

# Andrew C. Trapp

## CURRICULUM VITAE

WORCESTER POLYTECHNIC INSTITUTE  
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### Education

- ◇ **Ph.D., Industrial Engineering**, 2011  
Department of Industrial Engineering (Swanson School of Engineering)  
University of Pittsburgh, Pittsburgh, Pennsylvania  
Ph.D. Advisor: Dr. Oleg Prokopyev
- ◇ **M.S., Computer Science and Operations Research**, 2006  
Department of Applied Statistics and Operations Research  
Department of Computer Science  
Bowling Green State University, Bowling Green, Ohio
- ◇ **B.S., Applied Mathematics**, 2000  
Department of Mathematics and Statistics  
Rochester Institute of Technology (RIT), Rochester, New York

### Professional Positions Held

- ◇ *February 2017 – present, Associate Professor with tenure*  
*Operations and Industrial Engineering*  
*Mathematical Sciences (Collaborative Appointment)*  
*Data Science (Collaborative Appointment)*  
Worcester Polytechnic Institute
- ◇ *July 2011 – February 2017, Assistant Professor*  
*Operations and Industrial Engineering*  
Worcester Polytechnic Institute

### Research Interests

- ◇ Theoretical and Applied Linear and Integer Optimization
- ◇ Stochastic (Integer) Programming
- ◇ Application of Operations Research Methodologies in:
  - Social Justice: Humanitarian Decision Making
  - Analytics: Data Mining, Machine Learning
  - Health: Healthcare, Biomedicine
  - Environment: Energy, Sustainability

## Publications

### Refereed Journal Articles

1. M. Shojaeizadeh, S. Djasasbi, R. C. Paffenroth, A. C. Trapp, "Detecting Cognitive Effort Automatically using an Eye Tracking Machine Learning System," *accepted for publication, Decision Support Systems*, October 2018.
2. A. C. Trapp, W. Liu, S. Djasasbi, "Identifying Fixations in Gaze Data via Inner-Density and Optimization," *accepted for publication, INFORMS Journal on Computing*, August 2018.
3. T. Petit, A. C. Trapp, "Enriching Solutions to Combinatorial Problems via Solution Engineering," *accepted for publication, INFORMS Journal on Computing*, August 2018.
4. A. C. Trapp, C. Li, P. Flaherty, "Recovering All Generalized Order-Preserving Submatrices: New Exact Formulations and Algorithms," *Annals of Operations Research*, 263 (1–2), pp. 385–404, 2018.
5. R. A. Konrad, A. C. Trapp, T. Palmbach, J. S. Blom, "Overcoming Human Trafficking via Operations Research and Analytics: Opportunities for Methods, Models, and Applications," *European Journal of Operational Research*, 259 (2), pp. 733–745, 2017.
6. B. Lyu, Y. Li, J. Fu, A. C. Trapp, H. Xie, Y. Liao, "Scalable User-Substation Assignment with Big Data from Power Grids," *accepted for publication, IEEE Transactions on Big Data*, 2017.
7. A. C. Trapp, J. Sarkis, "Identifying Robust Portfolios of Suppliers: A Sustainable Selection and Development Perspective," *Journal of Cleaner Production*, 112 (3), pp. 2088–2100, 2016.
8. B. Tulu, A. C. Trapp, M. Hoque, D. M. Strong, S. A. Johnson, L. Garber, J. Trudel, "An Analysis of Patient Portal Utilization: What Can We Learn about Online Patient Behavior by Examining Portal Click Data?," *Health Systems*, 5 (1), pp. 66–79, 2016.
9. B. D. Faber, R. A. Konrad, C. Tang, A. C. Trapp, "Examining the Impact of Regular Physician Visits on Heart Failure Patients: A Use Case with Electronic Health Data," *Health Systems*, 5 (2), pp. 132–139, 2016.
10. A. C. Trapp, R. A. Konrad, "Finding Diverse Optima and Near-Optima to Binary Integer Programs," *IIE Transactions*, 47 (11), pp. 1300–1312, 2015.
11. A. C. Trapp, O. A. Prokopyev, "A Note on Constraint Aggregation and Value Functions for Two-Stage Stochastic Integer Programs," *Discrete Optimization*, 15, pp. 37–45, 2015.
12. A. C. Trapp, A. S. Rangwala, "Analyzing the Impact of In-rack Sprinklers in a Warehouse Fire: A Demonstration of the Role Optimization Has in Mitigating Damage," *Fire Safety Journal*, 73, pp. 55–62, 2015.
13. B. Shiner, C. Tang, A. C. Trapp, R. Konrad, I. Bar-On, B. V. Watts, "The Provision of Mental Health Treatment after Screening: Exploring the Relationship between Treatment Setting and Treatment Intensity," *General Hospital Psychiatry*, 36 (6), pp. 581–588, 2014.
14. A. C. Trapp, O. A. Prokopyev, A. J. Schaefer, "On A Level-Set Characterization of the Value Function of an Integer Program and Its Application to Stochastic Programming," *Operations Research*, 61 (2), pp. 498–511, 2013.
15. A. C. Trapp, F. Zink, O. A. Prokopyev, L. Schaefer, "Thermoacoustic Heat Engine Modeling and Optimization," *Applied Thermal Engineering*, 31 (14–15), pp. 2518–2528, 2011.
16. A. C. Trapp, O. A. Prokopyev, "Solving the Order-Preserving Submatrix Problem via Integer Programming," *INFORMS Journal on Computing*, 22 (3), pp. 387–400, 2010.
17. N. Temiz, A. Trapp, O. Prokopyev, C. J. Camacho, "Optimization of Minimum Set of Protein-DNA Interactions: a Quasi Exact Solution with Minimum Over-fitting," *Bioinformatics*, 26 (3), pp. 319–325, 2010.
18. A. Trapp, O. A. Prokopyev, S. Busygin, "Finding Checkerboard Patterns via Fractional 0–1 Programming," *Journal of Combinatorial Optimization*, 20 (1), pp. 1–26, 2010.

