

Lizhi Wang

CONTACT INFORMATION	3016 Black Engineering Building Iowa State University Ames, IA 50011 USA	515-294-1757 (office) 515-294-3524 (fax) lzwang@iastate.edu http://lzwang.public.iastate.edu
ACADEMIC APPOINTMENT	Associate Professor, Industrial and Manufacturing Systems Engineering, Iowa State University, 2013–present	
	Associate Professor (by courtesy joint appointment), Electrical and Computer Engineering, Iowa State University, 2013–present	
	Assistant Professor, Industrial and Manufacturing Systems Engineering, Iowa State University, 2007–2013	
	Assistant Professor (by courtesy joint appointment), Electrical and Computer Engineering, Iowa State University, 2007–2013	
EDUCATION	Ph.D., Industrial Engineering, University of Pittsburgh, 2007	
	B.E., Automation, University of Science and Technology of China, 2003	
	B.S., Management Science, University of Science and Technology of China, 2003	
GRANTS (TOTAL \$19,610,038 MY SHARE \$4,345,479 AS OF 12/2020)	34. PI: James McCalley. Co-PI: Jacob Mays and Lizhi Wang . “Integrating RTO and utility processes in planning and cost allocation.” Power Systems Engineering Research Center. 8/2021 – 6/2023. Total \$171,164, my share \$40,000.	
	33. PI: Sotirios Archontoulis. Co-PI: Kendall Lamkey, Michael Castellano, and Lizhi Wang . “Impacts of 40 years of plant breeding on productivity and sustainability.” The Foundation for Food and Agriculture Research. 10/2020 – 2/2023. Total \$4,089,857, my share \$511,232.	
	32. PI: Guowen Song. Co-PI: Michael Bartlett, Rachel Eike, James Lang, Ellen McKinney, Jeremy Paul, James Rothmanith, Dan Russell, Travis Sippel, Lizhi Wang , Xinwei Wang, and Chunwei Xiang. “Interdisciplinary research for next generation high performance personal protective equipment.” Iowa State University Presidential Interdisciplinary Research Initiative. 6/2020 – 6/2023. Total \$600,000, my share \$54,000.	
	31. PI: Lizhi Wang . Co-PI: Saeed Khaki. “Yield prediction.” GEF, 6/2020–7/2020. Total \$6,000, my share \$6,000.	
	30. PI: Lizhi Wang . Co-PI: Sotirios Archontoulis, William Beavis, and Guiping Hu. “Prediction and mitigation of crop yield reduction in the corn belt under different scenarios of the Covid-19 pandemic,” NSF, 4/2020 - 4/2021. Total \$98,233, my share \$32,745.	

