortune 500 clients. Forio Epicenter, our simulation development software, allows for the rapid creation of simulation front-ends, as well as dashboards and data visualizations.

Software Tutorial: *Publishing Interactive Analytics or Operations Research Models on the Web, Michael Bean, Co-Founder and President, Forio Simulations, mbean@forio.com*

Sunday, 11:45am–12:30pm, Room 302 (SB79)

Forio's Web platform makes your analytic model available to hundreds of people within your organization through the browser. We will start with an introduction to the platform and example analytics applications. Then we'll divide the workshop into two parts. In the first part, we will teach you how to get your analysis on a server so it can be shared. In the second part, we will focus on creating a user interface for your model.

Frontline Systems, Inc. 29
www.solver.com

Frontline Systems is democratizing analytics, enabling business analysts and managers to get fast results— without expensive enterprise software and steep learning curves. See how easily you can solve optimization, simulation/risk analysis, and predictive analytics models in Excel Online, Google Sheets, and Apple's iPad — starting for free. See new Analytic Solver® Platform V2016 for desktop Excel, the easy-to-use integrated software that builds on Excel's Solver, Tableau, Power BI, and other tools. See our developer SDKs for data mining, simulation, and optimization, and our new RASON® modeling language and REST API. You'll be surprised by how little this costs, and how quickly you can get results.

Software Tutorial: *Analytic Solver® Platform: Integrated Data Mining, Simulation and Optimization in Microsoft Excel*

Tuesday, 2:15–3pm, Room 302 (TC79)

Analytic Solver Platform in Microsoft Excel has everything you need for forecasting and data mining, Monte Carlo simulation and risk analysis, conventional and stochastic optimization – with data from Apache Spark and visualization of results in Excel, Tableau, and Power BI. See how you can use it to build your own analytic expertise and teach others, leveraging what you already know, build and solve industrial-scale models with the world's best Solvers, and effectively communicate business results.

GAMS Development Corp. 38
www.gams.com

The General Algebraic Modeling System (GAMS) is a high-level modeling system for mathematical programming and optimization. It consists of a language compiler and a stable of integrated high-performance solvers. GAMS is tailored for complex, large-scale modeling applications, and allows you to build large, maintainable models that can quickly adapt to new situations.

Software Tutorial: *GAMS – An Introduction, Steve Dirkse, Director of Optimization, GAMS Development Corp, sdirkse@gams.com*

Sunday, 5:15–6pm, Room 302 (SD79)

This workshop will show you how to use the General Algebraic Modeling System (GAMS) in an efficient and productive way. There will be an introduction to the system and a presentation of the key concepts in GAMS. The largest part of the workshop consists of hands-on exercises. The workshop will demonstrate how GAMS interacts with other applications and you will see how to analyze and debug problems using the tools available within GAMS.

Gurobi Optimization, Inc. 25
www.gurobi.com

Gurobi Optimization provides high performance math programming solvers using the most advanced implementations of the latest algorithms. We offer best-in-class performance, support a broad range of interfaces and modeling languages, and offer flexible licensing together with transparent, no surprises pricing, all backed by outstanding, easy-to-reach support.

Software Tutorial: *Modeling with the Gurobi Python Interface, Dr. Renan Garcia, Optimization Support Engineer, Gurobi Optimization, garcia@gurobi.com*

Monday, 11:45am–12:30pm, Room 302 (MB79)

Are you looking for an environment that combines the expressiveness of a modeling language with the power and flexibility of a programming language? The Gurobi Python interface allows you to build concise and efficient optimization models using high-level modeling constructs. Moreover, Python itself has a vast ecosystem of packages designed to increase your productivity, such as a notebook-style interface (iPython Notebook), data access capabilities, and Web development tools. This tutorial will provide an overview of these features, including detailed examples that show how to use the Python interface to build models that can be turned into full optimization applications.

