

John G. Turner

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## Education

Ph.D., Tepper School of Business, Carnegie Mellon University, 2010.  
Major: Operations Research  
Minors: Operations Management, Economics  
Dissertation: Ad Slotting & Pricing: New Media Planning Models for New Media

M.S., Tepper School of Business, Carnegie Mellon University, 2006.  
Major: Operations Research

B.Math., *Dean's List Graduate (Highest Distinction)*, University of Waterloo, 2004.  
Major: Honours Operations Research Co-op  
Minor: Computer Science

## Academic Positions

Associate Professor, Paul Merage School of Business, UC Irvine (2017–Present)  
Assistant Professor, Paul Merage School of Business, UC Irvine (2010–2017)

## Research Interests

My research interests include applied optimization, large-scale optimization, revenue management, media management, health care management, and problems that lie at the interface of operations and marketing. The key ingredient that cross-cuts my research is the presence of problem-specific structures which can be exploited to deliver insights or computationally efficient algorithms. In one research stream, my focus is on planning and scheduling online advertising; my papers in this stream (1) develop a method for placing ads within the 3D worlds of console-based video games, (2) introduce a modeling paradigm for a broad class of display advertising called Guaranteed Targeted Display Advertising, (3) develop an efficient duality-based algorithm for planning Guaranteed Targeted Display Advertising, (4) develop a pattern-based model and algorithm for planning and scheduling a new form of guaranteed contract called the Reach & Frequency-based contract, and (5) solve other important operational-level advertising problems using large-scale optimization techniques. In another stream, my

papers employ analytics and specialized methods to (1) help retailers choose third-party shippers for long-term transportation contracts while balancing diesel price risk, (2) help the government of Korea to determine which hospitals to designate as Level I trauma centers to maximize coverage given a fixed resource budget, and (3) help travel search engines understand what factors contribute to consumers evaluating more/less options and purchasing with higher/lower likelihood.

### Professional Memberships

RM&P - INFORMS Revenue Management & Pricing Section  
MSOM - INFORMS Manufacturing and Service Operations Management Society  
INFORMS - Institute for Operations Research and the Management Sciences  
POMS - Production and Operations Management Society  
CDT - UC Irvine Center for Digital Transformation

### Awards and Honors

Junior Faculty Research Award, The Paul Merage School of Business, UC Irvine. (May 15, 2017)

In recognition for the highest research productivity (as measured by publications accepted in the 2016-17 academic year) among assistant professors at the Paul Merage School of Business.

Council on Research, Computing & Library Resources Award, UCI. (Feb 24, 2017).

Received \$1000 award to design routing policies to optimally route jobs (which vary in their requirements) to heterogeneous servers.

Dean's Honoree for Teaching Excellence, UC Irvine. (May 7, 2015).

In recognition for excellence in undergraduate teaching, presented by the Dean of the Paul Merage School of Business.

William Pierskalla Best Paper Award in Health Care Management Science, INFORMS. (2014).

The Health Applications Society of INFORMS sponsors an annual competition for the Pierskalla Award, which recognizes research excellence in the field of health care management science. I received this award for my work and related paper that studies the design of a trauma care system in Korea, and uses a method we developed called Shifting Quadratic Envelopes to outperform several benchmarks by up to 20%.

Yahoo Labs Faculty Research and Engagement Program (FREP) Scholar. (2012).

I was one of 28 faculty from top schools around the world given this award. As described by Yahoo!'s press briefing, "The [FREPP] program is designed to produce the highest quality scientific collaborations and outcomes by engaging with faculty and students conducting research in areas of mutual interest. The FREPP funds help academics across the globe collaborate with Yahoo! research scientists on new, exciting internet research studies and experiments."

Lave-Weil Prize, Tepper School of Business, Carnegie Mellon University. (2012).

Prior to winning the Pierskalla Award, my work in planning a trauma care system in Korea was awarded the 2012 Lave-Weil Prize for the best (at the time) unpublished paper on problem solving co-authored at Carnegie Mellon's Tepper School of Business (my coauthor is at CMU).

