

CURRICULUM VITAE

Laura A. Albert

formerly Laura A. McLay

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EMPLOYMENT

University of Wisconsin- Madison

Assistant Dean for Graduate Affairs, University of Wisconsin-Madison, College of Engineering
(May 2017 to present)

Associate Professor, University of Wisconsin-Madison, Department of Industrial & Systems
Engineering (May 2013 to present)

Additional appointments:

- Affiliate, Wisconsin Institute of Discovery, Optimization Group
- Honorary Fellow, Department of Emergency Medicine

Prior Academic Appointments

July 2012 to 2013 Associate Professor, Virginia Commonwealth University,
Department of Statistical Sciences & Operations Research.

Fall 2006 to 2012 Assistant Professor, Virginia Commonwealth University,
Department of Statistical Sciences & Operations Research.

Fall 2008 to 2013 Courtesy appointment in the Department of Mechanical Engineering,
Virginia Commonwealth University

EDUCATION

Ph.D. Industrial Engineering with Computational Science and Engineering option
University of Illinois at Urbana-Champaign, May 2006

M.S. General Engineering with Computational Science and Engineering option
University of Illinois at Urbana-Champaign, 2001

B.S. General Engineering with Honors, International Minor in German
University of Illinois at Urbana-Champaign, 2000.

AWARDS AND HONORS

- Arms, Control, Disarmament and International Security (ACDIS) Thesis Initiation Fellowship, 2002, University of Illinois, Urbana, IL.
- Alumni Teaching Fellowship, 2004, Department of Mechanical and Industrial Engineering, University of Illinois, Urbana, IL.
- George W. Harper Award for outstanding work in safety engineering, 2005, Department of Mechanical and Industrial Engineering, University of Illinois, Urbana, IL.
- Operations Research Challenge Competition Winner, First Symposium on Operations Research and the Criminal Justice System, US National Institute of Justice 2006.
- INFORMS Computing Society Student Paper Competition, Runner-up, 2006.
- Fellow, National Science Foundation, Enabling the Next Generation of Hazards and Disasters Researchers Fellows Program, 2009.
- Outstanding IIE Publication Award (with Sheldon H. Jacobson), 2009.
- Best paper award, 2009 Industrial Engineering Research Conference, Operations Research track (with Sunarin Chanta, Maria Mayorga, and Margaret Wiecek), 2009.
- Young Investigator Award, Department of the Army-Materiel Command, Army Research Office, 2010.
- NSF CAREER Award, 2011.
- Achievement Award Winner for Next-Generation Emergency Medical Response Through Data Analysis & Planning (Best in Category winner, as part of the Hanover County Fire & EMS team), National Association of Counties, 2010.
- Excellence in Scholarship Award, College of Humanities and Sciences, Virginia Commonwealth University, 2012.
- Best paper award from *Risk Analysis*, Society of Risk Analysis (with Casey Rothschild and Seth Guikema), 2012.
- Best Paper Award from *IIE Transactions* Focused Issue on Scheduling and Logistics (with Maria Mayorga), 2014.
- INFORMS Moving Spirit Award for service to INFORMS fora, 2014.
- Faculty recognition award, Leaders in Engineering Excellence and Diversity, University of Wisconsin-Madison College of Engineering, 2015, 2017, 2018.
- Harvey Spangler Award for Technology Enhanced Instruction, University of Wisconsin-Madison College of Engineering, 2017.
- Fellow, the Big Ten Academic Alliance-Academic Leadership Program (BTAA-ALP), 2018-19.
- Harvey D. Spangler Faculty Scholar, College of Engineering, University of Wisconsin-Madison, 2018 – 2021.
- INFORMS Impact Prize, “How Operations Research Changed Aviation Security,” with Sheldon Jacobson, Kenneth Fletcher, Adrian Lee, and Alexander Nikolaev, 2018.
- Ragnar E. Onstad Service to Society Award, College of Engineering, University of Wisconsin-Madison, 2019.

PUBLICATIONS

Journal Publications

1. Jacobson, S. H., **L. A. McLay**, S. N. Hall, J. E. Orosz, 2005. [Performance Analysis of Cyclical Simulated Annealing Algorithms](#), *Methodology and Computing in Applied Probability* 7(2) 183 – 201.
2. Jacobson, S. H., J. E. Virta, **L. A. McLay**, J. E. Kobza, 2005. [Integer Program Models for the Deployment of Airport Baggage Screening Security Devices](#), *Optimization and Engineering* 6(3) 339 – 359.
3. Vaughan, D. E., S. H. Jacobson, S. N. Hall, and **L. A. McLay**, 2005. [Simultaneous Generalized Hill Climbing Algorithms for Addressing Sets of Discrete Optimization Problems](#), *INFORMS Journal on Computing* 17(4) 1 – 12.
4. Jacobson, S. H., **L. A. McLay**, J. E. Kobza, J. M. Bowman, 2005. [Modeling and Analyzing Multiple Station Baggage Screening Security System Performance](#), *Naval Research Logistics* 52(1), 30 – 45.
5. **McLay, L. A.** and D. E. Goldberg, 2005. [Efficient Genetic Algorithms using Discretization Scheduling](#), *Evolutionary Computation* 13 (3) 353 – 385.
6. **McLay, L. A.**, S. H. Jacobson, and J. E. Kobza, 2006. [A Multilevel Passenger Prescreening Problem for Aviation Security](#), *Naval Research Logistics* 53 (3), 183 – 197.
7. Jacobson, S. H., **L. A. McLay**, S. N. Hall, D. Henderson, D. E. Vaughan, 2006. [Optimal Search Strategies Using Simultaneous Generalized Hill Climbing Algorithms](#), *Mathematical and Computer Modelling* 49(9-10), 1061 – 1073
8. Jacobson, S.H., **L.A. McLay**, 2006. [The Economic Impact of Obesity on Automobile Fuel Consumption](#), *The Engineering Economist* 51(4), 307 – 323.
9. **McLay, L. A.**, S. H. Jacobson, and J. E. Kobza, 2007. [Integer Programming Models and Analysis for a Multilevel Passenger Screening Problem](#), *IIE Transactions* 39(1), 73 – 81.
10. **McLay, L. A.** and S. H. Jacobson, 2007. [Integer Knapsack Problems with Set-up Weights](#), *Computational Optimization and Applications* 37(1), 35 – 47.
11. **McLay, L. A.** and S. H. Jacobson, 2007. [Algorithms for the Bounded Set-Up Knapsack Problem](#), *Discrete Optimization* 4(2), 206 – 212.
12. Nikolaev, A. G., S. H. Jacobson, and **L. A. McLay**, 2007. [A Sequential Stochastic Security System Design Problem for Aviation Security](#), *Transportation Science* 41(2), 182 – 194.
13. **McLay, L. A.**, S. H. Jacobson and J.E. Kobza, 2008. [The Tradeoff between Technology and Prescreening Intelligence in Checked Baggage Screening for Aviation Security](#), *Journal of Transportation Security* 1(2), 107 – 126.
14. Jacobson, S.H., and **L.A. McLay**, 2009. [Applying Statistical Tests to Empirically Compare Tabu Search Parameters for MAX 3-SATISFIABILITY: A Case Study](#), *Omega* 37(3), 522-534.
15. **McLay, L.A.**, 2009. [A Maximum Expected Covering Location Model with Two Types of Servers](#), *IIE Transactions* 41(8), 730 – 741.
16. Lee, A.J., **L.A. McLay**, and S.H. Jacobson, 2009. [Designing Aviation Security Passenger Screening Systems using Nonlinear Control](#). *SIAM Journal on Control and Optimization* 48(4), 2085 – 2105.
17. **McLay, L. A.**, S. H. Jacobson, and A. G. Nikolaev, 2009. [A Sequential Stochastic Passenger Screening Problem for Aviation Security](#), *IIE Transactions* 41(6), 575 – 591.

18. **McLay, L.A.**, S.H. Jacobson, A.J. Lee, 2010. [Risk-Based Policies for Aviation Security Checkpoint Screening](#). *Transportation Science* 44(3), 333-349.
19. **McLay, L.A.** and M.E. Mayorga, 2010. [Evaluating Emergency Medical Service Performance Measures](#). *Health Care Management Science* 13(2), 124 - 136.
20. Merrick, J.R.W., **McLay, L.A.**, 2010. [Is Screening Cargo Containers for Smuggled Nuclear Threats Worthwhile?](#) *Decision Analysis* 7(2), 155 – 171.
21. **McLay, L.A.**, Mayorga, M.E., 2011. [Evaluating the Impact of Performance Goals on Dispatching Decisions in Emergency Medical Service](#). *IIE Transactions on Healthcare Service Engineering* 1, 185 – 196.
22. **McLay, L.A.**, Fofoulides, C., Merrick, J.R.W., 2011. [Using Simulation Optimization to Construct Cost-Effective Screening Strategies for Cervical Cancer](#). *Health Care Management Science* 13(4), 294 – 318.
23. **McLay, L.A.**, Dreiding, R., Howe, G.L. 2011. [Rethinking the Encounter Probability for Direct-to-Target Nuclear Attacks for Aviation Security](#), *Journal of Transportation Security* 4(3), 447 – 480.
24. Chanta, S., Mayorga, M.E., Kurz, M.E., **McLay, L.A.**, 2011. [The minimum \$p\$ -envy location problem: A new model for equitable distribution of emergency resources](#). *IIE Transactions on Healthcare Systems Engineering* 1(2), 101 – 115.
25. **McLay, L.A.**, J. D. Lloyd, and E. Niman, 2011. [Interdicting Nuclear Material on Cargo Containers using Knapsack Problem Models](#). *Annals of Operations Research* 187(1), 185 – 205.
26. **McLay, L.A.**, Moore, H. 2012. [Hanover County Improves Its Response to Emergency Medical 911 Calls](#). *Interfaces* 42(4), 380-394.
27. Rothschild, C., **McLay, L.A.**, Guikema, S., 2012. [Adversarial risk analysis with incomplete information: A level- \$k\$ approach](#). *Risk Analysis* 32(7), 1219 – 1231. **This paper was selected as a Best Paper of 2012 for Risk Analysis.**
28. Bandara, D., Mayorga, M.E., **McLay, L.A.**, 2012. [Optimal Dispatching Strategies for Emergency Vehicles to Increase Patient Survivability](#). *International Journal of Operational Research*.
29. **McLay, L.A.**, Dreiding, R., 2012. [Multilevel, Threshold-Based Policies for Cargo Container Security Screening Systems](#). *European Journal of Operational Research* 220, 522 – 529.
30. **McLay, L.A.**, Brooks, J.P., Boone, E.L., 2012. [Analyzing the Volume and Nature of Emergency Medical Calls during Severe Weather Events using Regression Methodologies](#). *Socio-Economic Planning Sciences* 46, 55 – 66.
31. **McLay, L.A.**, Rothschild, C., Guikema, S., 2012. [Robust adversarial risk analysis: A level- \$k\$ approach](#). *Decision Analysis* 9(1), 41 –54.
32. Kunkel, A., **McLay, L.A.** 2013. [Determining minimum staffing levels during snowstorms using an integrated simulation, regression, and reliability model](#). *Health Care Management Science* 16(1), 14 - 26.
33. **McLay, L.A.**, Mayorga, M.E., 2013. [A model for optimally dispatching ambulances to emergency calls with classification errors in patient priorities](#). *IIE Transactions* 45(1), 1—24. **This paper was selected as a Best Paper Award for IIE Transactions Focused Issue on Scheduling and Logistics.**