Hong Kong Polytechnic University 53
www.polyu.edu.hk

The Department of Logistics and Maritime Studies is one of the three departments in the Faculty of Business, The Hong Kong Polytechnic University. We take a multidisciplinary approach to establishing an area of excellence in logistics, supply chain, and operations management. We would like to enhance and accelerate through the recruitment of ambitious, high-caliber candidates to join our academic team (http://www.lms.polyu.edu.hk/en/footer/careeropportunities/). You are welcome to join our tea reception, which will be held on November 2 from 5–6pm and November 3 from 11am–12pm in the Three Bay Hospitality Suite of Marriott Philadelphia.

IBM 51-52
www.ibm.com

IBM is paving the way to the next generation of analytics solutions and platforms, combining descriptive, predictive, and prescriptive analytics with the power of cloud and cognitive insights. IBM Decision Optimization, which includes the market-leading IBM CPLEX Optimizer, has helped more organizations drive performance improvements from prescriptive analytics than any other company, including four times as many Edelman Award finalists. Visit the IBM Analytics booth to learn more about prescriptive analytics with IBM Decision Optimization, as well as the IBM Academic Initiative offering for all fields of analytics.

Software Tutorial: *IBM Decision Optimization for Python (IBM Optimization group)*

Sunday, 4:30–5:15pm, Room 204B (SD75)

In this tutorial, you will learn how to use the new CPLEX Modeling API for Python with standard development tools. You will learn how to install this open source library, configure your environment to use it, and write optimization models in a few minutes. At the end of the session, you will be able to write your own optimization model and solve them with the free IBM Decision Optimization offers (either with the DOcloud trial or with the Community Edition of CPLEX Optimization Studio). The hands-on part of the tutorial requires a 64-bit machine (Windows, Linux, or Mac) and access to Wi-Fi, but all participants will be able to follow along. Follow us on Twitter @IBMoptimization

Software Tutorial: *IBM Academic Initiative for Cloud…Building Next-Generation Skills (IBM Academic Initiative Group)*

Wednesday, 11–11:45am, Room 302 (WB79)

Digital transformations are requiring students, no matter what their major, to understand how to leverage and build solutions on the cloud. With the new Academic Initiative for Cloud offering, faculty and students can have hands-on cloud-based experiences to propel radical ideas and innovation using IBM Watson, Internet of Things, big data, analytics, mobile, and more. Join us to collaborate on best practices to empower innovation in the classroom and beyond! http://ibm.biz/aiforcloud

IdeaConnection 50
www.ideaconnection.com

IdeaConnection provides a full suite of open innovation services to help accelerate your R&D initiatives and speed your products to market. Whether it's finding licensing opportunities, searching for collaboration partners, solving technical problems, crowdsourcing, or giving you the tools and help to make your open innovation portal successful, our model ensures that you are using the right tool for the job.

IdeaConnection uses multidisciplinary teams of highly qualified, hand-picked experts to solve your technical challenges. The result is an unparalleled level of confidentiality, lower burden on your technical staff, and highest success rate in the industry. Better yet, you only pay for success.

IEOM Society 18
www.iieom.org

IEOM Society promotes and encourages critical thinking in the field of Industrial Engineering (IE) and Operations Management (OM), provides means to communicate and network among people enthused with similar interests through conferences, seminars, workshops, membership, student and professional chapters across the globe, and illustrative research publications to disseminate the earned knowledge and experience. IEOM Global Engineering Education addresses challenges and opportunities for readiness of engineering graduates from various parts of the world. IEOM Society focuses on how to reduce the readiness gap around the world. IEOM Industry Solutions showcases industrial case studies and their impacts using IE/OM tools and techniques.

Lehigh University, ISE Department 16
https://ise.lehigh.edu

Recognized among the nation's premier research universities, Lehigh offers a rigorous academic community for nearly 7,000 students. Lehigh's SESQUICENTENNIAL celebrations are shining light on the people, places, breakthroughs, and traditions of the 150 years that made Lehigh a prime institution. The ISE Department pursues excellence and national prominence in OR, analytics, IT, and related fields through innovative teaching, distinguished research, and professional leadership. Building on its unique strength and reputation, ISE strives for leadership in educational innovation, multidisciplinary cutting edge research, and industrial partnership. Our ultimate mission is to produce leaders who have learned to think critically and analytically, have the skills to comprehend and create new knowledge, and are willing to serve and inspire others.