29. PI: **Lizhi Wang**. “New genomic selection algorithms,” BASF, 12/2019 - 12/2021. Total \$220,000, my share \$220,000.
28. PI: Guowen Song. Co-PI: Warren Franke, James Lang, Ellen McKinney, James Rothmanith, Dan Russell, **Lizhi Wang**, Xinwei Wang, and Chunwei Xiang, “Development of hand-specific model and systematic tool for next generation gloves used for firefighters and other emergency responders,” FEMA, 9/2019 - 8/2022. Total \$1,574,989, my share \$157,499.
27. PI: **Lizhi Wang**. “Comparison of genomic selection algorithms,” BASF, 12/2018 - 5/2019. Total \$25,000, my share \$25,000.
26. PI: **Lizhi Wang**. Co-PI: Sotirios Archontoulis, Baskar Ganapathysubramanian, Guiping Hu, and Patrick Schnable. “BTT EAGER: Improving crop yield prediction by integrating machine learning with process-based crop models,” NSF, 3/2019 - 2/2021. Total \$300,000, my share \$60,000.
25. PI: **Lizhi Wang**. Co-PI: Sotirios Archontoulis (ISU), William Beavis (ISU), Guiping Hu (ISU), and Jack Kloeber (Kromite). Senior personnel: Greg Doonan (Syngenta) and Charlie Messina (DuPont Pioneer). “LEAP HI GOALI: Engineering crops for genetic adaptation to changing environments,” NSF, 9/2018 - 8/2023. Total \$1,999,999, my share \$500,000.
24. PI: **Lizhi Wang**. “Designed adaptation from natural genetic variants – Phase II,” Plant Sciences Institute, 1/2018 – 1/2021. Total \$225,000, my share \$225,000.
23. PI: Patrick Schnable. Co-PI: **Lizhi Wang** and Guiping Hu. “Development and Evaluation of Improved Strategies for Genomic Selection via Simulations and Empirical Testing,” USDA, 12/2016 – 12/2019. Total \$733,795, my share \$250,000.
22. PI: **Lizhi Wang**. Co-PI: James McCalley and Christopher DeMarco. “Development of expansion planning methods and tools for handling uncertainty,” Power Systems Engineering Research Center, 6/2017 – 8/2019. Total \$220,000, my share \$80,000.
21. PI: **Lizhi Wang**. Co-PI: Guiping Hu. “Real-time inventory control under autonomous and coordinated mechanisms,” NSF Center for e-Design, 8/2016 – 8/2018. Total \$100,000, my share \$50,000.
20. PI: Guiping Hu. Co-PI: Caroline Krejci, Sarah Ryan, **Lizhi Wang**, Dave Sly (Proplanner), Charles Hu (Boeing), Andrew Dugenske (Factory Right), Craig Sutton (Deere). “FactBoard: Real-time data driven visual decision support system for the factory floor,” Digital Manufacturing and Design Innovation Institute, 12/2015 – 12/2017. Total \$2,537,893, my share \$250,000.
19. PI: Guiping Hu. Co-PI: Dave Sly (Proplanner) and **Lizhi Wang**. “Real-time shop floor production planning and optimization under uncertainty,” NSF Center for e-Design, 12/2015 – 12/2017. Total \$80,000, my share \$40,000.
18. PI: Guiping Hu. Co-PI: Jing Dong, **Lizhi Wang**, and Xuesong Zhou. “Data driven highway infrastructure resilience assessment– Phase II,” Midwest Transportation Consortium, 8/2015 – 8/2017. Total \$200,000, my share \$50,000.
17. PI: William Beavis. Co-PI: **Lizhi Wang**. “Trait breeding optimizer,” Syngenta, 1/2015 – 4/2016. Total \$130,000, my share \$82,000.

16. PI: **Lizhi Wang**. “Designed adaptation from natural genetic variants,” Plant Sciences Institute, 1/2015 – 1/2018. Total \$250,000, my share \$250,000.
15. PI: Guiping Hu. Co-PI: Jing Dong, **Lizhi Wang**, and Xuesong Zhou. “Data driven highway infrastructure resilience assessment – Phase I,” Midwest Transportation Consortium, 8/2014 – 8/2015. Total \$50,000, my share \$10,000.
14. PI: Walter P Suza. Co-PI: Jessica Barb, William Beavis, Ana Correia, Shuizhang Fei, Thomas Lubberstedt, Michael Retallick, Asheesh Singh, **Lizhi Wang**, Jianming Yu. “Plant breeding master of science programs for Africa,” Bill and Melinda Gates Foundation. 01/2014 – 12/2016. Total \$1,643,817, my share \$164,382.
13. PI: Emily Heaton. Co-PI: Matthew Darr, Guiping Hu, Lisa Schulte-Moore, and **Lizhi Wang**. “Integrated sustainable bioenergy pathways,” Baker Council. 01/2014 – 01/2018. Total \$1,480,000, my share \$370,000.
12. PI: Guiping Hu. Co-PI: **Lizhi Wang**. “Supply chain lot sizing decision models and analysis,” NSF Center for e-design. 08/2013 – 08/2015. Total \$100,000, my share \$40,000.
11. PI: **Lizhi Wang**. Co-PI: George Gross and Sakis Meliopoulos. “A framework for transmission planning under uncertainty,” Power Systems Engineering Research Center (PSERC), 06/2013 – 08/2015. Total \$200,000, my share \$80,000.
10. PI: Emily Heaton. Co-PI: Matt Darr, Guiping Hu, Lisa Schulte, and **Lizhi Wang**. “Iowa’s sustainable energy pathway (ISEP): Building a team to address the complete biofuels supply chain,” Plant Sciences Institute, 10/2012 – 9/2013. Total \$49,990, my share \$11,247.
9. PI: **Lizhi Wang**. “Risk assessment of unit commitment cost under uncertainty,” Electric Power Research Center (EPRC), 8/2012 – 8/2014. Total \$71,135, my share \$71,135.
8. PI: William Beavis. Co-PI: **Lizhi Wang**. “Backcross breeding optimizer,” Syngenta, 8/2012 – 12/2013. Total \$160,060, my share \$88,630.
7. PI: Guiping Hu. Co-PI: **Lizhi Wang**. “International collaboration on bioenergy system analysis,” ISU IMSE Innovation Initiative. 04/2012 – 07/2012. Total \$10,000, my share \$5,000.
6. PI: **Lizhi Wang**. Co-PI: George Gross. “Analytical methods for the study of investment strategies in compliance with environmental policy requirements,” Power Systems Engineering Research Center (PSERC), 06/2011 – 08/2013. Total \$150,000, my share \$80,000.
5. PI: **Lizhi Wang**. “Forecasting sales of PHEVs and PHEV users’ recharging behavior,” EPRC, 8/2010 – 8/2012. Total \$58,514, my share \$58,514.
4. PI: **Lizhi Wang**. Iowa State University, 2050 Challenge Graduate Fellowship, 07/2010-06/2011. Total \$7,500, my share \$7,500.
3. PI: Guiping Hu. Co-PI: Randy Boeckenstedt, **Lizhi Wang**, and Susan Wohlsdorf-Arendt. “Mapping potential food sheds in Iowa: a system optimization modeling approach,” Leopold Center for Sustainable Agriculture, 02/2010 – 01/2012. Total \$74,826, my share \$24,942.

