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EDUCATION	<p><b>MIT</b>, Cambridge, MA <span style="float: right;">Sept. 2011 – Aug. 2015</span>  <i>PhD</i>, Operations Research Center. Advisor: Dimitris Bertsimas.  GPA: 5.0 / 5.0</p> <p><b>University of Maryland</b>, College Park, MD <span style="float: right;">Sept. 2006 – May 2010</span>  <i>Bachelor of Science</i>, Computer Science (summa cum laude)  <i>Bachelor of Science</i>, Mathematics (summa cum laude, high honors)  GPA: 4.0 / 4.0</p>
ACADEMIC POSITIONS	<p><b>MIT Sloan School of Management</b>, Cambridge, MA <span style="float: right;">Sept. 2015 – present</span>  <i>Lecturer and Postdoctoral Fellow</i></p> <p><b>MIT Operations Research Center</b>, Cambridge, MA <span style="float: right;">Sept. 2011 – Aug. 2015</span>  <i>Research assistant</i></p>
JOURNAL PUBLICATIONS	<p>“Optimal healthcare decision making under multiple mathematical models: Application in prostate cancer screening,” with D. Bertsimas and T. Trikalinos. To appear in <i>Health Care Management Science</i>.</p> <p>“An Analytics Approach to Designing Combination Chemotherapy Regimens for Cancer,” with D. Bertsimas, A. O’Hair, and S. Relyea. <i>Management Science</i>, 62(5), 1511–1531, 2016.  <b>Winner of the 2013 William Pierskalla Best Paper Award</b></p> <p>“Tenure Analytics: Models for Predicting Research Impact,” with D. Bertsimas, E. Brynjolfsson, and S. Reichman. <i>Operations Research</i>, 63(6), 1246–1261, 2015.</p> <p>“A Course on Advanced Software Tools for Operations Research and Analytics,” with I. Dunning, V. Gupta, A. King, J. Kung, and M. Lubin, <i>INFORMS Transactions on Education</i>, 15(2), 169–179, 2015.</p> <p>“Comparison of Heuristics for the Colorful Traveling Salesman Problem,” with A. Raiconi, R. Cerulli, M. Gentili, B. Golden, and S. Chen, <i>International Journal of Metaheuristics</i>, 2(2): 141–173, 2013.</p> <p>“Empirical Analysis of the Effect of Residents on Emergency Department Treatment Times,” with D. Anderson, B. Golden, M. Harrington, and J. M. Hirshon, <i>IIE Transactions on Healthcare Systems Engineering</i> 3(3), 171–180, 2013.</p> <p>“The Impact of the Residency Teaching Model on the Efficacy of the Emergency Department at an Academic Center,” with D. Anderson, B. Golden, M. Harrington, and J. M. Hirshon, <i>Socio-Economic Planning Sciences</i> 47(3), 183–190, 2013.</p> <p>“Statistical Constraints on Binary Black Hole Inspiral Dynamics,” with C. Galley, F. Herrmann, M. Tiglio, and G. Guerberoff, <i>Classical and Quantum Gravity</i> 27(24), 245007, 2010.</p> <p>“The Effective Application of a New Approach to the Generalized Orienteering Problem,” with B. Golden, <i>Journal of Heuristics</i> 16(3), 393–415, 2010.  <b>Winner of the 2010 INFORMS Undergraduate Operations Research Prize</b></p> <p>“Integrating Post-Newtonian Equations on Graphics Processing Units,” with F. Herrmann, M. Bellone, G. Guerberoff, and M. Tiglio, <i>Classical and Quantum Gravity</i> 27(3), 032001, 2010.</p>