34. Mayorga, M.E., Bandara, D., **McLay, L.A.**, 2013. [Districting and dispatching policies for emergency medical service systems to improve patient survival](#), *IIE Transactions on Healthcare Systems Engineering* 3(1), 39 – 56.
35. Toro-Diaz, H., Mayorga, M.E., Chanta, S., **McLay, L.A.**, 2013. [Joint location and dispatching decisions for Emergency Medical Services](#). *Computers & Industrial Engineering* 64(4), 917 – 928.
36. Dreiding, R.A., **McLay, L.A.**, 2013. [An Integrated Screening Model for Screening Cargo Containers for Nuclear Weapons](#). *European Journal of Operational Research* 230, 181 – 189.
37. Malhotra, A.K., Goldberg, S.R., **McLay, L.**, Martin, N.R., Wolfe, L.G., Levy, M.M., Khatani, V., Borchers, T.C., Duane, T.M., Aboutanos, M.B., Ivatury, R.R., 2014. [DVT Surveillance Program in the ICU: Analysis of cost-effectiveness](#). *PLOS ONE* 9(9), e106793.
38. Chanta, S., Mayorga, M. E., **McLay, L. A.**, 2014. [Improving Rural Emergency Services without Sacrificing Coverage: A Bi-Objective Covering Location Model for EMS Systems](#). *Annals of Operations Research* 221(1), 133 – 159.
39. Sudtachat, K., Mayorga, M.E., **McLay, L.A.** 2014. [Recommendations for Dispatching Emergency Vehicles under Multi-tiered Response via Simulation](#). *International Transactions in Operational Research* 21(4), 581-617.
40. Chanta, S., Mayorga, M.E., **McLay, L.A.**, 2014. [The minimum p-envy problem with requirement on minimum survival rate](#). *Computers & Industrial Engineering* 74, 228 – 239.
41. Clarke, J., **McLay, L.A.**, McLeskey, Jr., J.T., 2014. [Comparison of genetic algorithm to particle swarm for constrained simulation-based optimization](#). *Advanced Engineering Informatics* 28, 81 – 90.
42. Bandara, D., Mayorga, M.E., **McLay, L.A.**, 2014. [Priority Dispatching Strategies for EMS Systems](#), *The Journal of the Operational Research Society* 65, 572 – 587.
43. Grannan, B.C., Bastian, N., **McLay, L.A.** 2015. [A Maximum Expected Covering Problem for Locating and Dispatching Two Classes of Military Medical Evacuation Air Assets](#). *Operations Research Letters* 9, 1511-1531.
44. Toro-Diaz, H., Mayorga, M.E., **McLay, L.A.**, Rajagopalan, H., Saydem, C., 2015. [Reducing disparities in large scale emergency medical service systems](#), *Journal of the Operational Research Society* 66, 1169-1181. doi:10.1057/jors.2014.83
45. **McLay, L.A.**, Mayorga, M.E., 2013. [A dispatching model for server-to-customer systems that balances efficiency and equity](#). *Manufacturing & Service Operations Management* 15(2), 205 – 200.
46. Ansari, S., **McLay, L.A.**, Mayorga, M.E., 2015. [A Maximum Expected Covering Problem for District Design](#), *Transportation Science* 51(1), 376 – 390.
47. Sudtachat, K., Mayorga, M.E., **McLay, L.A.**, 2016. [A Nested-Compliance Table Policy for Emergency Medical Service Systems under Relocation](#). *OMEGA* 58, 154 – 168.
48. Barker, K., Lambert, J.H., Zobel, C.W., Tapia, A.H., Ramirez-Marques, J.E., **Albert, L.**, Nicholson, C., Caragea, C., 2017. [Defining resilience analytics](#). *Sustainable and Resilient Infrastructure* 2(2), 59 – 67. <http://dx.doi.org/10.1080/23789689.2017.1294859>
49. Ansari, S., Yoon, S., **Albert, L. A.**, 2017. [An approximate Hypercube model for public service systems with co-located servers and multiple response](#). *Transportation Research Part E: Logistics and Transportation Review*. 103, 143 – 157.

50. Yoon, S., **Albert, L.** 2018. [An Expected Coverage Model with a Cutoff Priority Queue](https://doi.org/10.1007/s10729-017-9409-3). *Health Care Management Science* 21(4), 517 – 533. DOI: <https://doi.org/10.1007/s10729-017-9409-3>.
51. Enayati, S., Mayorga, M., Toro-Diaz, H., **Albert, L.** 2018. [Identifying trade-offs in equity and efficiency for simultaneously optimizing location and multi-priority dispatch of ambulances](https://doi.org/10.1111/itor.12590). *International Transactions in Operational Research* 26, 415 – 438. DOI: 10.1111/itor.12590
52. Iloglu, S., **Albert, L.A.** 2019. [An Integrated Network Design and Scheduling Problem for Network Recovery and Emergency Response](https://doi.org/10.1016/j.orp.2018.08.001). *Operations Research Perspectives* 5, 218 – 231. <https://doi.org/10.1016/j.orp.2018.08.001>
53. Zheng, K., and **Albert, L.A.** 2018. [An exact algorithm for solving the bilevel facility interdiction and fortification problem](https://doi.org/10.1016/j.orsl.2018.05.001). *Operations Research Letters* 46(6), 573 – 578.
54. Almoghathawia, Y., Barker, K., **Albert, L.** 2019. Resilience-Driven Restoration Model for Interdependent Infrastructure Networks, To appear in *Reliability Engineering and System Safety*, 185, 12 – 23, <https://doi.org/10.1016/j.res.2018.12.006>.
55. Zheng, K., **Albert, L.**, Luedtke, J.R., Towle, E. 2019. [A budgeted maximum multiple coverage model for cybersecurity planning and management](https://doi.org/10.1016/j.iise.2019.05.001), To appear in *IIE Transactions*.
56. Zheng, K., and **Albert, L.A.** 2019. [A robust approach for mitigating risks in cyber supply chains](https://doi.org/10.1111/risa.13269), To appear in *Risk Analysis*. DOI: 10.1111/risa.13269

Book Chapters

1. **McLay, L.A.**, 2010. Emergency Medical Service Systems that Improve Patient Survivability. *Encyclopedia of Operations Research in the area of “Applications with Societal Impact,”* eds. J.J. Cochran, L. A. Cox, Jr., P. Keshinocak, J.C. Smith. John Wiley & Sons, Inc., Hoboken, NJ (published online: DOI: 10.1002/9780470400531.eorms0296).
2. **McLay, L.A.**, 2011. [Risk-Based Resource Allocation Models for Aviation Security](https://doi.org/10.1007/978-1-4419-9999-9_10). *Safety and Risk Modeling and Its Applications*, Springer, p. 243 – 262.
3. Leclerc, P.D., **L.A. McLay**, M.E. Mayorga, 2011. [Modeling equity for allocating public resources](https://doi.org/10.1007/978-1-4419-9999-9_10). *Community-Based Operations Research: Decision Modeling for Local Impact and Diverse Populations*, Springer, p. 97 – 118.
4. Merrick, J. and **Albert, L.**, 2018. Expert Judgment Based Nuclear Threat Assessment for Vessels Arriving in the US, in: Dias LC, Morton A, Quigley J (eds), *Elicitation: The science and art of structuring judgement*. Springer, New York (Chapter 19)

Books and Conference Volumes edited

1. Borchers, B., Brooks, J.P., and **McLay, L.A.** 2015. Operations Research and Computing: Algorithms and Software for Analytics, 14th INFORMS Computing Society Conference (ICS2015) volume, January 11-13, 2015, Richmond, VA, available open source at: <https://www.informs.org/Pubs/ICS-Proceedings/2015-Conference-Volume>.

Conference Proceedings

1. **McLay, L.A.**, Jacobson, S.H., Kobza, J.E., 2006. “Balancing Technology Capability Enhancement and Passenger Prescreening Information for Aviation Baggage Screening, Proceedings of Safe Skies Symposium, Washington, DC.
2. Jacobson, S.H., Hall, S.N., **McLay, L.A.**, 2006, “Visiting Near-Optimal Solutions Using Local Search Algorithms.” Proceedings in Computational Statistics, COMPSTAT 2006 (Editors, A. Rizzi, M. Vichi), Physica-Verlag, Springer, Heidelberg, Germany, 471-481.