George B. Dantzig Dissertation Award, INFORMS. (Nov 13, 2011).

The George B. Dantzig Award is awarded by INFORMS for the best dissertation in any area of operations research and the management sciences that is innovative and relevant to practice. This is the top award that INFORMS, our main professional society, confers to young researchers. Two papers that came out of my dissertation are "Scheduling of Dynamic In-Game Advertising" and "The Planning of Guaranteed Targeted Display Advertising", both now-published in *Operations Research*.

Council on Research, Computing & Library Resources Award, UCI. (Jan 12, 2011).

Received \$3500 award to conduct research in social network ad optimization.

## RESEARCH

### Publications

#### Journal Articles, Peer Reviewed

- [10] Hojjat, A., Turner, J. G., Cetintas, S., Yang, J. A Unified Framework for the Scheduling of Guaranteed Targeted Display Advertising under Reach and Frequency Requirements. *Operations Research*, In Press (Accepted).
- [9] Choudhary, V., Currim, I. S., Dewan, S., Jeliaskov, I., Mintz, O., Turner, J. G. (2016). Evaluation Set Size and Purchase: Evidence from a Product Search Engine. *Journal of Interactive Marketing*, In Press (Accepted).

- [7] Drezner, Z., Scott, C. H., Turner, J. G. (2016). Mixed Planar and Network Single-Facility Location Problems. *Networks*, Published online in advance of print. DOI: 10.1002/net.21698.
- [6] Cho, S.-H., Jang, H., Lee, T., Turner, J. G. (2014). Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning. *Operations Research*, 62(4), 751--771. **Awarded the 2014 INFORMS William Pierskalla Best Paper Award & the 2012 Carnegie-Mellon University Lave-Weil Prize.**
- [3] Turner, J. G., Peterson, B., Cho, S.-H., Kekre, S., Scheller-Wolf, A. (2012). A Large U.S. Retailer Selects Transportation Carriers Under Diesel Price Uncertainty. *Interfaces*, 42(4), 365-379.
- [2] Turner, J. G. (2012). Planning of Guaranteed Targeted Display Advertising. *Operations Research*, 60(1), 18-33. **Recognized by the 2011 INFORMS Dantzig Dissertation Award.**
- [1] Turner, J. G., Scheller-Wolf, A., Tayur, S. (2011). Scheduling of Dynamic In-Game Advertising. *Operations Research*, 59(1), 1-16. **Recognized by the 2011 INFORMS Dantzig Dissertation Award.**

#### Conference Proceedings, Peer Reviewed

- [8] Arkhipov, D., Turner, J. G., Dillencourt, M., Torres, P., Regan, A. (2016). Yield Optimization with Binding Latency Constraints. *Proceedings of the 3<sup>rd</sup> International Conference on Soft Computing and Machine Intelligence (ISCMI)*, In Press (Accepted).
- [5] Hojjat, A., Turner, J. G., Cetintas, S., Yang, J. (2014). Delivering Guaranteed Display Ads under Reach and Frequency Requirements. *Proceedings of the 28th AAAI Conference on Artificial Intelligence*, pp. 2278-2284. **This is the #1-ranked computer science conference in artificial intelligence.**
- [4] Lee, T., Jang, H., Cho, S.-H., Turner, J. G. (2012). A Simulation-Based Iterative Method for a Trauma Center - Air Ambulance Location Problem. *Proceedings of the 2012 IEEE Winter Simulation Conference*, pp. 955-966.

#### Working Papers

- [W11] Lejeune, M., Turner, J. G. Planning Online Advertising Using Lorenz Curves. (Under 2<sup>nd</sup> Round Submission, *Operations Research*).