2. PI: **Lizhi Wang**. Iowa State University, Waters 2050 Challenge Graduate Fellowship, 07/2008-06/2009. Total \$9,000, my share \$9,000.
1. PI: James McCalley. Co-PI: Dionysios Aliprantis, Nadia Gkritza, Arun K. Somani, and **Lizhi Wang**. “21st century national energy and transportation infrastructures: balancing sustainability, costs, and resiliency (NETSCORE-21),” NSF, 08/2008 – 08/2012. Total \$1,983,266, my share \$396,653.

TEACHING EXPERIENCE	<p><i>Course Developer and Instructor</i> Spring 10, 12, 14, 15, 17; Fall 19 IE 634 Computational Optimization, Iowa State University</p> <p><i>Course Developer and Instructor</i> Spring 12 IE 502X/602X Responsible Conduct of Research, Iowa State University</p> <p><i>Course Developer and Instructor</i> Fall 07 – 18, 20 IE 534 Linear Programming, Iowa State University</p> <p><i>Course Instructor</i> Spring 08 – 11, 13, 14, 18, 19, 20 IE 305 Engineering Economic Analysis, Iowa State University</p> <p><i>Course Instructor</i> Fall 19, 20 IE 513 Analysis of stochastic systems, Iowa State University</p> <p><i>Course Instructor</i> Fall 12, 14, 16, 17 IE 312 Optimization, Iowa State University</p> <p><i>Course co-Instructor</i> Summer 07 Study abroad program “Plus 3 China”, University of Pittsburgh and Tsinghua University</p> <p><i>Course Instructor</i> Fall 06 ENGR 0020 Probability and Statistics for Engineers I, University of Pittsburgh</p>
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JOURNAL PUBLICATIONS (1600+ CITATIONS AS OF 12/2020)	<ol style="list-style-type: none"> 54. Saba Moeinizade, Ye Han, Hieu Pham, Guiping Hu, and Lizhi Wang, “A look-ahead Monte Carlo simulation method for improving parental selection in trait introgression,” to appear in <i>Scientific Reports</i>, 2021. 53. Preetam Kulkarni, Vahid Azizi, Guiping Hu, Lizhi Wang, “Analysis of decision making and information sharing strategies in a two-echelon supply chain,” to appear in <i>International Journal of Supply Chain and Inventory Management</i>, 2020. 52. Javad Ansarifar, Faezeh Akhavizadegan, and Lizhi Wang, “Performance prediction of crosses in plant breeding through genotype by environment interactions,” to appear in <i>Scientific Reports</i>, 2020. 51. Saba Moeinizade, Aaron Kusmec, Guiping Hu, Lizhi Wang, and Patrick S. Schnable, “Multi-trait genomic selection methods for crop improvement,” to appear in <i>Genetics</i>, 2020.
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50. Saeed Khaki, Hieu Pham, Ye Han, Andy Kuhl, Wade Kent, and **Lizhi Wang**, “Convolutional neural networks for image-based corn kernel detection and counting,” to appear in *Sensors*, 2020.
49. Saeed Khaki, Zahra Khalilzadeh, and **Lizhi Wang**, “Predicting yield performance of parents in plant breeding: A neural collaborative filtering approach,” to appear in *PLOS ONE*, 2020.
48. Faezeh Akhavizadegan, **Lizhi Wang**, and James McCalley, “Scenario Selection for Iterative Stochastic Transmission Expansion Planning,” to appear in *Energies*, 2020.
47. Saeed Khaki, **Lizhi Wang**, and Sotirios Archontoulis, “A CNN-RNN framework for crop yield prediction,” to appear in *Frontiers in Plant Science*, 2019.
46. Saeed Khaki, Zahra Khalilzadeh, and **Lizhi Wang**, “Classification of crop tolerance to heat and drought: A deep convolutional neural networks approach,” to appear in *Agronomy*, 2019.
45. Saba Moeinizade, Megan Wellner, Guiping Hu, and **Lizhi Wang**, “Complementarity-based Selection Strategy for Genomic Selection,” to appear in *Crop Science*, 2019.
44. Javad Ansarifard and **Lizhi Wang**, “New algorithms for detecting multi-effect and multi-way epistatic interactions,” to appear in *Bioinformatics*, 2019
43. Saeed Khaki and **Lizhi Wang**, “Crop yield prediction using deep neural networks,” *Frontiers in Plant Science*, vol. 10, 2019.
42. Saba Moeinizade, Guiping Hu, **Lizhi Wang**, and Patrick Schnable, “Optimizing selection and mating in genomic selection with a look-ahead approach: an operations research framework,” *Genes Genomes Genetics*, vol. 9(7), p. 2123-2133, 2019.
41. **Lizhi Wang** and Maryam Nikouei Mehr, “An optimization approach to epistasis detection,” *European Journal of Operational Research*, vol. 274(3), p. 1069-1076, 2019.
40. **Lizhi Wang**, Guodong Zhu, Will Johnson, and Mriga Kher, “Three new approaches to genomic selection,” *Plant Breeding*, vol. 137(5), p. 673-681, 2018.
39. Mohammad Rahdar, **Lizhi Wang**, and Guiping Hu, “A tri-level optimization model for inventory control with uncertain demand and lead time”, *International Journal of Production Economics*, vol.195, p.96-195, 2018..
38. John Cameron, Ye Han, William Beavis, and **Lizhi Wang**, “Systematic design for trait introgression projects,” to appear in *Theoretical and Applied Genetics*, 2017.
37. Matt Goiffon, Aaron Kusmec, **Lizhi Wang**, Guiping Hu, and Patrick Schnable, “Improving response in genomic selection with optimal population value selection: a population-based selection strategy,” *Genetics*, vol. 206(3), p. 1675-1682, 2017.
36. **Lizhi Wang** and Pan Xu, “The watermelon algorithm for the bilevel integer linear programming problem,” *SIAM Journal on Optimization*, vol. 27(3), p. 1403-1430, 2017.