ARTICLES SUBMITTED	“What Works Best When? A Systematic Evaluation of Heuristics for Max-Cut and QUBO,” with I. Dunning and S. Gupta. Second round in <i>INFORMS Journal on Computing</i> .	
WORKING PAPERS	“Model Robustness,” with D. Bertsimas and V. Mišić.	
ARTICLES IN PREPARATION	“Improving Individualized Patient Predictions by Combining Clinical Study Databases and Cancer Registry Data,” with D. Bertsimas, A. Weinstein, and D. Zhuo.	
	“Designing Treatment Guidelines for Metastatic Breast Cancer Using Databases of Clinical Studies,” with D. Bertsimas and L. Vahdat.	
	“Designing Drug Therapies for Metastatic Breast Cancer Using Databases of Clinical Studies,” with D. Bertsimas and L. Vahdat.	
THESIS	“Analytics for Improved Cancer Screening and Treatment,” MIT, 2015.	
CONFERENCE PUBLICATIONS	“Comparison of Heuristics for Solving the GMLST Problem,” with Y. Chen, N. Cornick, A. Hall, R. Sahajpal, I. Yahav, and B. Golden, <i>Proceedings of the 9th INFORMS Telecommunications Conference</i> , 191–217, 2008.	
	“The Generalized Traveling Salesman Problem: A New Genetic Algorithm Approach,” with B. Golden, <i>Proceedings of the 10th INFORMS Computing Society Conference</i> , 165–181, 2007.	
BOOK CHAPTERS	“Black Hole Simulations with CUDA,” with F. Herrmann and M. Tiglio, <i>GPU Computing Gems Emerald Edition (W. Hwu, ed.)</i> , Morgan Kaufmann, 103–111, 2011.	
	“Comparison of Metaheuristics,” with B. Golden, <i>Handbook of Metaheuristics (M. Gendreau and J. Potvin, eds.)</i> , Springer, 625–640, 2010.	
CONFERENCE PRESENTATIONS	<b>Optimal Screening Under Multiple Mathematical Models</b>	
	POMS 27th Annual Conference, Orlando, FL	May 2016
	2015 INFORMS Annual Meeting, Philadelphia, PA	Nov. 2015
	2014 INFORMS Annual Meeting, San Francisco, CA	Nov. 2014
	POMS 25th Annual Conference, Atlanta, GA	May 2014
	<b>Designing Drug Therapies for Cancer</b>	
	INFORMS Healthcare 2015, Nashville, TN	July 2015
	INFORMS Healthcare 2013, Chicago, IL	June 2013
	2013 INFORMS Annual Meeting, Minneapolis, MN	Oct. 2013
	<b>Systematic Evaluation of Max-Cut and QUBO Heuristics</b>	
	2015 INFORMS Computing Society Conference, Richmond, VA	Jan. 2015
	2014 INFORMS Annual Meeting, San Francisco, CA	Nov. 2014
	<b>Optimal Screening for Prostate Cancer</b>	
	2012 INFORMS Annual Meeting, Phoenix, AZ	Oct. 2012
	<b>Generalized Orienteering Problem Heuristics</b>	
	2010 INFORMS Annual Meeting, Austin, TX	Nov. 2010
	Metaheuristics International Conference 2009, Hamburg, Germany	July 2009
	11th INFORMS Computing Society Conference, Charleston, SC	Jan. 2009
	<b>Binary Black Hole Simulations</b>	
	NVIDIA GPU Technology Conference, San Jose, CA	Oct. 2009

**Generalized Minimum Label Spanning Tree Problem Heuristics**  
9th INFORMS Telecommunications Conference, College Park, MD Mar. 2008

**Generalized Traveling Salesman Problem Heuristics**  
10th INFORMS Computing Society Conference, Coral Gables, FL Jan. 2007

AWARDS

**William Pierskalla Best Paper Award**, an award for the top healthcare management science paper worldwide (Oct. 2013)

**NSF Graduate Research Fellowship Program Award** (Mar. 2012)

**INFORMS Undergraduate Operations Research Prize**, an award for the top undergraduate operations research paper worldwide (Nov. 2010)

**2010 Student Researchers of the Year Award**, an award for the top five undergraduate researchers in all disciplines at the University of Maryland (May 2010)