19. O. A. Prokopyev, S. Butenko, A. Trapp, "Checking Solvability of Systems of Interval Linear Equations and Inequalities via Mixed Integer Programming," *European Journal of Operational Research*, 199 (1), pp. 117–121, 2009.

### Refereed Book Chapters

1. F. Zhang, C. Wang, A. C. Trapp, P. Flaherty, "A Global Optimization Algorithm for Sparse Mixed Membership Matrix Factorization," *New Advances in Statistics and Data Science, in press*, Zhang, L. et al. editors, ICSA Book Series in Statistics, Springer, August 2018.

### Refereed Conference Publications

1. A. C. Trapp, A. Teytelboym, N. Ahani, T. Andersson, "Refugee Resettlement via Machine Learning and Integer Optimization," *OR60 Annual Conference*, Lancaster, United Kingdom, September 2018.
2. W. Liu, S. Djasmasbi, A. C. Trapp, "Measuring Focused Attention Using Fixation Inner Density," *Human-Computer Interaction International Conference 2018 (HCII2018)*, Las Vegas, Nevada, July 2018.
3. C. Chagnon, A. C. Trapp, S. Djasmasbi, "Creating a Decision Support System for Service Classification and Assignment through Optimization," *Americas' Conference on Information Systems (AMCIS)*, Boston, MA, August 2017.
4. H. Saddiki, A. C. Trapp, P. Flaherty, "A Deterministic Global Optimization Method for Variational Inference," *Advances in Approximate Bayesian Inference: NIPS 2016 Workshop*, Barcelona, Spain, December 2016.
5. B. Lyu, S. Li, Y. Li, J. Fu, A. C. Trapp, H. Xie, and Y. Liao, "Scalable User Assignment in Power Grids: A Data Driven Approach," *ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems*, San Francisco, CA, October 2016.
6. M. Shojaeizadeh, S. Djasmasbi, A. C. Trapp, "Density of Gaze Points within a Fixation and Information Processing Behavior," *Human-Computer Interaction International Conference 2016 (HCII2016)*, Toronto, Ontario, Canada, July 2016.
7. M. Shojaeizadeh, S. Djasmasbi, A. C. Trapp, "Does Pupillary Data Differ During Fixations and Saccades? Does It Carry Information about Task Demand?," *Thirteenth Annual Workshop on HCI Research in MIS*, Fort Worth, TX, December 2015.
8. T. Petit, A. C. Trapp, "Finding Diverse Solutions of High Quality to Constraint Optimization Problems," *International Joint Conference on Artificial Intelligence (IJCAI)*, Buenos Aires, Argentina, July 2015. [Invited Oral (Long Talk) and Poster Presentation].