- **[W12]** Nourbakhsh, V., Turner, J. G. Routing Heterogeneous Jobs to Heterogeneous Servers: A Global Optimization-Based Approach. (Under Submission, *Operations Research*).
- **[W13]** Hojjat, A., Turner, J. G. Controlling the Exposure Frequency Distribution of Online Advertising with Markov Chains. (Preparing for initial submission).
- **[W14]** Xu, T., Yu, Y., Turner, J. G., Regan, A. C. Thompson Sampling in a Dynamic System for Contextual Bandit Problems. (Preparing for initial submission).

#### Work in Progress

- **[P15]** Arkhipov, D., Turner, J. G., Dillencourt, M., Torres, P., Regan, A. Optimizing Online Advertising Waterfalls.

#### Contracts, Grants and Sponsored Research

Turner, John G (Principal Investigator) "Yahoo! Faculty Research and Engagement Award 2012," Yahoo! Inc., \$40,000. (October 23, 2012).

#### Presentations Given

##### Invited Talks at Research Institutions

- 03/10/2017 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. Invited Talk, College of Business, University of Illinois at Chicago, Chicago, IL. With Lejeune, M. (Author).
- 03/09/2017 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. Invited Talk, Booth School of Business, University of Chicago, Chicago, IL. With Lejeune, M. (Author).
- 01/20/2017 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. Invited Talk, Leavey School of Business, Santa Clara University, Santa Clara, CA. With Lejeune, M. (Author).
- 10/14/2016 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. Invited Talk, Foster School of Business, University of Washington, Seattle, WA. With Lejeune, M. (Author).
- 3/18/2016 "Planning Online Advertising Using Lorenz Curves". **Turner, J. (Presenter & Author)**. Invited Talk, Rady School of Management, University of California, San Diego. With Lejeune, M. (Author).
- 3/6/2015 "Delivering Guaranteed Display Advertising under Reach and Frequency Requirements", **Turner, J. (Presenter & Author)**. Invited Talk, Darden

- School of Business, University of Virginia, Charlottesville, VA. With Hojjat, A. (Author), Cetintas, S. (Author), Yang, J. (Author).
- 2/6/2015 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. Invited Talk, Robert H. Smith School of Business, University of Maryland, College Park, MD. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 9/5/2014 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. Invited Talk, Carroll School of Management, Boston College, Boston, MA. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 7/8/2014 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. Invited Talk, London Business School, London, UK. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 4/11/2014 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. Invited Talk, Leavey School of Business, Santa Clara University, Santa Clara, CA. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 2/22/2013 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. Invited Talk, University of Miami School of Business Administration, Coral Gables, FL. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 1/29/2013 "Planning of Guaranteed Targeted Display Advertising", **Turner, J. (Presenter & Author)**. Invited Talk, Yahoo!, Inc., Sunnyvale, CA.
- 11/9/2012 "Planning of Guaranteed Targeted Display Advertising", **Turner, J. (Presenter & Author)**. Invited Talk, University of California, Berkeley, Haas School of Business, Berkeley, CA.
- 10/26/2012 "Planning of Guaranteed Targeted Display Advertising", **Turner, J. (Presenter & Author)**. Invited Talk, Georgia Tech Scheller College of Business, Atlanta, GA.
- 3/25/2011 "Planning of Guaranteed Targeted Display Advertising", **Turner, J. (Presenter & Author)**. Invited Talk, George Washington University School of Business, Washington, DC.

Talks Given at UC Irvine

- 2/15/2017 "Waterfall Yield Optimization for Online Advertising", **Turner, J. (Presenter & Author)**. Paul Merage School of Business Assistant Professor Colloquium, UC Irvine, Irvine, CA. With Arkhipov, D. (Author), Dillencourt, M. (Author), Regan, A. (Author).