LINDO Systems, Inc. 39
www.lindo.com

LINDO Systems offers three products hooked to industrial strength solvers for linear, integer, stochastic, NLP, and global optimization. LINGO includes a powerful modeling language and convenient data options to make building models faster and easier. What'sBest! allows you to build large optimization models in Excel. Models are easy to build and understand for anyone comfortable with Excel. LINDO API allows you to plug the power of the LINDO solvers right into customized applications that you have written. Find out about the latest solver enhancements and pick up a full capacity evaluation license to try or a free educational research license.

Software Tutorial: *Optimization Modeling Made Easy, Mark Wiley, VP Marketing, LINDO, mwiley@lindo.com, and Gautier Laude, Software Development Manager, LINDO, glaude@lindo.com*

Monday, 4:30–5:15pm, Room 302 (MD79)

Come and learn how easy it is to: quickly build linear, nonlinear, quadratic, conic, and integer optimization models; incorporate uncertainty into optimization models; access data from Excel and databases; and seamlessly embed a solver into your own application. Come see a demonstration of the power and flexibility of the new releases of LINDO API – a callable solver engine; LINGO – an integrated modeling language and solvers; and What'sBest! – a large-scale solver for Excel.

MathWorks 30
www.mathworks.com

The MATLAB and Simulink product families are fundamental applied math and computational tools adopted by more than 5000 universities and colleges. MathWorks products help prepare students for careers in industry, where the tools are widely used for data analysis, mathematical modeling, and algorithm development in collaborative research and new product development.

Software Tutorial: *MATLAB: An Environment for Operations Research and Data Analytics, Seth DeLand, Data Analytics Product Manager, MathWorks, seth.deland@mathworks.com*

Tuesday, 8:45–9:30am, Room 302 (TA79)

MATLAB is a platform for analysis, visualization, simulation, and optimization. You can access and analyze real-world data and develop customized algorithms that scale to your largest problems. Join us to see how MATLAB can help you explore data, develop algorithms, and integrate analytics into enterprise applications. You'll also learn about new features including mixed-integer linear programming, machine learning, and working with big data.

Maximal Software, Inc. 54
www.maximalsoftware.com

Maximal Software will be introducing the new release 5.0 of the MPL Modeling System and the OptiMax Component Library during the Annual Meeting. This new release represents a major milestone for MPL, and offers numerous new features and enhancements. We will also be introducing both the MPL Academic Program and MPL Free Development Program, which provide access to free full-size development versions of the MPL software for academic faculty, students, and even commercial users and consultants. To sign up for your free copy of MPL, please visit us at our Exhibit Booth anytime during the conference, or attend our Software Demonstration session.

Software Tutorial: *Introducing New Release 5.0 of the MPL Modeling System and the OptiMax Component Library, Bjarni Kristjansson, President, Maximal Software, Inc., Bjarni@maximalsoftware.com*

Wednesday, 8–8:45am, Room 302 (WA79)

Maximal Software is introducing a new major release 5.0 of the MPL Modeling System, which represents a major milestone for MPL. We will be demonstrating the many new features and enhancements of MPL, including new directory structure, redesigned documentation, new solver updates, Reverse Hessian for nonlinear models, and enhanced Stochastic support. Major updates for the MPL OptiMax Library and the MPL Callable Library, include new callbacks, new exception handlers, and enhanced multithreaded support.

Microsoft Power BI 41
https://powerbi.microsoft.com

At Microsoft, our mission and values are to help people and businesses throughout the world realize their full potential. We are striving to empower a culture of data by visualizing any data, any place, in any way. Our Power BI solution allows everyone in an organization to become data-driven decision makers. Power BI simplifies complex analytics and provides proactive alerting on all kinds and sizes of data from structured and unstructured to real-time streaming data.