**Outstanding Senior Award**, an award for the top senior undergraduate math major at the University of Maryland (Apr. 2010)

**Barry M. Goldwater Scholarship**, an award for the top 278 U.S. undergraduate researchers in science, mathematics, and engineering (Mar. 2009)

**Phillip Merrill Presidential Scholar**, an award for the 25 most successful rising seniors at the University of Maryland (Mar. 2009)

**Choate Regents Scholarship**, 4-year full scholarship (Apr. 2006)

TEACHING  
EXPERIENCE

*15.060 Data, Models, and Decisions* Sept. – Dec. 2016

Instructor for two sections of this MIT MBA core course on quantitative decision making in management.

*15.003: Analytics Software Tools* Sept. 2016

Developed and delivered a 3-hour module on data wrangling with dplyr in R.

*15.071 The Analytics Edge* Feb. – May 2016

Co-instructor (with Prof. Robert Freund) for two sections of this MIT MBA elective course on analytics. Co-developed 12 new lectures for the course. **Teaching evaluation: 6.3/7.0 (155 students).**

*15.S60 SSIM: Software Tools for Operations Research* Jan. 2015

Developed and delivered a 3-hour seminar on network analysis in R.

*15.071x The Analytics Edge* Mar. 2013 – May 2014

Co-developed a Massive Open Online Course (MOOC) on edX. Curated 14 datasets and associated materials, co-developed three lectures, and developed and videoed two recitations.

*15.S60 SSIM: Software Tools for Operations Research* Jan. 2014

Developed and delivered a 3-hour seminar on data wrangling in base R.

*15.S60 SSIM: Software Tools for Operations Research* Jan. 2013

Developed and gave 3-hour seminars on advanced R and distributed optimization.

CASE STUDIES  
DEVELOPED

“Organ Allocation at the National Paired Kidney Exchange,” with D. Gamarnik and I. Ashlagi.

TEACHING	15.071x The Analytics Edge (edX, MOOC)	Mar. – May 2015
ASSISTANT	15.071x The Analytics Edge (edX, MOOC)	Mar. – May 2014
EXPERIENCE	15.071 The Analytics Edge (MIT, MBA)	Feb. – May 2013
	CMSC412 Operating Systems (UMD, undergrad)	Sept. – Dec. 2009
	CMSC351 Algorithms (UMD, undergrad)	Sept. – Dec. 2008
	CMSC212 Intro. to Low-Level Prog. Concepts (UMD, undergrad)	Jan. – May 2008
NON-ACADEMIC	<b>Google</b> , New York, NY	
EXPERIENCE	<i>Software Development Engineer Intern</i>	May – Aug. 2011
	Implemented validation framework for predictions published by Google AdWords.	
	<b>Enertiaq, Inc.</b> , Chevy Chase, MD	
	<i>Co-founder and Chief Technology Officer</i>	Jan. – Dec. 2010
	Co-developed a novel control-theoretic approach to providing electricity grid reliability via demand response. Designed and implemented a distributed software system, managing a small development team.	
	<b>The Diamondback Student Newspaper</b> , College Park, MD	
	<i>Opinion Columnist</i>	Dec. 2009 – May 2010
	<i>Assistant/Deputy Managing Editor</i>	May 2008 – Dec. 2009
	<i>Copy Editor/Copy Desk Chief</i>	Sept. 2006 – May 2008
	<b>Microsoft Corporation</b> , Redmond, WA	
	<i>Software Development Engineer Intern</i>	May – Aug. 2008
	Implemented UI and cache optimization projects shipped in Microsoft Office 2010.	
	<b>Kaplan Test Prep and Admissions</b> , Vienna, VA	
	<i>SAT and PSAT Teacher</i>	Dec. 2006 – Jan. 2008
COMPUTER SKILLS	Experience writing production code in C/C++, Javascript, PHP, and R. Experience with a broad range of mathematical optimization software.	
LAST UPDATED	September 17, 2016	