- 1/20/2016 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. Paul Merage School of Business Assistant Professor Colloquium, UC Irvine, Irvine, CA. With Lejeune, M. (Author).
- 2/18/2015 "Learning, Revising, and Forgetting Multidimensional Contextual Features to Optimize Online Ad Selection", **Turner, J. (Presenter & Author)**. Paul Merage School of Business Assistant Professor Colloquium, UC Irvine, Irvine, CA. With Xu, T. (Author), Regan, A. (Author), Yu, Y. (Author).
- 10/24/2014 "Data-Driven Optimization", **Turner, J. (Presenter & Author)**. Big Data Kickoff, UC Irvine, Irvine, CA.
- 1/15/2014 "Foundations of Social Network Ad Optimization", **Turner, J. (Presenter & Author)**. Paul Merage School of Business Assistant Professor Colloquium, UC Irvine, Irvine, CA. With Peterson, B. (Author), Cho, S.-H. (Author), Kekre, S. (Author), Scheller-Wolf, A. (Author).
- 3/18/2013 "Advertising Planning in Video Games and Beyond", **Turner, J. (Presenter & Author)**. Artificial Intelligence & Machine Learning Seminar, UC Irvine, Irvine, CA.
- 2/13/2013 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. Paul Merage School of Business Assistant Professor Colloquium, UC Irvine, Irvine, CA. With Cho, S.-H. (Author), Jang, H. (Author), Lee, T. (Author).
- 1/18/2012 "A Large U.S. Retailer Selects Transportation Carriers Under Diesel Price Uncertainty", **Turner, J. (Presenter & Author)**. Paul Merage School of Business Assistant Professor Colloquium, UC Irvine, Irvine, CA. With Peterson, B. (Author), Cho, S.-H. (Author), Kekre, S. (Author), Scheller-Wolf, A. (Author).
- 4/20/2011 "Planning of Guaranteed Targeted Display Advertising", **Turner, J. (Presenter & Author)**. Paul Merage School of Business Assistant Professor Colloquium, UC Irvine, Irvine, CA.
- 1/19/2011 "Scheduling of Dynamic In-Game Advertising", **Turner, J. (Presenter & Author)**. Center for Research on Information Technology and Organizations (CRITO), UC Irvine, Irvine, CA. With Scheller-Wolf, A. (Author), Tayur, S. (Author).

#### Conference Presentations

- 6/29/2017 "Waterfall Yield Optimization for Online Advertising", **Turner, J. (Presenter & Author)**. INFORMS Revenue Management & Pricing Conference, Amsterdam, Netherlands. Peer Reviewed. With Arkhipov, D. (Author), Dillencourt, M. (Author), Regan, A. (Author).

- 5/5/2017 "Continuous Learning for Contextual Bandits with Nonstationary Rewards", **Turner, J. (Presenter & Author)**. POMS Annual Meeting 2017, Seattle, WA. With Regan, A. (Author), Xu, T. (Author), Yu, Y. (Author).
- 11/15/2016 "Continuous Learning for Contextual Bandits with Nonstationary Rewards", **Turner, J. (Presenter & Author)**. INFORMS Annual Meeting 2017, Nashville, TN. With Regan, A. (Author), Xu, T. (Author), Yu, Y. (Author).
- 11/15/2016 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. INFORMS Annual Meeting 2017, Nashville, TN. With Lejeune, M. (Author).
- 6/16/2016 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. INFORMS Revenue Management & Pricing Conference, New York, NY. Peer Reviewed. With Lejeune, M. (Author).
- 5/31/2016 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. CORS Annual Meeting 2016, Banff, AB, Canada. With Lejeune, M. (Author).
- 5/20/2016 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. Annual Southern California OR/OM Day 2016, Irvine, CA. With Lejeune, M. (Author).
- 5/8/2016 "Evaluation Set Size and Purchase: Evidence from a Product Search Engine", **Turner, J. (Presenter & Author)**. POMS Annual Meeting 2016, Orlando, FL. With Choudhary, V. (Author), Currim, I. (Author), Dewan, S. (Author), Jeliaskov, I. (Author), Mintz, O. (Author).
- 5/8/2016 "Planning Online Advertising Using Lorenz Curves", **Turner, J. (Presenter & Author)**. POMS Annual Meeting 2016, Orlando, FL. With Lejeune, M. (Author).
- 11/3/2015 "Learning, Revising, and Forgetting Multidimensional Contextual Features for Online Ad Selection", **Turner, J. (Presenter & Author)**. INFORMS Annual Meeting 2015, Philadelphia, PA. With Regan, A. (Author), Xu, T. (Author), Yu, Y. (Author).
- 11/3/2015 "Scheduling of Guaranteed Targeted Display Advertising under Reach and Frequency Requirements", **Turner, J. (Author)**. INFORMS Annual Meeting 2015, Philadelphia, PA. With Hojjat, A. (Presenter & Author), Cetintas, S. (Author), Yang, J. (Author).
- 6/28/2015 "Delivering Guaranteed Display Advertising under Reach and Frequency Requirements", **Turner, J. (Presenter & Author)**. Manufacturing & Services Operations Management (MSOM) Conference, Toronto, ON. Peer Reviewed. With Hojjat, A. (Author), Cetintas, S. (Author), Yang, J. (Author).
- 6/6/2015 "Delivering Guaranteed Display Advertising under Reach and Frequency Requirements", **Turner, J. (Author)**. INFORMS Revenue Management &