### Non-Refereed Articles / Book Reviews

1. [Book Review] A. C. Trapp, J. Sarkis, "Decision Science for Housing and Community Development: Localized and Evidence-Based Responses to Distressed Housing and Blighted Communities," *Interfaces*, 2017.

### Articles under Review/Revision

1. R. A. Konrad, K. Maass, A. C. Trapp, "Selecting Locations of Rehabilitative Shelters for Human Trafficking Survivors: An Optimization Approach," under 1<sup>st</sup> review, *Production and Operations Management*.
2. A. C. Trapp, I. Harris, V. Sanchez Rodrigues, J. Sarkis, "Maritime Container Shipping from a Fourth-Party Logistics Perspective: Does Coopetition Improve Cost and Environmental Efficiencies?" under 1<sup>st</sup> review, *European Journal of Operational Research*.
3. A. C. Trapp, R. A. Konrad, J. Sarkis, A. Z. Zeng, "Closing the Loop: Forging High-Quality Agile Virtual Enterprises in a Reverse Supply Chain via Solution Portfolios," under 1<sup>st</sup> review, *Journal of the Operational Research Society*.

## Selected Working Papers

1. A. C. Trapp, A. Teytelboym, A. Martinello, T. Andersson, N. Ahani, "Placement Optimization in Refugee Resettlement" *Target Outlet: Operations Research*. [https://swopec.hhs.se/lunewp/abs/lunewp2018\\_023.htm](https://swopec.hhs.se/lunewp/abs/lunewp2018_023.htm)
2. C. Chagnon, P. Wiratchotisation, A. C. Trapp, S. Djamasbi, "Creating a Decision Support System for Service Classification and Assignment through Optimization," *Target Outlet: Decision Support Systems*.
3. W. Liu, A. C. Trapp, S. Djamasbi, "Refining the Fixation Inner-Density Filter via Gaze Point Outlier Detection," *Target Outlet: Computers & Operations Research*.
4. P. Wiratchotisation, H. Atef Yekta, A. C. Trapp, "Designing a Matching Mechanism for Student Project Opportunities," *Target Outlet: INFORMS Journal on Computing*.
5. P. Flaherty, P. Wiratchotisation, A. C. Trapp, "MAP Estimation for Mixture Models via a Modern Optimization Lens," *Target Outlet: Journal of the American Statistical Association*.
6. C. Johnston, S. Azizi, A. C. Trapp, R. Konrad, K. Dunphy, "Optimizing Foster Care Visitations via Vehicle Routing and Scheduling," *Target Outlet: Socio-Economic Planning Sciences*.
7. S. Azizi, A. C. Trapp, R. Konrad, S. Johnson, B. Faber, "Community Paramedicine Routing Decisions for Chronically Ill Patients," *Target Outlet: Socio-Economic Planning Sciences*.
8. V. Soto-Belloso, E. Perez Luna, K. Mendoza-Abarca, A. C. Trapp, "Optimizing to Increase Social Impact: Improving Client Scheduling and Distribution for Fundación Paraguaya," *Target Outlet: Interfaces*.
9. S. Azizi, A. C. Trapp, "Exploiting Integral Monoids to Solve Mixed-Integer Nonlinear Programs," *Target Outlet: INFORMS Journal on Computing*.
10. A. C. Trapp, R. A. Konrad, C. Vincent, "When Implementing the Best Solution Is Not Realistic: Optimal Compromises Between Efficiency And Practicality (TOPS)," *Target Outlet: Operations Research*.