3. Chanta, S., Mayorga, M., **McLay, L.**, Wiecek, M., 2009, "A Bi-Objective Covering Location Model for EMS Systems." Proceedings of the 2009 Industrial Engineering Research Conference. *Won Best Paper Award in the Operations Research track.*
4. Buede, D., Mahoney, S., Guikema, S., Ezell, B., **McLay, L.**, 2010. "Plural models for adaptive adversary modeling." Proceedings of the Workshop on Grand Challenges in Modeling, Simulation, and Analysis for Homeland Security (MSAHS 2010).
5. Kao, G., Eames, B., Haas, J., Fisher, A., Michalski, J., Blount, J., Hamlet, J., Lee, E., Gauthier, J., Wyss, G., Helinski, R., Franlin, D., **McLay, L.** 2014. [Supply chain Lifecycle Decision Analytics](#), 2014 International Carnahan Conference on Security Technology (ICCST), Rome, Italy, DOI: 10.1109/CCST.2014.6986979
6. **Albert McLay, L.**, 2015. [Discrete optimization models for homeland security and emergency management](#), TutORial at the 2015 INFORMS Annual Meeting, November 1-4, 2015, Philadelphia, PA.
7. Otles*, E., **McLay, L. A.**, & Patterson, B. W. 2015. Predicting Emergency Department Patient Throughput Times Utilizing Machine Learning. *Annals of Emergency Medicine*, 66(4), S99-S100. Abstract.
8. Otles*, E. **McLay, L.A.**, Gorski, J.K., and Patterson, B.W.. 2016. Forecasting emergency department patient admissions utilizing machine learning. *Academic Emergency Medicine* 23:S90

Professional Publications

1. **McLay, L.A.**, S.H. Jacobson, and J.E. Kobza, 2005. "Making Skies Safer: Applying Operations Research to Aviation Passenger Prescreening Systems," *ORMS Today*, 32(5), 24-31. Later reprinted in *Analytics*, Spring 2008, 12-17.
2. **McLay, L.A.**, 2009. "Interviewing for an academic position," In [Tips on getting an academic position](#), Ed. Z.J. Pei, Lulu, 33 – 36.
3. **McLay, L.A.** "Beneath and Beyond Blogging for OR," IFORS News 6(3), September 2012, available at <http://ifors.org/newsletter/IFORSsept2012.pdf>.
4. **Albert, L.** 2017. "[Opportunities for O.R. at the National Science Foundation](#)." *ORMS Today* 44(3), p. 10.

Papers under Review and Technical Reports

1. Zheng, K., and **Albert, L.A.** 2018. [Interdiction models for delaying adversarial attacks against critical information technology infrastructure](#). Submitted to *Naval Research Logistics*, September 2018.
2. Yoon, S. and **Albert, L.A.** 2018. [Dynamic Resource Assignment for Emergency Response with Multiple Types of Vehicles](#), Submitted to *Operations Research*, October 2018.
3. Dubois, E. **Albert, L.A.** 2018. [Dispatching Policies During Prolonged Mass Casualty Incidents](#). Submitted to *Production and Operations Management*, October 2018.
4. Iloglu, S. and **Albert, L.A.** 2019. [A maximal multiple coverage and network restoration problem for disaster recovery](#). Submitted to *International Transactions on Operational Research*, January 2019.
5. Yoon, S., and **Albert, L.A.** 2019. [A dynamic ambulance routing model with multiple response](#). Submitted to *Transportation Research Part E: Logistics and Transportation Review*, January 2019.
6. Yoon, S., and **Albert, L.A.** 2019. A Scenario-Based Ambulance Location Model for Emergency Response with Two Types of Vehicles. Under review at *Transportation Science*.

RESEARCH PRESENTATIONS

Keynote, Public, Plenary, Semi-Plenary, and Distinguished Lectures

1. Semi-Plenary speaker, German Operations Research Society International Conference on Operations Research, "Delivering emergency medical services: Research, application, and outreach," September 2-5, 2014, Aachen, Germany.
2. Fuzzy Vance Lecture in Mathematics, Oberlin College, Department of Mathematics. September 30, 2015. "Locating and dispatching ambulances using discrete optimization methodologies"
3. Keynote talk. "Advanced analytics for supporting public policy, bracketology, and beyond!" WISNET Connections Conference, May 8-9, 2017, Madison, WI.
4. Keynote talk. "Delivering emergency medical services: Research, theory, and application." 4th International Workshop on Planning of Emergency Services, Delft, the Netherlands, June 19-20, 2017.
5. Keynote speaker, Great Lakes Analytics in Sports Conference, "Forecasting the College Football Playoff Using Markov Chains," June 21, 2018.
6. Keynote speaker, EURO Working Group on Locational Analysis meeting to occur in June 2019 in Brussels, Belgium.

Invited Seminars and Lectures

7. Department of Statistical Sciences and Operations Research, VCU, Fall 2006 Seminar Series, October 16, 2006, "Screening Passengers for Aviation Security."
8. John Tyler Community College, Midlothian, VA, December 3, 2007, "Issues in Terrorism and Homeland Security."
9. Georgetown University, April 11, 2008, "A Maximum Expected Covering Location Model for Emergency Medical Service Systems."
10. Joint Technical Presentation of the Washington, D.C. Chapter of INFORMS and the National Chapter of IIE at George Washington University, December 4, 2008, "Screening Cargo Containers for Nuclear Material."
11. The University of Texas at Austin, January 23, 2009, "Emergency Medical Service Systems that Save Lives."
12. Virginia Commonwealth University, Discrete Mathematics Seminar, September 3, 2009, "Knapsack Problem Variations and Homeland Security: Theory and Application."
13. University of Buffalo (SUNY), November 19, 2009, "Resource Allocation Problems for Nuclear Terrorism."
14. Virginia Commonwealth University, Biomath Seminar, April 16, 2010. "Optimal Emergency Medical Service Dispatching Policies"
15. Virginia Commonwealth University, Mechanical Engineering Seminar, May 3, 2010. "Optimization Models for Emergency Medical Services."
16. George Washington University, School of Business seminar, February 4, 2011. "Optimal dispatching models for server-to-customer systems with classification errors."
17. Rensselaer Polytechnic Institute, October 5, 2011. "A model for optimally dispatching ambulances to emergency calls with classification errors in patient priorities."
18. Panelist, Grace Hopper Celebration of Women in Computing Conference, Baltimore, MD, "Securing our borders - are we there yet?," October 3-6, 2012.
19. Richmond-Tidewater Chapter of INFORMS, May 10, 2012, "Managing Emergency Medical Services During Severe Weather Events."
20. Washington DC Chapter of INFORMS, May 15, 2012, "Managing Emergency Medical Services During Severe Weather Events."
21. University of Oklahoma, September 14, 2012, "Optimal and equitable policies for dispatching ambulances to emergency medical patients."

22. Texas A & M University, November 26, 2012. "Models for jointly locating and dispatching ambulances."
23. Virginia Commonwealth University, Department of Healthcare Policy and Research, November 13, 2012, "Operations research models for emergency medical services."
24. Invited Speaker. 2013 AAAS Annual Meeting, Boston, MA, "Emergency medical and fire calls during severe weather events" in the Symposium entitled Dynamics of Disasters: Harnessing the Science of Networks to Save Lives, February 14-18, 2013.
25. Featured speaker, IEEE Conference on Automation Science and Engineering (CASE) Women in Engineering luncheon, "Five Observations about Women in Engineering," August 19, 2013.
26. Wisconsin Institute of Discovery, University of Wisconsin-Madison, Systems, Information, Learning and Optimization (SILO) seminar, 30 October 2013, "Homeland Security Screening Supply Chain Optimization."
27. University of Michigan, March 27, 2014, "Optimization models for locating and dispatching ambulances."
28. University of Wisconsin-Madison, complex systems seminar, April 1, 2014, "Modeling issues in emergency medical services and their implications."
29. University of Wisconsin-Madison, applied math seminar, April 4, 2014, "Covering optimization models for emergency response, security, and resilience."
30. Illinois Institute of Technology, April 21, 2014, "Covering optimization models for emergency response, security, and resilience."
31. University of Illinois at Urbana-Champaign, April 24, 2014, "Covering optimization models for emergency response, security, and resilience."
32. Northwestern University, Department of Industrial Engineering and Management Sciences, May 6, 2014, "Covering optimization models for emergency response, security, and resilience."
33. University of Wisconsin-Madison, Computation and Informatics in Biology and Medicine (CIBM) Seminar Series, December 2, 2014, "Delivering Emergency Medical Services: Research, Application, and Outreach."
34. Keynote speaker for University of Toronto's Operations Research Group Mini Symposium, February 23, 2015.
35. University of Wisconsin-Madison, Wisconsin Institutes for Discovery, SILO Seminar Series, December 9, 2015, "A Modified Logistic Regression Markov Chain Model for Forecasting the College Football Playoff"
36. University of Wisconsin-Madison, Chaos and Complex Systems Seminar, March 1, 2016, "How to rank sports teams and forecast game outcomes using math models."
37. Lehigh University, March 22, 2016, "Allocating resources for emergency response: theory, practice, and outreach."
38. University of Wisconsin-Madison, Industrial and Systems Engineering 50th Anniversary Reunion, June 4, 2016, "Operations research for homeland security and beyond!"
39. University of Wisconsin-Madison, New Educators Orientation Keynote Speaker, "My teaching journey: there and back again," January 12, 2017.
40. Wisconsin Institute for Discovery, Crossroads of Ideas, "The Math Behind the March Madness Tournament," March 14, 2017.
41. Invited Speaker, International Conference on Risk Analysis, Decision Analysis, and Security, "An Interdiction Model for Delaying Adversarial Attacks in Information Technology Supply Chains," Beijing, China, July 21-23, 2017.
42. UW Now panel sponsored by the Bascom Hill Society and the UW Foundation, New York City, October 25, 2017.