- Pricing Conference, New York, NY. Peer Reviewed. With Hojjat, A. (Presenter & Author), Cetintas, S. (Author), Yang, J. (Author).
- 5/22/2015 "Delivering Guaranteed Display Ads under Reach and Frequency Requirements", **Turner, J. (Author)**. Annual Southern California OR/OM Day 2015, Los Angeles, CA. With Hojjat, A. (Presenter & Author), Cetintas, S. (Author), Yang, J. (Author).
- 5/8/2015 "Learning, Revising, and Forgetting Multidimensional Contextual Features to Optimize Online Ad Selection", **Turner, J. (Presenter & Author)**. POMS Annual Meeting 2015, Washington, DC. With Xu, T. (Author), Regan, A. (Author), Yu, Y. (Author).
- 7/29/2014 "Delivering Guaranteed Display Ads under Reach and Frequency Requirements", **Turner, J. (Presenter & Author)**. Twenty-Eighth AAAI Conference on Artificial Intelligence, Quebec City, QC. Peer Reviewed. With Hojjat, A. (Author), Cetintas, S. (Author), Yang, J. (Author).
- 7/13/2014 "Foundations of Social Network Ad Optimization", **Turner, J. (Presenter & Author)**. International Federation of Operational Research Societies (IFORS) Triennial Conference 2014, Barcelona, Spain.
- 6/12/2014 "Evaluation Set Sizes: Antecedents and Consequences at an Online Intermediary", **Turner, J. (Author)**. Statistical Challenges in eCommerce Research, Tel Aviv University, Israel. Peer Reviewed. With Choudhary, V. (Author), Currim, I. (Author), Dewan, S. (Presenter & Author), Jeliaskov, I. (Author), Mintz, O. (Author).
- 5/23/2014 "Foundations of Social Network Ad Optimization", **Turner, J. (Presenter & Author)**. Annual Southern California OR/OM Day 2014, Los Angeles, CA. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 5/11/2014 "Foundations of Social Network Ad Optimization", **Turner, J. (Author)**. POMS Annual Meeting 2014, Atlanta, GA.
- 10/6/2013 "Foundations of Social Network Ad Optimization", **Turner, J. (Author)**. INFORMS Annual Meeting 2013, Minneapolis, MN.
- 6/19/2012 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. INFORMS MSOM (Manufacturing and Service Operations Management) Conference 2012, New York, NY. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 5/4/2012 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. Annual Southern California OR/OM Day 2012, Los Angeles, CA. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).