Software Tutorial: *Power BI: Bring Your Data to Life, Jen Underwood, Microsoft Sr. Program Manager, Microsoft Power BI, jenunder@microsoft.com*

Sunday 8:45–9:30am, Room 302 (SA79)

In this tutorial session, you will explore Power BI with Microsoft engineering product team members. Feel free to bring a sample of your own data to create your own personalized dashboards. You will learn:

- Data preparation: Discover, transform, and combine data from various sources
- Data models: Create relationships, categorize your data and author business calculations
- Interactive visual reports: Author professional reports to slice/dice data to discover insights

- Power BI Dashboards: Ask language questions, create real-time dashboards, and share insights
- Power BI Mobile Apps: Interact with dashboards from iOS, Android, or Windows devices

MOSEK ApS 37
www.mosek.com

MOSEK ApS provides optimization software that helps customers make better decisions. The customer base consists of financial institutions and companies, engineering and software vendors, among others.
MOSEK ApS was established in 1997 by Erling D. Andersen and Knud D. Andersen and it specializes in creating advanced software for solution of mathematical optimization problems. In particular, the company focuses on solution of large-scale linear, quadratic, and conic optimization problems. For more details visit our website: www.mosek.com.

Software Tutorial: *Using MOSEK at Its Best, Andrea Cassioli, Product Manager, MOSEK ApS, andrea.cassioli@mosek.com*

Monday, 2:15–3pm, Room 302 (MC79)

MOSEK provides high-quality software for conic optimization. The software tutorial focuses on:

1. the key features and benefits of our objective-oriented API called FUSION API: speed, expressiveness, and simplicity;
2. modeling issues and best practices that may be helpful in many cases; and
3. insight on the upcoming new release will be presented.

Customer inspired examples will be used to show how to use MOSEK at its best.

North Carolina State University, Industrial and Systems Engineering 47
http://www.ise.ncsu.edu

The Edward P. Fitts Department of Industrial and Systems Engineering at NC State University is among the top-ranked programs in the country. The department features educational and research programs in optimization, stochastic processes, simulation, systems analysis and analytics, quality and reliability, logistics, and health systems. We offer Masters (resident and online) and Doctoral degrees in Industrial Engineering as well as a Master of Supply Chain Engineering and Management. With external from NSF, NIH, DoD, and industry and location near Research Triangle Park, the department provides a vibrant environment for more than 200 graduate students.

North Carolina State University, Engineering Online 48
http://engineeringonline.ncsu.edu/

The College of Engineering at North Carolina State University has 12 academic departments and more than 20 centers, institutes, and laboratories. Professional engineers and computer scientists can participate in the College's Engineering Online program and take classes for professional development or toward the completion of one of the 16 online master's degree programs available for distance students. For more information, visit these websites: www.engr.ncsu.edu and http://engineeringonline.ncsu.edu.

Optimization Direct Inc. 9
www.optimizationdirect.com

Optimization Direct Inc., co-founded by Dr. Robert Ashford, a pioneer in the field of optimization, and Dr. Alkis Vazacopoulos, a leader in the industry, markets IBM® ILOG® CPLEX Optimization Studio®, the world's leading software product for modeling and optimization. CPLEX Optimization Studio solves large-scale optimization problems and enables better business decisions and resulting financial benefits in areas such as supply chain management, operations, healthcare, retail, transportation, logistics, and asset management. It has been applied in sectors as diverse as manufacturing, processing, distribution, retailing, transport, finance, and investment.

Software Tutorial: *Solving Large-Scale Optimization Problems using CPLEX Optimization Studio, Drs. Robert Ashford and Alkis Vazacopoulos, Optimization Direct, Inc, alkis@optimizationdirect.com*

Wednesday, 8:45–9:30am, Room 302 (WA79)

Recent advancements in linear and mixed programing give us the capability to solve larger optimization problems. CPLEX Optimization Studio solves large-scale optimization problems and enables better business decisions and resulting financial benefits in areas such as supply chain management, operations, healthcare, retail, transportation, logistics, and asset management. In this tutorial using CPLEX Optimization Studio, we will discuss modeling practices, case studies, and demonstrate good practices for solving hard optimization problems. We will also discuss recent CPLEX performance improvements and recently added features.

Palisade Corporation 34
www.palisade.com

Maker of the world's leading risk and decision analysis software, @RISK & the DecisionTools Suite.

We're the difference between taking a guess and taking control. At Palisade, we turn the art of decision-making into a science that works for you. Our innovative software solutions create usable insights from uncertain situations. As the leading provider of risk and decision analysis software for three decades, Palisade enables companies and organizations to evaluate risk at any level and decide what step comes next. With offices around the world, Palisade offers a truly global presence. And, with over 150,000 decision makers using our products at top research universities and Fortune 500 companies, Palisade has a diverse client base that spans a broad range of industries and organizations.