## Patents

1. Patent application for *Fixation Identification Using Density Optimization* (U.S. Patent Serial No. # 62/368,992)
2. Patent application for *Automatic Detection of Cognitive Demand via an Eye Tracking Machine Learning System* (U.S. Patent Serial No. # 62/711,057)

## Courses Taught

- ◇ OIE 598, *Optimization Methods for Business Analytics*: 2014 Spring 4.67/5.0 (university mean 3.53); 2015 Spring 4.61/5.0 (university mean 4.27); 2016 Spring 4.69/5.0 (university mean 4.29); 2016 Fall 4.69 (university mean 4.15)
- ◇ OIE 4420, *Practical Optimization*: 2015 D term 4.38/5.0 (university mean 4.14); 2016 D term 4.68/5.0 (university mean 4.11); 2016 A term 4.89/5.0 (university mean 4.13)
- ◇ OIE 44XX, *Engineering Optimization*: 2013 D term 4.69/5.0 (university mean 4.12); 2014 D term 4.13/5.0 (university mean 4.12)
- ◇ BUS 2080, *Data Analysis for Decision Making*: 2011 B term 3.33/5.0 (university mean 4.13); 2012 D term 4.14/5.0 (university mean 4.05); 2013 D term 4.30/5.0 (university mean 4.12)
- ◇ OIE 2850, *Engineering Economics*: 2011 A term 4.38/5.0 (university mean 4.13); 2012 A term 4.13/5.0 (university mean 4.10); 2013 A term 4.15/5.0 (university mean 4.10); 2014 A term 4.43/5.0 (university mean 4.10); 2015 A term 4.43/5.0 (university mean 4.12); 2016 B term 4.57/5.0 (university mean 4.13)

## Funding

- ◇ **A. C. Trapp (PI)**. \$320,427. National Science Foundation. “Matching Problems in Refugee Resettlement, Research award #1825348”, Aug. 2018 through Aug. 2021.
- ◇ R. Konrad (PI), **A. C. Trapp (co-PI)**, M. Dank (co-PI), K. Maass (co-PI). \$145,932. National Science Foundation. “EAGER: ISN: A Data Analytic Approach to Understanding Human Trafficking Networks, Research award #1841893”, Aug. 2018 through Aug. 2019.
- ◇ **A. C. Trapp (PI)**. \$10,400. Ragnar Söderberg Foundation. “Project: Outcome Optimization in Refugee Resettlement, Research grant E8/13”, 2018.
- ◇ **A. C. Trapp (PI)**. \$13,600. Jan Wallander & Tom Hedelius Foundation. “Project: Outcome Optimization in Refugee Resettlement, Research grant P2016-0126:1”, 2017.
- ◇ S. Johnson (PI), **A. C. Trapp (co-PI)**, R. Konrad (co-PI). \$30,000. WPI internal grant “Designing and Deploying Hospital Capacity Effectively,” collaboration with UMass Memorial Healthcare to develop and evaluate methods for improved matching of supply and demand capacity in healthcare systems, 2016.
- ◇ **A. C. Trapp (PI)**. \$4,000. LIRS (Lutheran Immigration and Refugee Services). Research grant to extend development of Refugee Placement Optimization Tool, 2016.
- ◇ **A. C. Trapp (PI)**. \$10,000. LIRS (Lutheran Immigration and Refugee Services). Research grant to fund development of Refugee Placement Optimization Tool, 2015.
- ◇ B. Faber (PI), **A. C. Trapp (co-PI)**, R. Konrad (co-PI). \$350,000. Dimensional Insight. Grant to establish WPI Analytics Lab (\$300,000 in kind, \$50,000 cash), 2012.