- 4/20/2012 "Contract Choice for Targeted Advertising", **Turner, J. (Presenter & Author)**. POMS (Production and Operations Management Society) Conference 2012, Chicago, IL. With Jerath, K. (Author).
- 4/20/2012 "Simultaneous Location of Trauma Centers and Helicopters for Emergency Medical Service Planning", **Turner, J. (Presenter & Author)**. POMS (Production and Operations Management Society) Conference 2012, Chicago, IL. With Cho, S.-H. (Author), Lee, T. (Author), Jang, H. (Author).
- 4/16/2012 "A Large U.S. Retailer Selects Transportation Carriers Under Diesel Price Uncertainty", **Turner, J. (Presenter & Author)**. INFORMS Conference on Business Analytics and Operations Research, Huntington Beach, CA. Peer Reviewed. With Peterson, B. (Author), Cho, S.-H. (Author), Kekre, S. (Author), Scheller-Wolf, A. (Author).
- 11/16/2011 "A Location Problem for Trauma Centers and EMS Transportation Resources", **Turner, J. (Author)**. INFORMS Annual Meeting 2011, Charlotte, NC. With Lee, T. (Presenter & Author), Jang, H. (Author), Cho, S.-H. (Author).
- 11/13/2011 "Dantzig Award Finalist Presentation: New Media Planning Models for New Media", **Turner, J. (Presenter & Author)**. INFORMS Annual Meeting 2011, Charlotte, NC.
- 11/13/2011 "Contract Choice for Targeted Advertising", **Turner, J. (Presenter & Author)**. INFORMS Annual Meeting 2011, Charlotte, NC. With Jerath, K. (Author).
- 7/11/2011 "Planning of Guaranteed Targeted Display Advertising - Computational Aggregation", **Turner, J. (Presenter & Author)**. International Federation of Operational Research Societies (IFORS) Triennial Conference 2011, Melbourne, Victoria, Australia.
- 10/11/2010 "Planning of Guaranteed Targeted Display Advertising - Computational Aggregation", **Turner, J. (Presenter & Author)**. INFORMS Annual Meeting 2010, Austin, TX.
- 5/21/2010 "Planning of Guaranteed Targeted Display Advertising", **Turner, J. (Presenter & Author)**. Annual Southern California OR/OM Day 2010, Irvine, CA.

## Professional Service

### Reviewer, Journal Articles

Operations Research, 2010 – Present

Management Science, 2012 – Present

Manufacturing & Services Operations Management, 2012 – Present

Production and Operations Management, 2013 – Present

Interfaces, 2016 – Present  
European Journal of Operational Research, 2008 – Present  
IIE Transactions, 2017 – Present  
Naval Research Logistics, 2014 – Present  
Journal of Interactive Advertising, 2014 – Present  
Journal of Industrial and Management Optimization, 2011 – Present  
Decision Sciences, 2015 – Present  
Omega: The International Journal of Management Science, 2014 – Present  
Operational Research: An International Journal, 2016 – Present  
Computers & Operations Research, 2013 – Present

**Reviewer, Refereed Conferences**

M&SOM (Manufacturing & Services Operations Management), 2012  
M&SOM Supply Chain Special Interest Group, 2012  
M&SOM Sustainability Special Interest Group, 2014  
POMS (Production and Operations Management Society) College of Healthcare  
Operations Management (CHOM) Paper Competition, 2013  
Direct/Interactive Marketing Research Summit, 2015

**Member, Conference Program Committee**

11<sup>th</sup> Ad Auctions Workshop (held in conjunction with the ACM Conference on  
Economics and Computation), Portland, OR, USA. June 16, 2015  
12<sup>th</sup> Ad Auctions Workshop (held in conjunction with the ACM Conference on  
Economics and Computation), Maastricht, Netherlands, July 25, 2016

**Conference Chair**

Southern California OR/OM Day Conference, Irvine, CA, USA. May 20, 2016

**Conference Track Chair**

POMS (Production and Operations Management Society)  
Revenue Management Track Chair, Seattle, WA, USA. May 5-8, 2017

**Conference Session Chair**

INFORMS (Institute for Operations Research and the Management Sciences)  
Nashville, TN, USA. November 13-16, 2016.  
Philadelphia, PA, USA. November 1-4, 2015.  
Charlotte, NC, USA. November 13-16, 2011.  
POMS (Production and Operations Management Society)  
Chicago, IL, USA. April 20-23, 2012.  
CORS (Canadian Operational Research Society)  
Banff, AB, Canada. May 30 - June 1, 2016.  
IFORS (International Federation of Operational Research Societies)

Barcelona, Spain. July 13–18, 2014.  
Melbourne, Australia. July 10–15, 2011.