Software Tutorial: *Introduction to Risk and Decision Analysis using Palisade @RISK and The DecisionTools Suite, Jose Raul Castro, Palisade Corporation*

Wednesday, 1:30–3pm, Room 302 (WC79)

This event is designed to provide an entry-level introduction into probabilistic analysis and will show how Monte Carlo simulation, decision trees, and optimization can be applied to your everyday business analyses. If you build models in Excel then Palisade solutions can almost certainly help you to make more informed decisions, right from your desktop.

The webinar will explore some of the ways in which organizations are applying Palisade tools. From oil and gas, insurance and finance to healthcare, defense and construction, the DecisionTools Suite improves decision making at many of the world's most successful companies.

Palgrave Macmillan 26
www.palgrave.com

Palgrave Macmillan is a cross-market publisher specializing in cutting edge academic and trade nonfiction, reference, and journals.

Provalis Research 19
www.provalisresearch.com

Provalis Research is a leading developer of text analytics software with ground-breaking qualitative and quantitative analysis programs, such as QDA Miner, an innovative mixed-methods qualitative data analysis software; WordStat, a powerful add-on module for computer-assisted content analysis and text mining; and Simstat, an easy, yet powerful statistical software. One of the most distinctive features of these tools

is their interoperability, allowing researchers to integrate numerical and textual data into a single project file and seamlessly move back and forth between quantitative and qualitative data analysis, as well as to easily explore relationships between numerical and textual data.

Software Tutorial: *How to Analyze Big Text Data with Provalis Text Analytics Tools, Normand Peladeau, CEO, Provalis Research, peladeau@provalisresearch.com*

Sunday, 1:30–2:15pm, Room 302 (SC79)

Provalis Research will showcase its integrated collection of text analytics software. QDA Miner is easy-to-use qualitative and mixed-methods software that meets the needs of researchers performing qualitative data analysis and would like to code more quickly and more consistently larger amounts of documents. It offers high-level computer assistance for qualitative coding with innovative text search tools that help users speed up the coding process as well as advanced statistical and visualization tools. Users with even bigger text data can take advantage of WordStat. This add-on module to QDA Miner can be used to analyze huge amounts of unstructured information, quickly extract themes, find trends over time, and automatically identify patterns and references to specific concepts using categorization dictionaries.

Responsive Learning Technologies 4
www.responsive.net

Responsive Learning Technologies develops online competitive exercises used to teach operations management and supply chain management in business and industrial engineering programs. Our games provide a dynamic context for teaching concepts like capacity management, lead time management, inventory control, supply network design, and logistics. Beginning with our first game, Littlefield Technologies developed at Stanford's Graduate School of Business in 1999, our simulation games have been widely used with all levels of students from undergraduate to post-graduate and executives. In addition, we offer Business Foundations, an online adaptive learning system designed to help students prepare for beginning their MBA studies.

Software Tutorial: *Online Games to Teach Operations and Supply Chain Management, Sam Wood, President, Responsive Learning Technologies, wood@responsive.net*

Tuesday, 5:15–6pm, Room 302 (TD79)

Learn about online competitive exercises that are used in operations management and supply chain management courses to teach topics like capacity management, lead time management, inventory control, supply chain design, and logistics. These games are typically used as graded assignments

River Logic, Inc. 43
www.riverlogic.com

Founded in 2000, River Logic is a privately held technology firm with a mission to establish prescriptive analytics (optimization) as the leading scientific approach to business planning and decision support. Its focus is on helping customers and business partners increase their performance, decision-making agility, and ability to predict business outcomes. River Logic provides a prescriptive analytics platform, Enterprise Optimizer®, on a service-oriented architecture that supports SaaS and on-premises deployments. This is complemented by an Integrated Business Planning application that simplifies customer adoption of the solution and platform into their business. These solutions enable customers and partners to quickly configure scalable, high-ROI white space planning and decision support applications.