43. University of Chicago Booth School of Business, "Models and algorithms for delivering emergency medical services," November 7, 2017.
44. AAAS Annual Meeting, "Good Security Policy Requires Tradeoffs Between Efficiency, Effectiveness, and Cost," February 17, 2018, Austin, TX.
45. University of Oklahoma, "Designing emergency medical service systems to enhance community resilience," March 26, 2018.
46. INFORMS Government & Analytics Summit, Opening remarks, "Operations Research & Analytics: Saving Lives, Saving Money, Solving Problems," May 21, 2018, Washington, DC.
47. Carnegie Mellon University, Heinz College, "Models and algorithms for protecting critical information technology infrastructure." September 10, 2018.

Contributed Research Talks

48. Contributed Session (with David E. Goldberg), 2000 Genetic and Evolutionary Computation Conference (GECCO), July 8-12, 2000, Las Vegas, NV, "The Effect of Numerical Integration on Solution Quality of a Genetic Algorithm." In reviewed proceedings.
49. Contributed Session (with David E. Goldberg), 2001 Artificial Neural Networks in Engineering (ANNIE), November 5-7, 2001, St. Louis, MO, "Efficient evaluation relaxation under integrated fitness functions." In reviewed proceedings.
50. Contributed Session (with David E. Goldberg), 2002 Genetic and Evolutionary Computation Conference (GECCO), July 9-13, 2002, New York, NY, "Efficient Discretization Scheduling in Multiple Dimensions." In reviewed proceedings.
51. Speaker, The Fourteenth International Summer Symposium on Science and World Affairs, July 15-21, 2002, Urbana, IL, "Passenger Profiling Issues in Aviation Security."
52. Speaker, Arms, Control, Disarmament, and International Security (ACDIS) Millennium Series, February 19, 2003, Urbana, IL, "Passenger Screening Issues in Aviation Security."
53. Contributed Session (with Sheldon H. Jacobson and John E. Kobza), 2003 INFORMS National Meeting, October 19-22, 2003, Atlanta, GA, "Modeling and Analyzing Checked Baggage Screening Systems."
54. Contributed Session (with Sheldon H. Jacobson), 2004 SIAM Conference on Discrete Mathematics, June 13-16, 2004, Nashville, TN, "Integer Knapsack Problem with Set-up Weights."
55. Contributed Session (with Sheldon H. Jacobson and John E. Kobza), 2005 INFORMS National Meeting, November 13-16, 2005, San Francisco, CA, "Integer Programming Models and Analysis for a Multilevel Passenger Screening Problem"
56. Speaker, 2006 Symposium on Operations Research and the Criminal Justice System, September 28-29, 2006, Arlington, VA, "Balancing COMPSTAT and Community Policing."
57. Speaker (with Sheldon H. Jacobson), 2006 INFORMS National Meeting, November 5-8, 2006, Pittsburgh, PA, "The Economic Impact of Obesity on Automobile Fuel."
58. Speaker (with Sheldon H. Jacobson), 2007 INFORMS International Conference, July 8-11, 2007, Puerto Rico, "A Sequential Stochastic Passenger Screening Problem for Aviation Security."
59. Speaker. Berglund Honors Seminar Series, Virginia Commonwealth University, September 18, 2007, "Issues in Homeland Security and Emergency Response."
60. Speaker, SAMSI Perception, Policy & Practice Workshop, October 3-4, 2007, Research Triangle Park, NC, "Modeling Patient Survivability for Emergency Medical Service Systems."
61. Speaker (with Jason R.W. Merrick), 2007 INFORMS Annual Meeting, November 4-7, 2007, Seattle, WA, "Modeling Survivability for Emergency Medical Service Systems."

62. Sponsored Session (with Sheldon H. Jacobson and Adrian J. Lee), 2007 INFORMS Annual Meeting, November 4-7, 2007, Seattle, WA, "A Problem to Sequentially Screen Passengers for Aviation Security."
63. Speaker. Berglund Honors Seminar Series, Virginia Commonwealth University, October 7, 2008, "Issues in Homeland Security and Emergency Response."
64. Speaker (with Jamie D. Lloyd and Emily Niman), 2008 INFORMS Annual Meeting, October 11-15, 2008, Washington, DC, "Screening Cargo Containers for Nuclear Material."
65. Speaker (with Jason R.W. Merrick, Jamie D. Lloyd, Emily Niman) DIMACS/DyDAn/LPS Workshop on Port Security/Safety, Inspection, Risk Analysis and Modeling, November 17-18, 2008, Piscataway, NJ. "Screening Cargo Containers for Nuclear Material using Knapsack Problem and Bayesian Probability Models"
66. Contributed session (with Chris Foufoulides), 2009 Virginia Academy of Science, 87th Annual Meeting, May 26-29, 2009, "Using Simulation Optimization to Construct Efficient Screening Strategies for Cervical Cancer."
67. Speaker. Berglund Honors Seminar Series, Virginia Commonwealth University, September 15, 2009, "Optimally Managing Emergency Medical Service Systems."
68. Speaker (with Chris Foufoulides), 2009 INFORMS Annual Meeting, October 11-14, 2009, San Diego, CA. "Using Simulation Optimization to Construct Efficient Screening Strategies for Cervical Cancer."
69. Speaker (with Maria E. Mayorga), 2009 INFORMS Annual Meeting, October 11-14, 2009, San Diego, CA. "Evaluating Emergency Medical Service Performance Measures."
70. Speaker (with Jason R.W. Merrick), 2009 INFORMS Annual Meeting, October 11-14, 2009, San Diego, CA. "Is Screening Cargo Containers for Smuggled Nuclear Threats Worthwhile?"
71. Panelist, "Science Blogging: Laboratory of Ideas or Contaminated Experiment?" Virginia Commonwealth University, February 17, 2010.
72. Speaker (with K. Reggie Moore), DIMACS/CCICADA Workshop on Modeling and Mitigation of the Impacts of Extreme Weather Events to Human Health Risks, Rutgers University, Piscataway, NJ, "How does extreme weather affect the volume and nature of emergency medical 911 calls?", June 3-4, 2010.
73. Speaker (with Maria E. Mayorga), 2010 INFORMS Annual Meeting, Austin, TX, "Optimal Dispatching Policies for Emergency Medical Services," November 7-10, 2010.
74. Speaker (with Maria E. Mayorga), 2010 INFORMS Annual Meeting, Austin, TX, "Equitable Dispatching Policies for Emergency Medical Services," November 7-10, 2010.
75. Panel moderator, 2010 INFORMS Annual Meeting, Austin, TX, "Blogging and tweeting about operations research: A panel discussion about social networking," November 7-10, 2010.
76. Speaker (with Maria E. Mayorga), 2011 INFORMS Computing Society Conference, Monterey, CA, "An optimal dispatching model for server-to-customer systems with classification errors," January 9-11, 2011.
77. Speaker (with Sheldon H. Jacobson and Alexander Nikolaev), 2011 INFORMS Computing Society Conference, Monterey, CA, "Sequential, Stochastic Screening Problems," January 9-11, 2011.
78. Speaker. Berglund Honors Seminar Series, Virginia Commonwealth University, February 3, 2011, "Emergency medical services and extreme weather events."
79. Speaker (with Ed Boone and J. Paul Brooks), 2011 Virginia Academy of Science, 89th Annual Meeting, May 24 – 26, 2011, "Estimating the volume and nature of emergency medical calls during severe weather."

80. Speaker, International Research Committee on Disasters Researchers Meeting, "An Analysis of the Volume and Nature of Emergency Medical Calls During Severe Weather Events," July 12-13, 2011, Broomfield, CO.
81. Speaker. Berglund Honors Seminar Series, Virginia Commonwealth University, September 27, 2011, "Staffing ambulances during blizzards."
82. Speaker. "A mixed-integer programming model for enforcing priority list policies in Markov decision process models." Army Conference on Applied Statistics, October 19-21, 2011, Annapolis, MD.
83. Speaker (with Rebecca Dreiding). "Screening cargo containers for nuclear material using a layered, risk-based screening system." Society for Risk Analysis Conference, December 4-7, 2011, Charleston, SC.
84. Speaker (with Casey Rothschild and Seth Guikema), 2011 INFORMS Annual Meeting, Charlotte, NC, "Robust Adversarial Risk Analysis: A Level-k Approach," November 13-16, 2011.
85. Speaker, 2011 INFORMS Annual Meeting, Charlotte, NC, "A mixed-integer programming model for enforcing priority list policies in Markov decision processes," November 13-16, 2011.
86. Speaker (with Edward Boone and J. Paul Brooks), 2011 INFORMS Annual Meeting, Charlotte, NC, "Analyzing the Volume and Nature of Emergency Medical Calls during Severe Weather Events," November 13-16, 2011.
87. Speaker, American Meteorological Society Annual Meeting, "An Analysis of the Volume and Nature of Emergency Medical Calls During Severe Weather Events," January 22-26, 2012, New Orleans, LA.
88. Speaker (with Maria E. Mayorga), "Equitable dispatching policies for emergency medical services," Computational Management Science Conference, April 18-20, 2012, London, UK.
89. Speaker. Berglund Honors Seminar Series, Virginia Commonwealth University, April 23, 2012, "The effect of Hurricane Irene and Snowmageddon on 911 calls."
90. Speaker, "A mixed-integer programming model for enforcing priority list policies in Markov decision processes," International Symposium of Mathematical Programming, August 20-24, 2012, Berlin.
91. Speaker (with Sardar Ansari and Maria E. Mayorga), "A mixed integer programming model for locating and dispatching ambulances," Army Conference on Applied Statistics, October 24-26, 2012, Monterey, CA.
92. Speaker (with Maria E. Mayorga), 2012 INFORMS Annual Meeting, Phoenix, AZ, "Evaluating the Impact of Performance Goals on Emergency Medical Service Dispatching Decisions," October 14-17, 2012.
93. Speaker (with Richard Garrett), 2012 INFORMS Annual Meeting, Phoenix, AZ, "Predictive Performance of Data Mining and Regression Methodologies On 911 Call Counts," October 14-17, 2012.
94. Panelist, 2012 INFORMS Annual Meeting, Phoenix, AZ, "Bringing O.R. into the 21st Century with Social Networking and Web 2.0 Tools," October 14-17, 2012.
95. Invited Panelist, 2012 INFORMS Annual Meeting, Phoenix, AZ, "Panel Discussion: Effective Strategies for Time Management and Work-life Balance," October 14-17, 2012.
96. Panel Moderator, 2012 INFORMS Annual Meeting, Phoenix, AZ, "Panel Discussion on Women in Engineering: Publishing, Recruitment, and Retention," October 14-17, 2012.
97. Speaker (with Sardar Ansari and Maria E. Mayorga), "A mixed integer programming model for locating and dispatching via district design," INFORMS Computing Society Conference, January 6-8, 2013, Santa Fe, NM.