Panelist, Session on Analytics and Decision Analysis

INFORMS Annual Conference, November 3, 2015, Philadelphia, PA.

**Abstract:** Huge increases in data availability and computing power have transformed quantitative fields and led to a proliferation of tools for analytics. Panelists will discuss how Decision Analysis can strengthen analytics broadly defined, and how analytics can strengthen Decision Analysis.

## TEACHING

### Teaching Overview

I like to combine analytical problem-solving methods with industry applications that strive to balance supply and demand in their own unique ways. I regularly teach Revenue Management and Management Science at the MBA and undergraduate levels, and Large-Scale Optimization to Ph.D. students. I have also taught Operations Management at the undergraduate level. When I teach I try to make sure that students of all backgrounds master the foundational concepts, while those that come into a class with prior relevant knowledge can take their understanding of the topic to the next level. When possible, I use examples from my research in online advertising planning and locating trauma centers to drive class discussions.

### Courses Taught

Revenue Management (UG & MBA)  
Management Science (UG & MBA)  
Large-Scale Optimization (PhD)  
Operations Management (UG)

### Special Pedagogical Activities

#### Case Study

I authored a teaching case (with Alan Scheller-Wolf and Sridhar Tayur of Carnegie Mellon University) titled “Dynamic In-Game Advertising: Managing Complex High-Stakes Operations,” based on my 2011 Operations Research paper “Scheduling of Dynamic In-Game Advertising.” This case was picked as a finalist in the INFORMS

2016 Case Competition; the winner of this competition will be announced at the INFORMS Annual Conference in Nashville, TN, in early November.

#### **Moderator, Panel Session on Teaching Revenue Management**

Invited, organized, and moderated a panel of experienced scholars to discuss our experiences with teaching Revenue Management (a class that I introduced at UCI to MBA students in Spring 2012, and to undergrads in Fall 2014). This was held at the POMS Annual Meeting in Denver, CO, USA, on May 4, 2013.

#### **Executive Education**

Gave the following lectures to Korean exchange students participating in certificate programs offered at the Paul Merage School of Business, UC Irvine:

“Trauma Care System Design in Korea: An Introduction to Optimization & Simulation Modeling” delivered to 45 Suwon University upper-division undergraduates. February 16, 2016.

“The New Age of Analytics in Online Advertising: Revenue Management and Pricing for Digital Media” delivered to 22 KAIST Masters of Information Management students. July 15, 2013.

#### **Doctoral Student Supervision**

##### **Graduated Ph.D. Students, Advisor & Chair of Doctoral Committee**

Ali Hojjat, “New Models and Mechanisms for the Planning and Allocation of Online Advertising.” Defended thesis July 20, 2016. Placement: Assistant Professor of Decision Sciences, Paul College of Business, University of New Hampshire, Durham, NH.

##### **Graduated Ph.D. Students, Member of Doctoral Committee**

Dmitri Arkhipov, “Computational Models for Scheduling in Online Advertising.” Defended thesis August 25, 2016. Placement: Post-Doctoral Researcher, Donald Bren School of Computer Science, University of California, Irvine, Irvine, CA.

Neda Masoud, “Multi-Hop Peer-to-Peer Ridesharing.” Defended thesis July 13, 2016. Placement: Assistant Professor, Civil and Environmental Engineering, University of Michigan, Ann Arbor, MI.