Sotware Tutorial: *Code-Free Modeling for Large-Scale LP and MIP Problems using Enterprise Optimizer, Eric Kelso, VP Product Management, River Logic, Inc., ekelso@riverlogic.com*

Tuesday, 11:45am–12:30pm, Room 302 (TB79)

Enterprise Optimizer is a code-free, visual LP and MIP optimization modeling platform. Using EO's intuitive drag-and-drop interface, learn how to rapidly create integrated process and financial models. Learn about EO's wizard-driven data integration, query designer, user-defined schema, dashboard builder, VBA integration, APIs, and job automation component. Outputs demonstrated include detailed unit costs and audit-quality P&L, balance sheet, and cash flow statements. The entire session will be spent discussing major features and showing real-world applications.

SAS 5
www.sas.com

Successful organizations today rely heavily on analytics to guide and support operational, tactical, and strategic decision making. Many of the most successful rely on SAS, which provides a full spectrum of coordinated analytic capabilities, including data integration, statistics, data and text mining, econometrics and forecasting, and operations research (optimization, simulation, and scheduling). SAS helps organizations around the world build analytic models, populate them with relevant data and insights, communicate recommended decisions effectively, and surface these capabilities within accessible, business-oriented interfaces. Visit us to see how SAS can help you understand the past and present, anticipate the future, and make better decisions.

Software Tutorial: *Building and Solving Optimization Models with SAS, Ed Hughes, Principal Product Manager, and Rob Pratt, Senior R&D Manager, SAS*

Tuesday, 4:30–5:15pm, Room 302 (TD79)

SAS provides a broad spectrum of data and analytic capabilities, including statistics, data and text mining, econometrics and forecasting, and operations research—optimization, simulation, and scheduling. OPTMODEL from SAS provides a powerful and intuitive algebraic optimization modeling language and unified support for building and solving LP, MILP, QP, NLP, CLP, and network-oriented models. We'll demonstrate OPTMODEL for basic and advanced problems, highlighting its newer capabilities and its support for both standard and customized solution approaches.

SAS JMP Division 7
www.jmp.com

JMP is desktop statistical discovery software from SAS that links interactive graphs with deep statistics. In the classroom, its visual approach to data exploration and analysis promotes understanding and collaboration. JMP reveals context and insight not seen in a table of numbers. The academic version of the software includes the same comprehensive and extensible capabilities that are used in the industry version. JMP is available for both Macintosh and Windows systems.

Software Tutorial: *Interactive and Visual Data Analysis with JMP 12 Pro, Darryl Revenew, JMP Academic Ambassador, SAS JMP Division, Darryl.revenew@jmp.com*

Monday, 8–9:30am, Room 302 (MA79)

JMP Statistical Discovery Software is interactive and visual desktop software for Windows and Mac, with a complete array of integrated graphical and statistical procedures. We will demonstrate JMP tools for data analysis, visualization, and exploration, including, Graph Builder®, bubble plots, the data filter, and our popular mapping tools. In addition to interactive techniques for univariate and bivariate analysis, we will look at methods for multivariate analysis including clustering, principal components, and data mining.

SAS Education Practice 6
www.sas.com/en_us/industry/higher-education.html

SAS is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market. Through innovative solutions, SAS helps customers at more than 75,000 sites improve performance and deliver value by making better decisions faster. Since 1976, SAS has been giving customers around the world THE POWER TO KNOW®.

Software Tutorial: *Introduction to SAS Data Mining, F. Michael Speed, Ph.D., Analytical Consultant, SAS, mike.speed@sas.com, and Tom Bohannon, Pd.D., Analytical Consultant, SAS, tom.bohannon@sas.com*

Sunday, 2:15–3pm, Room 302 (SC79)

This introduction covers the skills required to assemble analysis flow diagrams using the rich tool set of SAS Enterprise Miner for both pattern discovery and predictive modeling. Participants will learn how to: define a SAS Enterprise Miner project; modify data for better analysis results; build and understand predictive models; and compare and explain complex models.