98. Speaker (with Sardar Ansari and Maria Mayorga), "Integrated models for locating and dispatching ambulances." INFORMS Healthcare Conference, June 23-26, 2013, Chicago, IL.
99. Speaker (with Casey Rothschild and Seth Guikema), "Adversarial risk analysis with incomplete information: A level-k approach," Society for Risk Analysis Symposium, December 8-11, 2013, Baltimore, MD.
100. Speaker (with John Angelis), "A sensitivity analysis of three quarterback rating systems," INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.
101. Speaker (with Soovin Yoon), "The value of patient information in allocating emergency medical service resources," INFORMS Annual Meeting, November 9-12, 2014, San Francisco, CA.
102. Speaker (with Kaiyue Zheng). "Maximal coverage problems for reducing cyber-security vulnerabilities" at the INFORMS Computing Society Conference, January 11-13, 2015, Richmond, VA.
103. TutORial Speaker, "Discrete optimization models for homeland security and disaster management," INFORMS Annual Meeting, "Discrete optimization models for homeland security and emergency management," November 1-4, 2015, Philadelphia, PA.
104. Panelist at the INFORMS Annual Meeting, "Special Panel on 20th Year Anniversary of WORMS: Strategies for Advancing Women in OR/MS," November 1-4, 2015, Philadelphia, PA.
105. Invited speaker, "Maximal coverage models for trustworthy computing," Adversarial risk analysis for critical infrastructure workshop, May 23-27, 2016, Leiden, the Netherlands.
106. Speaker (with Suzan Afacan), "An Integrated Network Design And Scheduling Problem for Network Restoration And Emergency Response," INFORMS International, Hawaii, June 12-15, 2016.
107. Speaker (with Kaiyue Zheng), "A Budgeted Maximum Multiple Coverage Model For Cybersecurity Planning And Management," INFORMS International, Hawaii, June 12-15, 2016.
108. Featured speaker, Women in Science and Engineering (WISE) lecture, University of Wisconsin-Madison, October 4, 2016.
109. Speaker, "A logistic regression model for forecasting the College Football Playoff," INFORMS Annual Meeting, November 6-9, 2016, Nashville, TN.
110. Speaker, "An Expected Coverage Model With A Cutoff Priority Queue," INFORMS Healthcare Conference, July 24-28, 2017, Rotterdam, Netherlands.
111. Panelist. "Becoming a More Productive Writer." INFORMS Annual Meeting, November 2-7, 2018, Phoenix, AZ.

Posters

112. With Alisha Purohit. 2008 INFORMS Annual Meeting, October 11-15, 2008, Washington, DC, "Designing Next-Generation Emergency Medical Service Systems."
113. With Maria Mayorga. 2009 Virginia Health Equity Conference, September 10-11, 2009, Glen Allen, VA, "Equity in locating ambulances in emergency medical service systems."
114. With James Denison, Rebecca Dreiding, and Maria Mayorga. 2009 INFORMS Annual Meeting, October 11-14, 2009, San Diego, CA. "Evaluating Emergency Medical Service Dispatching Policies."

RESEARCH AWARDS AND CONTRACTS (\$2,181,547)

Federal (\$2,131,701)

1. National Security Agency, "Distinguished Visiting Professor, Summer Programs in Operations Research Technology (SPORT)," PI, \$33,360, 5/16/2007 – 8/31/2007.

2. National Science Foundation, "ARI-SA: Multi-Layered System Level Screening for Port Security," CBET-0735735, PI, \$292,077, 9/1/2007 – 8/31/2008. This was continued as Department of Homeland Security, Domestic Nuclear Detection Office, 9/1/2008 – 8/31/2010.
3. Department of Homeland Security, "Plural Models for Adaptive Adversary Modeling," Co-PI, Co-PI, \$229,896, 7/1/2010 – 5/1/2011.
4. Department of the Army-Materiel Command, Army Research Office, Young Investigator Award, "Optimally Managing Dynamic Military Server-to-Customer Systems," PI, \$150,000, 5/14/2010 – 5/13/2013.
5. National Science Foundation, "CAREER: Extreme Weather Events and Emergency Medical Services: A Discrete Optimization Modeling Framework", #1444219 (originally: #1054148), 6/1/2011 – 5/31/2018, PI, \$433,375.
6. Sandia National Laboratories, "Supply Chain Life Cycle Optimization Algorithm Development," 8/1/2013 – 9/30/2013, PI, \$9,983. 8/1/2014 – 9/30/2014, PI, \$11,500
7. National Science Foundation, "Collaborative Research: Flexible Multi-Scale Models of Transportation Network Service Recovery," #1361448, 5/1/2014 – 4/30/2018, PI, \$158,864.
8. National Science Foundation, "SBE: Small: An optimization framework for prioritizing cyber-security mitigations for securing information technology infrastructure," #1422768, 9/1/2014 – 8/31/2018, PI, \$455,828.
9. Department of Homeland Security, Subaward from the Center of Excellence for Command, Control, and Interoperability Center (CCICADA) at Rutgers, "Data Analytics for Venue Screening," \$32,535. PI.
10. National Science Foundation, "Resilience Analytics: A Data-Driven Approach for Enhanced Interdependent Network Resilience." #1541165, 10/15/2015 – 10/14/2018 Co-PI, \$1,381,958 (UW subaward \$299,748).
11. National Science Foundation, "EAGER: A Framework For Economical Cyber Security Inspection and Assurance." #1912166, 3/15/2019 – 3/14/2021. Co-PI, \$300,000 (UW subaward \$100,000).

Internal (\$49,846)

1. American Cancer Society Institutional Research Grant, "Mathematical Modeling of Dynamic Cervical Cancer Screening Policies," PI, \$15,740, IRG-73-001-31, 1/1/2007 – 12/31/2007.
2. Virginia Commonwealth University, Honors Summer Undergraduate Research Project, Project advisor, \$3000, 5/15/2008 – 7/14/2008.
3. Virginia Commonwealth University, Honors Summer Undergraduate Research Project, Project advisor, \$2225, 5/15/2009 – 7/14/2009.
4. Virginia Commonwealth University, Honors Summer Undergraduate Research Project, Project advisor, \$1000, 5/15/2010 – 7/14/2010.
5. University of Wisconsin-Madison, Vilas Life Cycle Professorship, \$27,881, 9/1/2015 – 6/30/2017.

TEACHING

Courses at the University of Wisconsin-Madison

1. ISyE 624, Stochastic Modeling Techniques (6 times)
 - a. Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018

2. ISyE 320/321: Simulation and Probabilistic Modeling (3 times)
 - a. Spring 2014, Spring 2015, Spring 2017
3. EGR 102: Introduction to Society's Engineering Grand Challenges (3 times)
 - a. Spring 2014, Fall 2014, Fall 2015
4. ISyE 601: Topics in Sports Analytics
 - a. Spring 2017
5. ISyE 691: Doctoral Student Development Seminar (1 time)
 - a. Fall 2014
6. ISyE 823: Special Topics: Discrete optimization modeling techniques for public services, homeland security, and disasters (1 time)
 - a. Spring 2016

Courses at Virginia Commonwealth University

1. MATH/OPER 327, Mathematical Modeling (2 times)
 - a. Fall 2006, Spring 2013
2. OPER 647, Multiobjective Decision Analysis (3 times)
 - a. Spring 2007, Spring 2010, Spring 2012
3. OPER 731, Discrete Optimization (3 times)
 - a. Spring 2009, Spring 2011, Fall 2011
4. OPER 791, Supply Chains (1 time)
 - a. Fall 2012
5. STAT 541, Applied Statistics for Engineers and Scientists (3 times)
 - a. Fall 2007, Fall 2008, Fall 2009
6. STAT 503, Introduction to Stochastic Processes (5 times)
 - a. Spring 2007, Spring 2009, Spring 2010, Spring 2011, Spring 2012
7. STAT 613, Stochastic Processes (3 times)
 - a. Spring 2010, Spring 2011, Fall 2012
8. SYSM 683, Systems Seminar III (1 time)
 - a. Fall 2012

Major Curriculum Development at University of Wisconsin-Madison

1. Development of a 1-credit hour PhD seminar for PhD students professional development (ISYE 691, Fall 2014)
2. Development of a 3-credit hour PhD seminar on Discrete optimization modeling techniques for public services, homeland security, and disasters (ISYE 823, Spring 2016). In this course, the students wrote a course blog (<https://publicsectorcourse.wordpress.com/>)
3. Development of a 3-credit hour senior design election/graduate course Topics in Sports Analytics (ISYE 601, Spring 2017).