## Awards

- ◇ Student Paper Competition Finalist, INFORMS Data Mining Section, Austin, TX, 2010.
- ◇ Outstanding Graduate Research Assistant Award, Department of Industrial Engineering, University of Pittsburgh, 2010.
- ◇ GAANN Fellowship, Sustainable Engineering in Pittsburgh, Mascaro Center for Sustainable Innovation via U.S. Department of Education’s Graduate Assistance in Areas of National Need (GAANN) program, 2007–2010.
- ◇ INFORMS Future Academician Colloquium, Participant, San Diego, CA, 2009.
- ◇ Presidential Scholarship Award, Department of Mathematics and Statistics, Rochester Institute of Technology, 1995–2000.

## Invited Presentations

- ◇ Can Data Analytics and Mathematical Models Aid Anti-Human Trafficking and Social Justice Efforts?, *Presented by Dr. Kayse Maass, Human Trafficking and Social Justice Conference, Toledo, Ohio, 2018.*
- ◇ Refugee Resettlement via Machine Learning and Integer Optimization, *Keynote presented by Dr. Alexander Teytelboym, OR60 Annual Conference, Lancaster, United Kingdom, 2018.*
- ◇ Measuring Focused Attention Using Fixation Inner-Density (FID), *Presented by Wen Liu, Human-Computer Interaction International Conference (HCII2018), Las Vegas, Nevada, 2018.*
- ◇ Integrating Vehicle Routing and Scheduling to Optimize Foster Care Visitations, *Poster presented by Caroline Johnston, SIAM Annual Meeting (AN18), Portland, OR, 2018.*
- ◇ Optimizing Refugee Resettlement Decisions, *19<sup>th</sup> ACM Conference on Economics and Computation (ACM EC18), Ithaca, NY, 2018.*

- ◇ Refugee Resettlement via Integer Programming, *INFORMS Annual Meeting*, Houston, TX, 2017.
- ◇ Selecting Locations of Rehabilitative Shelters for Human Trafficking Survivors among States in the U.S.: A Decision Analytic Approach, *Presented by Dr. Kayse Lee Maass, INFORMS Annual Meeting*, Houston, TX, 2017.
- ◇ New Density-based Optimization Formulations and Algorithms to Identify Fixations in Gaze Data, *Presented by Wen Liu, INFORMS Annual Meeting*, Houston, TX, 2017.
- ◇ Optimal Compromises Between Efficiency And Practicality, *Cardiff University*, Cardiff, Wales, UK, 2017.
- ◇ Locating Rehabilitative Shelters for Survivors of Domestic Human Trafficking, *Presented by Dr. Renata A. Konrad, Conference on Health & Humanitarian Logistics*, Copenhagen, Denmark, 2017.
- ◇ Using Density to Identify Fixations in Gaze Data: Optimization-Based Formulations and Algorithms, *University of Massachusetts, Machine Learning and Friends*, Amherst, MA, 2017.
- ◇ Using Density to Identify Fixations in Gaze Data: Optimization-Based Formulations and Algorithms, *Presented by Wen Liu, INFORMS Computing Society Conference*, Austin, TX, 2017.
- ◇ Using Density to Identify Fixations in Gaze Data: Optimization-Based Formulations and Algorithms, *INFORMS Annual Meeting*, Nashville, TN, 2016.
- ◇ Optimal Compromises Between Efficiency And Practicality, *INFORMS Annual Meeting*, Nashville, TN, 2016.
- ◇ Human Trafficking: Opportunities for Operations Research and Management Science, *Presented by Dr. Renata A. Konrad, INFORMS Annual Meeting*, Nashville, TN, 2016.
- ◇ Scalable User Assignment in Power Grids: A Data Driven Approach, *Presented by Dr. Yanhua Li, ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems*, San Francisco, CA, 2016.
- ◇ Locating Rehabilitative Shelters for Survivors of Domestic Human Trafficking, *Presented by Dr. Renata A. Konrad, Conference on Health & Humanitarian Logistics*, Atlanta, GA, 2016.
- ◇ Does Pupillary Data Differ During Fixations and Saccades? Does it Carry Information About Task Demand?, *Poster Presented by Mina Shojaeizadeh, The Fourteenth Annual Pre-ICIS Workshop on HCI Research in MIS*, Fort Worth, TX, 2015.
- ◇ Sparse Mixed-Membership Matrix Factorization via Mixed-Integer Programming, *INFORMS Annual Meeting*, Philadelphia, PA, 2015.
- ◇ Finding Diverse Solutions of High Quality to Constraint Optimization Problems, *Presented by Dr. Thierry Petit, International Joint Conference on Artificial Intelligence (IJCAI)*, Buenos Aires, Argentina, July 2015. [Invited Oral (Long Talk) and Poster Presentation; Acceptance Rate 28.8% (575/1,996)].
- ◇ Sparse Mixed-Membership Matrix Factorization via Mixed-Integer Programming, *22<sup>nd</sup> International Symposium on Mathematical Programming*, Pittsburgh, Pennsylvania, 2015.
- ◇ Human Trafficking: Opportunities for Operations Research and Management Science, *Presented by Dr. Renata Konrad, Annual Industrial & Systems Engineering Research Conference (ISERC)*, Nashville, Tennessee, 2015.
- ◇ New Exact Formulations to Solve Generalizations and Extensions of the OPSM Problem, *INFORMS Computing Society Conference*, Richmond, Virginia, 2015.
- ◇ Assessing Both Solution Diversity and Solution Quality in Constraint Programming, *Presented by Dr. Thierry Petit, INFORMS Computing Society Conference*, Richmond, Virginia, 2015.
- ◇ Sparse Mixed-Membership Matrix Factorization via Mixed-Integer Programming, *INFORMS Computing Society Conference*, Richmond, Virginia, 2015.
- ◇ Sparse Mixed-Membership Matrix Factorization via Mixed-Integer Programming, *INFORMS Annual Meeting*, San Francisco, CA, 2014.