Tianbing Xu, “Online Advertising: A Large Scale Computing Perspective.” Defended thesis November 4, 2013. Placement: Research Scientist, Facebook, Inc., Menlo Park, CA.

James Cao, "Three Essays on Demand Management." Defended thesis May 25, 2012. Placement: Assistant Professor, Edwards School of Business, University of Saskatchewan, SK, Canada.

**Graduated Ph.D. Students, Member of Doctoral Candidacy Committee**

Pedro Camargo, "ReMuLAA – A New Algorithm for the Route Choice Problem." Proposed thesis November 5, 2013. Placement: Transportation Modeler, Marcopa Association of Governments, Phoenix, AZ.

Heidi Tucholski, "Incentivized Decisions in the U.S. Air Force: Stepping Back to Look at the Big Picture." Proposed thesis March 4, 2013. Placement: U.S. Air Force.

**Current Ph.D. Students, Advisor & Chair of Doctoral Candidacy Committee**

Vahid Nourbakhsh, "Routing Dynamics: Optimization, Measurement, and Applications." Proposed thesis September 13, 2016.

**Current Ph.D. Students, Member of Doctoral Candidacy Committee**

William Lam, "Combinatorial Optimization for Graphical Models." Proposed thesis November 20, 2013.

**Directed Individual/Independent Studies (MBA-299)**

April Liu, "A Study of Business Metrics and Data Analysis." Spring 2016.

Amrita Datta, "Competitive Intelligence Report for Social Media." Spring 2016.

Hiroaki Tanaka, "Research and Development Plan for an Online University." Winter 2016.

Christine Kelly, "How Utility Drives Decision Making." Fall 2015.

Anish Sattur, "Streaming the Recruitment Cycle at Madiba Inc." Fall 2015.

Cara Davidoff, "The Ever-Changing Hotel Industry." Spring 2015.

Deepti Nelavelli, "An Exploration of Project Management Trends." Spring 2015.

Natalia Zagorodnyaya, "Westendorp's Price Sensitivity Technique Applied to the Auto Industry." Spring 2015.

Yasu Takamatsu, "Big Data Analysis at Toshiba." Spring 2015.

Jay Simon & Mabel Lin, "A Study of Analytics." Winter 2015.

Jin Kuo, "Online Advertising for Pacific Dental." Fall 2014.

Ken Lee, "SAP Implementation for Spectrum Brands." Fall 2014.

Kevin Teng, "Pricing Negotiation at Niagara Bottling Co." Fall 2014.

Max Snitkovsky, "Streamlining On-Boarding at HireRight, Inc." Fall 2014.

Saradha Ramaswami, "Semiconductor Logistics at GlobalFoundries, Inc." Spring 2014.

Suveer Sharma, "Living Juice: ShopKeep and Expense Models." Spring 2014.

Yi-Ching Huang, "Niagara Bottling Company Customer Service Metrics." Fall 2012.

#### Undergraduate Research Supervision

Meerae Park, "A Tale of Two Rosters: The Relationship Between Salaries and Winning in the National Basketball League." Winter 2014.

Johnson Liu, "Facility Location Research Paper." Spring 2011.

## SERVICE

### Department Service

Coordinator, Operations and Decision Technologies Colloquium, Winter 2011 - Spring 2014.

Member, Operations Ph.D. Student Admissions Committee, 2010 - Present

### School/College Service

Member, Joint Masters Program Committee, Fall 2015 - Present

Member, Masters Program Committee, Fall 2010 - Spring 2013 and Fall 2014 - Present.

Member, Online Education Committee, Fall 2014 - Spring 2015.

Member, Undergraduate Program Committee, Fall 2013 - Spring 2014.

Member, New Building Information Technology Committee, Winter 2014.

### University Service

Member, Council on Faculty Welfare (CFW), Fall 2013 & Winter 2014

Member, Council on Undergraduate Admissions and Relations with Schools (CUARS), Fall 2012 & Fall 2013