Major Curriculum Development at Virginia Commonwealth University

1. Created new PhD level course OPER 731 (Discrete optimization)
2. Reintroduced courses STAT 503/STAT 613 (on the books but were not in the curriculum)
3. Created a 1 credit hour PhD preparation course on proposal writing (SYSM 683)

Teaching Seminars, Lectures, and Talks

1. Sponsored Session, 2007 INFORMS Annual Meeting, November 4-7, 2007, Seattle, WA, "OR in the Classroom: Helping the Homeless."

2. Invited Panel, Blog panel for the Center for Teaching Excellence (at Virginia Commonwealth University) Teaching and Learning with Technology Institute, June 2, 2009.
3. Created a [lecture on technical writing for STAT/OPER 690](#), Research and Communications Seminar.
4. Speaker. Virginia Commonwealth University Math Club seminar, October 7, 2011 "[So you're thinking about graduate school in the mathematical sciences.](#)"
5. Invited Panelist, 2011 INFORMS Annual Meeting, Charlotte, NC, "Bloggging for O.R. - Publish Your O.R. Work and Insights Online," November 13-16, 2011.
6. Guest lecturer, "Advice for PhD students about to hit the academic job market" for the "Preparing Future Faculty" program at VCU, December 8, 2011.
7. Seminar for students at the University of Oklahoma, September 14, 2012, "Advice for PhD students, prospective PhD students, and aspiring academics."
8. Speaker. Berglund Honors seminar series at Virginia Commonwealth University, "Applying to graduate school: Tips for navigating (and surviving) the process," October 2, 2012.
9. Speaker. Engineering Tomorrow's Careers Summer Camp for high school girls at UW-Madison organized by the UW SWE chapter, June 18, 2014.
10. **Distinguished lecturer at Oberlin College** for an undergraduate optimization course in the Department of mathematics, September 29 – October 1, 2015.
 - a. Lectures included "Integer programming for locating ambulances" and "Should a football team run or pass? A game theory approach using linear programming."
11. **Keynote speaker**, Spring New Educators Orientation, January 12, 2017, University of Wisconsin-Madison.
12. Panelist, "Breaking the Bias Habit: Tips for Inclusive Teaching," March 21, 2017, University of Wisconsin-Madison.
13. **Visiting Professor**, University of Oklahoma, March 26, 2018. Gave a lecture, "Modeling service networks" in the Dream Course on the Analytics of Resilient Cyber-Physical-Social Networks.
 - a. Lecture entitled "Modeling service networks."

Teaching Self-Development

1. Participated in the 2006 INFORMS Teaching Colloquium.
2. Participated in the 2009-2010 VCU Center for Teaching Excellence Tablet PC Program.
3. Participant in five VCU Center for Teaching Excellence courses (2006-2009).
4. Breaking the Bias Habit, UW-Madison, 2017.

Current Graduate Students Advising or Mentoring

1. Suzan Afacan, PhD candidate in Industrial and Systems Engineering (advisee), University of Wisconsin-Madison [expected May 2019].
2. Eric Dubois, PhD candidate in Industrial and Systems Engineering (advisee), University of Wisconsin-Madison [expected August 2019].
3. Veronica White, PhD candidate in Industrial and Systems Engineering (advisee), University of Wisconsin-Madison [expected May 2022].
4. Adam Schmidt, PhD candidate in Industrial and Systems Engineering (advisee), University of Wisconsin-Madison [expected August 2022].

Ph.D. Dissertations Directed.

1. Benjamin Grannan, "Dispatch, Delivery, and Location Logistics for the Aeromedical Evacuation of Time-Sensitive Military Casualties Under Uncertainty," PhD in Systems Modeling and Analysis, Virginia Commonwealth University Science, 2014.
2. Kaiyue (Kay) Zheng. "Models and algorithms for critical infrastructure protection with an application to cybersecurity planning," PhD in Industrial Engineering, University of Wisconsin-Madison, 2017.
3. Soovin Yoon, "Optimal Planning of Tiered Emergency Medical Services," PhD in Industrial Engineering (advisee), University of Wisconsin-Madison, January 2019.

M.S. Theses Directed

1. Christopher Foufoulides, MS in Operations Research at Virginia Commonwealth University, "Using simulation optimization to construct efficient screening strategies for cervical cancer," September 2008.
2. Jamie Dauberman Lloyd, MS in Operations Research at Virginia Commonwealth University (co-advised with Jason Merrick), "Making decisions about screening cargo containers for nuclear threats using decision analysis and optimization," December 2010.
3. Rebecca Dreiding, MS in Operations Research at Virginia Commonwealth University, "Allocating homeland security screening resources using knapsack problem models," December 2010.
5. Sardar Ansari, MS in Statistics, Virginia Commonwealth University Science, December 2013.

M.S. Research

1. Erkin Otles, MS University of Wisconsin-Madison, Industrial and Systems Engineering, 2016.
2. Huan Liang, MS University of Wisconsin-Madison, Industrial and Systems Engineering, 2019.

Post-Docs supervised

1. Forough Enayaty Ahangar, 2017-2019.

Ph.D. Committees

1. Sardar Ansari, Virginia Commonwealth University, Computer Science, August 2013.
2. Josh Clarke, Virginia Commonwealth University, Mechanical Engineering, May 2014.
3. James Brooks, Rensselaer Polytechnic Institute, Decision Sciences and Engineering Systems, May 2014.
4. Wairimu Magua, University of Wisconsin-Madison, Industrial and Systems Engineering, August 2014.
5. Mahdi Hamzeei, University of Wisconsin-Madison, Industrial and Systems Engineering, December 2014.
6. James Codella, University of Wisconsin-Madison, Industrial and Systems Engineering, December 2014.
7. Fuat Kosanoglu, University of Wisconsin-Madison, Industrial and Systems Engineering, December 2014.
8. Matthew Gidden, University of Wisconsin-Madison, Nuclear Engineering, May 2015.

9. Hyemin Jeon, University of Wisconsin-Madison, Industrial and Systems Engineering, May 2015.
10. Edmond Ramley, University of Wisconsin-Madison, Industrial and Systems Engineering, January 2016.
11. Namsuk Cho, University of Wisconsin-Madison, Industrial and Systems Engineering, May 2016.
12. Muhacit Cevik, University of Wisconsin-Madison, Industrial and Systems Engineering, May 2016.
13. Amonsiri Vilasdaechanont, University of Wisconsin-Madison, Industrial and Systems Engineering, 2016.
14. Sait Tunc, University of Wisconsin-Madison, Industrial and Systems Engineering, December 2016.
15. Vindhya Venkatraman, University of Wisconsin-Madison, Industrial and Systems Engineering, 2016.
16. Ergun Mehmet, University of Wisconsin-Madison, Industrial and Systems Engineering, 2017.
17. Amanda Smith, University of Wisconsin-Madison, Industrial and Systems Engineering, 2018.
18. Hyo Kyung Lee, University of Wisconsin-Madison, Industrial and Systems Engineering, expected in May 2019.

M.S. Committees

19. Mike Seifert, Applied MS Project in Operations Research at Virginia Commonwealth University, December 2007.
20. Laxi Mullanpadi, MS in Chemical and Life Science Engineering at Virginia Commonwealth University, May 2009
21. Kelly Duncan, Applied MS Project in Operations Research at Virginia Commonwealth University, August 2009.

Undergraduate Student Research

1. Jamie Dauberman Lloyd, Independent study, Fall 2007.
2. Emily Niman, research on NSF/DNDO grant, Summer 2008.
3. Garrett Howe, research on NSF/DNDO grant, Summer 2009.
4. Alisha Purohit, Honors Summer Undergraduate Research Project in 2008.
5. James Denison, Honors Summer Undergraduate Research Project in 2009.
6. Garrett Howe, Independent study, Spring 2010.
7. James Denison, Honors Summer Undergraduate Research Project in 2010.
8. Garrett Howe, Undergraduate Summer Research Fellowship, 2010-2011.
9. Richard Garrett, undergraduate research, Summer 2011.
10. Amber Kunkel, undergraduate research, Summer 2011.
11. Taylor Richard, NSF REU, Summer 2012.
12. Victor Rivera Rodriguez, Summer 2014.
13. Huimin Ou, Summer 2016.
14. Adam Schmidt, 2017.

Student Awards

- Student advisor for finalists in IIE/FlexSim Software Student Simulation Competition to be held at the Healthcare Systems Process Improvement Conference in Orlando, FL on February 18-20, 2015. Student members include Erkin Otles, April Soler, Michael Russo, and Samuel Schmitt.
- Suzan Afacan was awarded the Best Poster Award at the Turkish-American Scientists and Scholars Association (TASSA) Conference in Chicago, IL on April 2-3, 2016 for a poster entitled "An integrated network design and scheduling problem for network restoration"

SERVICE

Editorial Boards

Department editor for *IIE Transactions* in the area of Government, Public Policy and Society, 2013 – present.

Associate editor for *International Transactions on Operational Research*, 2013 – 2016.

Associate editor for *OMEGA*, 2015 – 2016.

Area editor for *Risk Analysis* in the area of Mathematical Modeling, 2013 – 2015.

Area editor for *IIE Transactions* in the area of Homeland Security, 2009 – 2012.

Professional Society Committees

Committee member of the National Research Council Committee on Risk-Based Methods for Insurance Premium of Negatively Elevated Structures in the National Flood Insurance Program, 2014 – 2015.

INFORMS Ad Hoc Committee on Diversity, 2016 – 2017.

Speakers Chair for the 2017 INFORMS Annual Meeting (2016-2017)

Professional Society Leadership Positions

Current

INFORMS Vice President of Marketing, Communications, and Outreach, 2016 – present.

INFORMS Government and Analytics summit committee and chair, 2018 – present.

Completed

President-Elect/President/Past-President, INFORMS Section on Public Sector Operations Research (PSOR), 2013 – 2015.