- ◇ Minimizing Water Requirements for Electricity Generation in Water Scarce Areas, *Presented by Dr. Erica Stults, INFORMS Annual Meeting, San Francisco, CA, 2014.*
- ◇ Finding Multiple Optimal Solutions to Binary Integer Programs, *University of Tennessee, Knoxville, TN, 2013.*
- ◇ Finding Diverse Solutions of High Quality to Binary (0–1) Integer Programs, *INFORMS Annual Meeting, Minneapolis, MN, 2013.*
- ◇ Analysis of the Effect of Technology Distribution on the Water Requirements for Energy Generation, *Presented by Dr. Erica Stults, INFORMS Annual Meeting, Minneapolis, MN, 2013.*
- ◇ Assessing and Maintaining Quality of Care for Veterans with Mental Health Disorders, *Presented by Sett Oo, INFORMS Health Care Conference, Chicago, IL, 2013.*
- ◇ The Role of Preventative Care for Congestive Heart Failure Patients in a Rural Health System, *Presented by Dr. Renata Konrad, INFORMS Health Care Conference, Chicago, IL, 2013.*
- ◇ Finding Diverse Solutions of High Quality to Binary (0–1) Integer Programs, *INFORMS Computing Society Conference, Santa Fe, NM, 2013.*
- ◇ Comparing Value Function-Based Approaches to Solving Two-stage Integer Programs, *INFORMS Annual Meeting, Phoenix, AZ, 2012.*
- ◇ Exact Solution Approaches for Generalizations to the Order-Preserving Submatrix Problem, *INFORMS Annual Meeting, Phoenix, AZ, 2012.*
- ◇ Solving a Class of Two-stage Stochastic Integer Programs (2SSIPs): Value Function Considerations, *INFORMS Optimization Society Conference, Miami, FL, 2012.*
- ◇ Using Constraint Aggregation to Solve a Class of Two-stage Stochastic Integer Programs, *INFORMS Annual Meeting, Charlotte, NC, 2011.*
- ◇ On a Level-Set Characterization of the Integer Programming Value Function and its Application to Stochastic Programming, *INFORMS Annual Meeting, Austin, TX, 2010.*
- ◇ Optimizing Interaction Code Parameters for Zinc Finger / DNA Recognition, *INFORMS Annual Meeting, Austin, TX, 2010.*
- ◇ Solving The OPSM Problem Using Integer Programming, *INFORMS Annual Meeting, Austin, TX, 2010.*
- ◇ Solving a Class of Two-Stage Stochastic Integer Programs Using Partial Value Functions, *12<sup>th</sup> International Conference on Stochastic Programming, Halifax, Nova Scotia, Canada, 2010.*
- ◇ On Global Optimization of Two-Stage Stochastic Integer Programs, *INFORMS Annual Meeting, San Diego, CA, 2009.*
- ◇ Solving The OPSM Problem Using Integer Programming, *Industrial Engineering Research Conference (IERC), Vancouver, BC, 2008.*