SIAM 8
www.siam.org

Visit the Society for Industrial and Applied Mathematics (SIAM, Booth #8) to check out our new publications, including recent titles in the MOS-SIAM Series on Optimization such as Evaluating Gas Network Capacities (Koch et al.), Arc Routing: Problems, Methods, and Applications (Corberán and Laporte), Introduction to Nonlinear Optimization: Theory, Algorithms, and Applications with MATLAB (Beck), and other bestselling SIAM books, all available at a conference discount. You'll also find sample issues of SIAM's renowned journals, including SIOPT, along with information and applications for anyone interested in becoming a SIAM member. And don't forget to pick up a copy of SIAM News for the road.

SigmaXL, Inc. 17
www.sigmaxl.com

Established in 1998, SigmaXL, Inc. is a leading provider of user-friendly Excel Add-ins for Lean Six Sigma graphical and statistical tools and Monte Carlo simulation. Our customers include market leaders like FedEx, Microsoft, Motorola, and Shell. Our flagship product, SigmaXL®, was designed from the ground up to be a cost-effective, powerful, but easy-to-use tool for process improvement, quality, and statistics. DiscoverSim™ enables you to quantify your risk through Monte Carlo simulation and minimize your risk with global optimization. Version 2 is now bundled with MIDACO-SOLVER, one of the world's strongest evolutionary solvers for mixed discrete-continuous-constrained optimization.

Software Tutorial: *What's New in SigmaXL® Version 7, John Noguera, CTO & Co-founder, SigmaXL, Inc., jnoguera@sigmaxl.com*

Tuesday, 8–8:45am, Room 302 (TA79)

SigmaXL is a user-friendly Excel Add-In tool for process improvement, Six Sigma quality, and statistics. We introduce SigmaXL and the new features in Version 7: "Traffic Light" Automatic Assumptions Check for T-tests and ANOVA, Automatic Normality Check for Pearson Correlation and Small Sample Exact Statistics for One-Way Chi-Square, Two-Way (Contingency) Table and Nonparametric Tests. Exact statistics are appropriate when the sample size is too small for a chi-square or normal approximation to be valid.

Simio Simulation and Scheduling Software 45
www.simio.com

Simio Simulation and Scheduling Software is the most advanced solution on the market. With simulation, it is the only software that is fully object-oriented with process and objects being defined graphically with no programming. Unlike other scheduling software, Simio allows you to introduce risk into your production schedule with its patented Risk-based Planning and Scheduling. This dual function in Simio not only helps you improve your business performance from a facility design perspective, but also helps you maximize business results by optimizing the use of critical resources and assessing the risk associated with operational decisions.

Software Tutorial: *Introduction to Simio Simulation and Scheduling Software, C. Dennis Pegden, CEO and Founder, Simio, cdpegden@simio.com, and Eric Howard, Director of Marketing, Simio, ehoward@simio.com*

Sunday, 11–11:45am, Room 302 (SA79)

Simio is a premier simulation and scheduling software that allows you to expand traditional benefits of simulation to improve daily operations. In this tutorial, we will demonstrate Simio's 3D rapid modeling capability to effectively solve real problems. Explore how a single tool can be used to not only optimize your system design, but also provide effective planning and scheduling. Come explore the Simio difference and see why so many professional and novice simulationists are changing to Simio.

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Statistics.com 20
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The Institute for Statistics Education at Statistics.com offers 100+ courses in statistics, analytics, data mining, text mining, social network analysis, optimization, risk management, biostatistics, etc., plus courses that focus on tools like Python, R, SAS, SQL, and Hadoop. Our typical course is four weeks long and organized into weekly lessons that include readings, short videos, instant feedback exercises, homework due weekly, and a project. Courses are attended every day by an expert instructor, staffed by TAs who help the instructor with posting content and grading homework – participants do not need to be online at particular times.

Software Tutorial: *A Survey of Data Analytics Methods, Peter Bruce, Founder and President, The Institute for Statistics Education at Statistics.com, peter.bruce@statistics.com*

Tuesday, 11–11:45am, Room 302 (TB79)

This workshop will survey the field of data analytics, reviewing both traditional statistical methods and machine learning methods, including predictive modeling, unsupervised learning, text mining, statistical inference, time series forecasting, recommender systems, network analytics, and more. It will be a broad brush treatment aimed at newcomers, as well as those with knowledge in one area who wish to understand where other analytic methods fit into the picture.