President-Elect/President/Past-President, Women in OR/MS (WORMS), a forum of INFORMS, 2012 – 2014.

- Major initiatives included organizing new activities for the Analytics conference, beginning a student travel scholarship to the Analytics conference, beginning a student childcare travel scholarship to the Annual Meeting (with Susan Martonosi), and fundraising for conference events and travel scholarships.

INFORMS Computing Society Board of Directors, 2016 – 2017.

Member of the INFORMS Strategic Planning Committee, INFORMS, 2015 – 2017.

Vice-President of Meetings, Women in OR/MS (WORMS), a forum of INFORMS, 2008-2010.

Vice-President of Communications, INFORMS Section on Public Programs, Service and Needs (SPPSN), 2010 – 2012.

Member of the IT committee, INFORMS, 2011 – 2015.

Member of the Finance Committee, INFORMS, 2015.

Member, INFORMS Speaker Program, appointed in 2012.

Cluster chair, Women in OR/MS (WORMS), 2012 INFORMS Annual Meeting, Phoenix, AZ, October 2012.

Member of the INFORMS nominating committee, 2013.

Chair, best paper awards committee for Institute of Industrial Engineers Transactions (IIET) Focused Issue on Operations Engineering and Analytics, 2013.

Cluster chair for the Healthcare systems/Informatics, INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.

Cluster chair in Homeland security, INFORMS Computing Society Conference, January 11-13, 2015, Richmond, VA.

Member of the INFORMS Doing Good with Good O.R. Committee, INFORMS, 2012 – 2014, and co-chair of the committee in 2013.

Committee member of the Editor-in-Chief Review Committee for *Decision Analysis*, 2015.

Professional Societies Service

Wrote the newsletter and updated the web page for the OR/MS Applied to Public Programs, Service and Needs in INFORMS, April 2011, October 2011, April 2012, October 2012.

Journal Reviews

I have performed reviews for: *Annals of Operations Research, Computers & Operations Research, Decision Analysis, European Journal of Operational Research, Health Care Management Science, IIE Transactions, IIE Transactions on Healthcare Systems Engineering, Interfaces, The Journal of the Operational Research Society, Management Science, Operations Research, Naval Research Logistics, Reliability Engineering & System Safety, Risk Analysis, Socio-Economic Planning Sciences, Transportation Science.*

Proposal Reviews

NSF panels (7)

NSF proposal reviews, not as part of a panel (4)

Academic Conference Leadership

Member of the organizing committee, INFORMS Computing Conference, January 9-12, 2015, Richmond, VA. Committee duties included editing the conference volume, organizing sessions, website management, and conference guide.

INFORMS Annual Meeting Organizing Committee, Speakers Chair, 2017

Academic Conferences

Session chair, "Service Industry II," 2003 INFORMS National Meeting, October 19-22, 2003, Atlanta, GA.

Organized and chaired a session, "Homeland Security and Risk Applications," 2007 INFORMS International Conference, July 8-11, 2007, Puerto Rico.

Organized and chaired a session, "Aviation Security Applications," 2007 INFORMS Annual Meeting, November 4-7, 2007, Seattle, WA.

Invited Speaker for the INFORMS Future Academicians Colloquium, October 10, 2008.

Organized and chaired a session, "New Challenges and Metrics in Homeland Security," 2008 INFORMS Annual Meeting, October 11-15, Washington, DC.

Planned a reception for Women in OR/MS, a forum of INFORMS, 2008 INFORMS Annual Meeting, October 11-15, Washington, DC. The reception was attended by 194 people.

- Planned a luncheon for Women in OR/MS, a forum of INFORMS, 2008 INFORMS Annual Meeting, October 11-15, Washington, DC. The luncheon was attended by 184 people.
- Organized and chaired a session, "Port Security and Nuclear Interdiction," for the 2009 INFORMS Annual Meeting, October 11-14, 2009, San Diego, CA.
- Organized and chaired a session, "Treating Emergency Medical Patients," for the 2009 INFORMS Annual Meeting, October 11-14, 2009, San Diego, CA.
- Planned a luncheon for Women in OR/MS, a forum of INFORMS, 2009 INFORMS Annual Meeting, October 11-14, 2009, San Diego, CA. The luncheon was attended by 200 people. Albert (then McLay) led a fundraising effort that raised \$9800 in sponsorships.
- Reviewer, student paper competition in the Data Mining Section of INFORMS, 2010.
- Organized and chaired a panel discussion, "Blogging and tweeting about operations research: A panel discussion about social networking," INFORMS Annual Meeting, Austin, TX, November 7-10, 2010.
- Organized and chaired a session, "Emergency medical services: New directions," INFORMS Annual Meeting, Austin, TX, November 7-10, 2010.
- Organized and chaired a session, "Sensors, Servers, and Screening," 2011 INFORMS Computing Society Conference, January 9-11, 2011, Monterey, CA.
- Organized and chaired a session, "Fairness and Equity in OR Models," 2011 INFORMS Annual Meeting, November 13-16, 2011, Charlotte, NC.
- Organized and chaired a session, "New Directions in Emergency Medical Services," 2011 INFORMS Annual Meeting, November 13-16, 2011, Charlotte, NC.
- Organized a session on emergency medical services for the 2012 INFORMS Annual Meeting, Phoenix, AZ, October 2012.
- Organized and chaired a session, "Incentive auctions and interdiction models," INFORMS Computing Society Conference, January 6-8, 2013, Santa Fe, NM.
- Chaired a session, "Doing Good with Good OR," INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.
- Organized a session, "Best of WORMS," INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.
- Organized and chaired a session, "New directions in emergency medical services," INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.
- Planned a luncheon for 200 attendees for Women in OR/MS, a forum of INFORMS, 2013 INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN. Albert (then McLay) led a fundraising effort that raised \$9750 in sponsorships.
- Organized and chaired a session, "Public services and operations research," INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.
- Organized a session, "Fire and emergency medical services," INFORMS Annual Meeting, November 9-12, 2014, San Francisco, CA.
- Stream chair, INFORMS Computing Society Conference, January 9-12, 2015, Richmond, VA.
- Organized a session for the INFORMS Computing Conference, January 9-12, 2015, Richmond, VA.
- Organized and chair a session for the INFORMS Annual Meeting, "Cyber Security," November 1-4, 2015, Philadelphia, PA.
- Organized and chair a session for the INFORMS Annual Meeting, "Fire and Emergency Medical Services," November 1-4, 2015, Philadelphia, PA.

Cluster Chair for the INFORMS Computing Conference, Security and Military Applications cluster, 2017.

Wisconsin: ISyE Department

Student and Alumni Affairs Committee, 2013 – present.
Faculty Affairs Committee, 2013 – 2014.
Academic Affairs Committee, 2014 – 2015.
Search Committee for Associate Chair for Undergraduate Affairs, 2018.
Mentoring Committee (Kaibo Liu), 2015.
Mentoring Committee (Gabriel Zayas-Caban), 2017 – present.
Mentoring Committee (Carla Michini), 2018 – present.
INFORMS Student Chapter advisor (2015 – present).

Wisconsin: College of Engineering and Physical Sciences

Assistant Dean for Graduate Affairs, 2017 – present.
Physical Sciences Divisional Committee, 2016 – 2017.
College of Engineering Equity and Diversity Committee, 2016 – present.
College of Engineering Academic Planning Committee, 2017 – present.
College of Engineering Leadership Council, 2017 – present.
Women's Faculty Mentoring Program, 2018-2019.
Graduate Engineering Research Scholars (GERS) Director, 2018 – present.

Wisconsin: Campus and other

Academic Leadership Program, 2018 – 2019.
Graduate Research Scholar Executive Committee, 2018 – present.

VCU: Department, College, and University

VCU College Research Advisory Committee, 2007.
Chair, VCU College of Humanities and Sciences Library Committee, 2011 – 2012.
VCU College of Humanities and Sciences Library Committee, 2006 – 2007, 2008 to present.
Also met with all four candidates for the Associate University Librarian for Public Services position in Fall 2010.
VCU Libraries Advisory Committee, 2011 – 2012.
Chair, search committee for three positions at VCU, Statistical Sciences and Operations Research, VCU, 2011 – 2012.
VCU Search committee member for the Dean of Engineering, VCU, 2011 – 2012.
VCU Women's Studies Planning Committee, 2008 – 2009.
VCU Operations Research Curriculum Revision Committee, 2009 – 2010.
Panelist for the VCU Center for Teaching Excellence's *Teaching and Learning with Technology Institute*, Virginia Commonwealth University, 2 June 2009.

Service to colleagues

Award nominations (3), 2 successful, 1 unsuccessful.

Service for other universities

Promotion and tenure letters (4)

Press, news, trade journal, and blog coverage

I write a professional operations research blog and twitter feed entitled **Punk Rock Operations Research**.

I write ***Badger Bracketology***, a sports analytics and bracketology blog.

You can watch [YouTube videos I've appeared here](#).

November 12, 2018. [Special report: Secrets of the Lottery](#) on CBS 58 10pm news in Milwaukee, WI.

May 21, 2018. I gave the opening remarks entitled "Operations Research & Analytics: Saving Lives, Saving Money, Solving Problems" ([viewable on YouTube](#)) at the [INFORMS Government & Analytics Summit](#) in Washington, D.C.

May 12, 2018. [Whad'ya Know podcast interview with Michael Feldman](#).

March 30, 2018. [Know your Madisonian: Analytics keep UW-Madison professor running](#), Wisconsin State Journal by Rob Schultz.

March 14, 2018. "[WN@TL – Advanced Analytics for Emergency Response, Bracketology, & Beyond](#)" lecture [viewable on YouTube](#). **Note: this episode aired on [Wisconsin Public Television's University Place series](#) on July 23, 2018 at 4:07pm on the Wisconsin Channel.**

March 8, 2018. [Interest Down Ahead of NCAA Tournament, But Bracket Playing About Steady](#) by Edward Graham, Morning Consult.