## **Professional Activities and Service**

- ◇ Ad-hoc Reviewer for *European Journal of Operational Research, IIE Transactions, Omega, Networks, Annals of Operations Research, IJCAI 2016 Conference, PLOS ONE, Optimization Letters, Journal of Global Optimization, IIE Transactions on Healthcare Systems Engineering, Journal of Combinatorial Optimization, Journal of the Operational Research Society, Journal of Industrial and Management Optimization, Sustainable Energy Technologies and Assessments.*
- ◇ Session Chair, “Matchings and Assignments with Societal Impact”, *INFORMS Annual Meeting, Phoenix, AZ 2018.*
- ◇ Invited Session Chair, *INFORMS Computing Society Conference, Austin, TX 2017.*

- ◇ Invited Session Chair for MSOM / Healthcare OM Cluster, *INFORMS Annual Meeting*, Philadelphia, PA 2015.
- ◇ Invited Session Chair, *INFORMS Computing Society Conference*, Richmond, VA 2015.
- ◇ Invited Session Chair for Computing Society, *INFORMS Annual Meeting*, San Francisco, CA 2014.
- ◇ Invited Panel Session Chair for Junior Faculty Interest Group, *INFORMS Annual Meeting*, San Francisco, CA 2014.
- ◇ Invited Session Chair for Computing Society, *INFORMS Annual Meeting*, Minneapolis, MN 2013.
- ◇ Invited Session Chair for Optimization/Global Optimization, *INFORMS Annual Meeting*, Phoenix, AZ 2012.
- ◇ Invited Session Chair for Optimization/Global Optimization, *INFORMS Annual Meeting*, Charlotte, NC 2011.
- ◇ Invited Session Chair for Stochastic Programming, *INFORMS Annual Meeting*, Austin, TX 2010.
- ◇ Invited Session Co-Chair for Stochastic Programming, *INFORMS Annual Meeting*, San Diego, CA, 2009.
- ◇ Invited Session Chair for Operations Research, *IIE Annual Conference*, Vancouver, BC, 2008.

### **Industrial and Volunteer Experience**

- ◇ Erie Insurance, Quality Assurance Department
  - Software Quality Assurance Analyst, 2003.
- ◇ Larson Texts, Inc., Editorial Department
  - Product Specialist and Software Trainer, 2002.
- ◇ Hope For Homeless Youth, Men's Rehabilitation Home
  - Assistant Director, 2000 – 2001.
- ◇ Thomson West / Westlaw, Quality Assurance Department
  - Software Quality Assurance Analyst, 1999 – 2000.

### **Professional Society Memberships**

- ◇ Institute for Operations Research and the Management Sciences (INFORMS)
  - Computing Society
  - Section on Public Sector OR
  - Data Mining Section
  - Optimization Society
  - Health Applications Section
  - Section on Energy, Natural Resources, and the Environment
- ◇ Humanitarian Logistics Association (HLA)
- ◇ Sigma Xi Research Society (Full Member)