Syncopation Software, Inc. 1
www.syncopation.com

Syncopation Software is a leading provider of business analytic tools for decision and risk analysis, Monte Carlo simulation, real option valuation, and portfolio management. Our range of software solutions, backed by our responsive support and variety of efficient training courses, can help you tackle a wide variety of decision problems with inherent uncertainty. From quick risk assessments within a spreadsheet (DPL Direct), to complex decision support applications (DPL Professional), to the prioritization of a demanding portfolio (DPL Portfolio and DPMX), Syncopation has robust tools grounded in solid management science principles that are sure to lead you to better outcomes and enhanced value creation.

Software Tutorial: *DPL Portfolio and DPMX™: A Decision Analysis-based System for Better Portfolio Decisions, Chris Dalton, CEO, Syncopation Software, Inc., cdalton@syncopation.com*

Tuesday, 1:30–2:15pm, Room 302 (TC79)

This demonstration will show how the DPMX™ system can serve as the analytical backbone for an effective portfolio analysis process. We'll start with an overview of DPL Professional, a proven modelling environment for decision analysis, risk analysis, and Monte Carlo simulation. Next, we'll cover DPL Portfolio, the modelling environment for portfolio analysis, visualization, and prioritization. Finally, we'll show DPMX, a Web-based system for managing project data and presenting portfolio results in attractive, management-friendly charts. The motivating examples will be drawn from the prioritization of an R&D portfolio in the pharmaceutical industry.

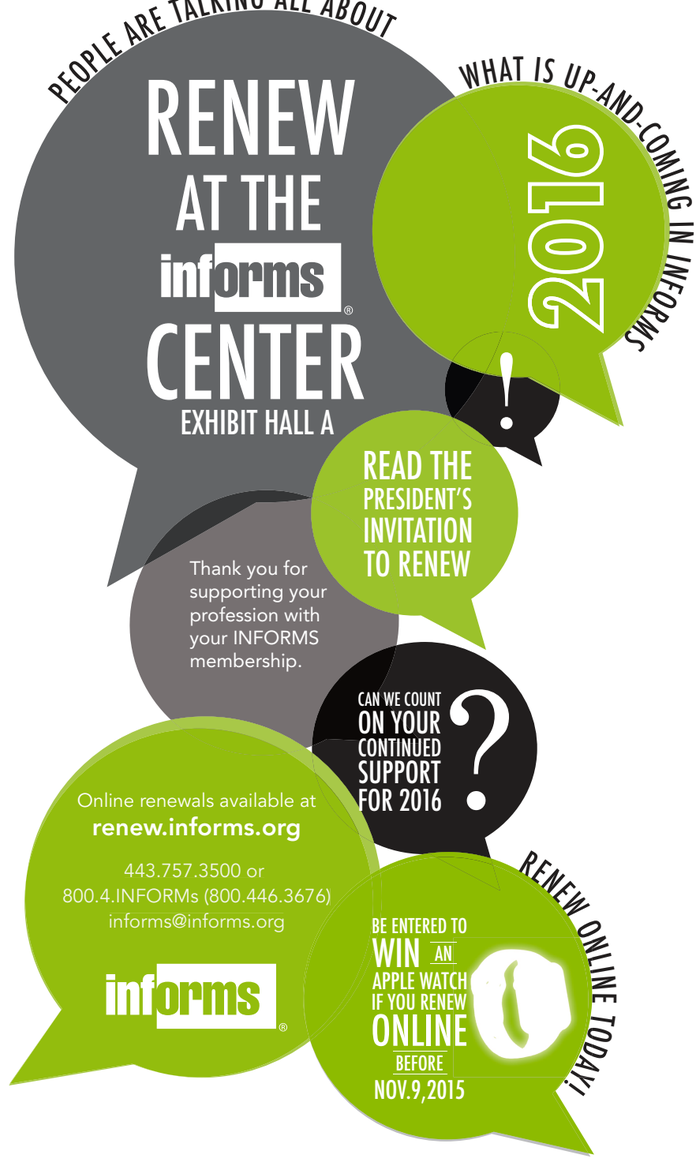
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