January 2018, ASEE PRISM Magazine. "[Organized chaos: From the classroom to research on emergency response to guiding graduate students, a systems engineer finds imaginative ways to make things work](#)" by Jennifer Pocock.

August 23, 2017: [Wisconsin hopes to win big in Powerball jackpot](#), evening news segment on WISC-TV (CBS affiliate in Madison).

July 30, 2017. [The Evolution of Aviation Security](#), University of the Air, an hour-long interview on Wisconsin Public Radio.

March 30, 2017. 30 minute interview on WORT FM Radio 89.9 Madison on "[Perpetual Notion Machine](#)."

March 20, 2017. "[Republicans Press Professors to Spend More Time Teaching](#)" *New York Times*.

March 20, 2017. "[Just Ask Us: When did it become popular to make March Madness brackets?](#)" Wisconsin State Journal.

March 14, 2017. NBC15 in Madison. 6 o'clock and 10 o'clock news segment "[UW professor talks NCAA bracket odds](#)"

March 14, 2017. "Live at Four" WISC-TV (CBS affiliate in Madison, WI) to talk about bracketology. "[Professor helps you build the perfect bracket](#)."

March 13, 2017. WKOW 10 o'clock evening news segment. "[UW bracketology expert surprised by Badgers' 8 seed](#)" My blog post about this is [here](#)

March 13, 2017. Wisconsin State Journal: "[University of Wisconsin professor offers tips for a winning March Madness bracket](#)," by Nico Savidge.

2016. I am featured in the book [Algorithms to Live By: the Computer Science of Human Decisions](#) by Brian Christian and Tom Griffiths. See the blog post about this book [here](#).

September 4, 2016. [Radio interview about election forecasting models for news radio WTMJ](#) in Milwaukee, WI.

August 16, 2016. UWMadScience "[More than one way to play presidential pick 'em](#)"

August 4, 2016. Radio interview about Powerball odds for news radio WTMJ in Milwaukee, WI.

- Guest on [“Live at Four” WISC-TV \(CBS affiliate in Madison, WI\) to talk about airport security queues](#), May 31, 2016.
- Guest on [“Live at Four” WISC-TV \(CBS affiliate in Madison, WI\) to talk about March Madness and bracket tips](#), March 15, 2016. Blog post [here](#).
- [Ask the Experts UW-Madison video on bracketology](#), March 13, 2016
- [Q & A interview article in the On Wisconsin alumni magazine](#), Spring 2016 issue.
- [Q & A interview article in the Capital Times](#), February 14, 2016 (online), February 17, 2016 (print)
- Guest on [Wharton Moneyball](#) on Wharton Business Radio (SiriusXM), February 3, 2016.
- Guest on the [Relatively Prime math podcast on the episode entitled “Just choose a spot Bob”](#) about how to optimally choose a parking spot, January 13, 2016
- Guest on [“Live at Four” WISC-TV \(CBS affiliate in Madison, WI\)](#) to talk about Powerball, January 13, 2016.
- Guest on [“Central Time”](#) on Wisconsin Public Radio in Madison, WI to talk about Powerball, January 13, 2016.
- Guest on newsradio [WTMJ 620](#) in Milwaukee to talk about Powerball odds and strategy, [January 12, 2016](#) and January 13, 2016.
- Featured guest on the [Advanced Football Analytics Podcast, January 6, 2015](#).
- [WID Series: Tools for Discovery feature](#), December 30, 2015
- [What’s your stORy feature](#) in *OR/MS Today*, October 2015.
- Interview on the math podcast [The Other Half in episode 2 “The Road Trip.”](#) July 21, 2015.
- The inaugural episode of the YouTube show [“ORiginals: outstanding research in everyday language” \(Season 1, Episode 1\)](#) is an interview with me about my research, July 7, 2015.
- UW-Madison Press Release: [“Bracketology 101: What McLay reads in the seeds,”](#) March 17, 2015.
- Interview on the [Madison NBC affiliate about state lottery](#) entitled “Three lottery tickets worth \$350,000 each sold in Dane County”, January 28, 2015.
- Quoted in an article by Shilagh Mirgain in *Brava Magazine* entitled [“Confidence: Why are women less than sure of themselves?”](#) in the November 2014 issue.
- Quoted in an article entitled [“Ebola concerns raise questions about travel”](#) in the Badger Herald, October 27, 2014.
- Laura’s Badger Bracketology work featured in [“Computer model picks Gophers in top seven for college football playoff”](#) in the StarTribune by Michael Rand, October 23, 2014.
- Quoted in an article “Cell phone alerts provide quick notice during storms” in the [Wisconsin State Journal](#) about tornadoes, cell phone apps, and risk communication, syndicated by the [Associated Press](#), June 22, 2014.
- Interview on the [Madison NBC affiliate about the NCAA men’s basketball tournament](#) entitled “Odds of winning lottery 1,000x greater than picking perfect NCAA bracket”, March 18, 2014.
- One of my research papers featured in a Washington Post Syndicate article by Esther Cepeda entitled [“Add a bus stop to your diet,”](#) syndicated and published in several online newspapers, March 12, 2014.
- Feature story at the University of Wisconsin-Madison web site, [“Laura McLay: Crunching data on high-risk scenarios.”](#) October 24, 2013.

Feature story in Perspective, alumni magazine for the University of Wisconsin-Madison College of Engineering, "[Her response: Increase the 'reward' in high-risk scenarios.](#)" September 27, 2013.

Interview on "The Stigler Diet" blog, "[Should I do a Ph.D.](#)", September 19, 2013.

Interview on the "MathBlogging.org" blog, "[Laura McLay – Punk Rock OR](#)", December 21, 2012.

In Carl Bialik's "The Numbers Guy" blog in the Wall Street Journal in an article entitled "[The Waiting Game](#)," May 4, 2012.

Featured on an INFORMS Science of Better Podcast in an episode entitled "[Punk Rock Blogging](#)," released on December 8, 2011.

Featured in a VCU News article entitled, "[VCU statistics professor discusses the improbability of the Rams' Final Four Run](#)," April 1, 2011.

Featured in a VCU News article entitled, "[Solving Complex Problems Using Math](#)," April 12, 2011.

Featured in a VCU News article entitled, "[VCU Researcher finds Right Mix of Resources is Critical in Reducing Emergency Medical Service Response Times to Save Lives in Cardiac Arrest](#)," August 19, 2011.

Featured in a segment on Richmond's NPR affiliate, 2008.

Press release on 11/1/2006 based on my article entitled "The Economic Impact of Obesity on Automobile Fuel Consumption" in the October-December issue of *The Engineering Economist*, received a large amount of attention from the popular press. The results of this research were featured in news articles in more than 400 online and print newspapers and magazines, and was featured on several national cable news shows and regional radio shows. My interview with WDBJ7, a CBS affiliate in Roanoke, Virginia, appeared on the evening news.

Invited guest (with graduate advisor Sheldon H. Jacobson), on the hour-long Focus 580 public radio program on AM580 to discuss research activities on aviation security, February 18, 2003, Urbana, IL.

Engineering Outreach

Gave a seminar at the Engineering Tomorrow's Careers Summer Camp for high school girls at UW-Madison organized by the UW SWE chapter, June 18, 2014.

Speaker. Engineering Tomorrow's Careers Summer Camp for high school girls at UW-Madison organized by the UW SWE chapter, June 18, 2014.

Talked to a class of high school students at the South Carolina Governor's School for Science and Mathematics about data analytics, December 14, 2015.

Speaker, Women in Science and Engineering (WISE), October 4, 2016.

Speaker, Engineering Summer Program Lunch and Learn for underrepresented minority students in high school, July 17, 2017.

UW Now panel sponsored by the Bascom Hill Society and the UW Foundation, New York City, October 25, 2017

Public talk at the Middleton, Wisconsin library on applications of industrial engineering. "Advanced analytics for supporting public policy, bracketology, and beyond!" September 22, 2017 (UW-Madison Speakers series).

Public talk, Wednesday Nite at The Lab, UW-Extension, "Advanced analytics for supporting emergency response, bracketology, and beyond!" March 21, 2017.

Speaker, Engineering Summer Program Lunch and Learn for underrepresented minority students in high school, July 16, 2018.

Faculty lunch participant, STEM Immersion program for incoming first-year and transfer students at the University of Wisconsin-Madison who are underrepresented in engineering. Direct connections with faculty are one of the most critical factors in student retention. August 30, 2018.

Badger Café to UW-Madison alumni group, "Industrial and systems engineering for emergency response, bracketology, and beyond!", October 30, 2018.

Scheduled talks:

- Public talk at the Beaverton, Wisconsin Lions Club about applications of industrial engineering. April 3, 2019 (UW-Madison Speakers series).
- University Roundtable, "Bracketology 101: how data analytics can rank sports teams," March 13, 2019.

Community Service and Outreach

Worked with Hanover County Fire and EMS to improve ambulance responses and save patient lives. Modeling efforts that have been implemented by Hanover County have significantly improved their ambulance response times. The improvements resulted in a National Association of Counties award, Best in Category. The results were published in an *Interfaces* article in 2012.

Analyzed call volumes and provided guidance to New Kent County Fire and EMS (in the metro Richmond area). She presented her findings to the county board of supervisors on June 27, 2012.

Organized a community service course project for OPER 647 in Spring 2007 with the Daily Planet, an agency that serves the homeless and underprivileged in Richmond, Virginia.

PROFESSIONAL MEMBERSHIPS

The Institute For Operations Research and the Management Sciences (INFORMS)

Institute of Industrial and Systems Engineers (IISE)

American Association for the Advancement of Science (AAAS)

Tau Beta Pi (Engineering honor society)

Alpha Pi Mu. (Industrial engineering honor society)