35. Ye Han, John Cameron, **Lizhi Wang**, and William Beavis, “The predicted cross value for genetic introgression of multiple alleles,” *Genetics*, vol. 205(4), p. 1409-1423, 2017.
34. Meiju Luo and **Lizhi Wang**, “The deterministic ERM and CVaR reformulation for the stochastic generalized complementarity problem,” *Japan Journal of Industrial and Applied Mathematics*, vol. 34(2), p. 321-333, 2017.
33. Shiyang Huang, Guiping Hu, Carrie Chennault, Liu Su, Elke Brandes, Emily Heaton, Lisa Schulte-Moore, **Lizhi Wang**, and John Tyndall, “An agent-based simulation model of farmer decision making on bioenergy crop adoption,” *Energy*, vol. 115(1), p. 1188-1201, 2016.
32. Bokan Chen and **Lizhi Wang**, “Robust transmission planning under uncertain generation investment and retirement,” *IEEE Transactions on Power Systems*, vol. 31(6), p. 5144-5152, 2016.
31. Ye Shi, Yugang Yu, and **Lizhi Wang**, “Operational impact on the environment: managing service systems with environmental deterioration,” to appear in *International Journal of Production Economics*, 2015.
30. Bokan Chen, Jianhui Wang, **Lizhi Wang**, Yanyi He, and Zhaoyu Wang, “Robust optimization for transmission expansion planning: Minimax cost vs. minimax regret,” *IEEE Transactions on Power Systems*, vol. 29(6), p. 3069-3077, 2014.
29. Guiping Hu, **Lizhi Wang**, Yihsu Chen, and Bopaya Bidanda, “An oligopoly model to analyze the market and social welfare for green manufacturing industry,” *Journal of Cleaner Production*, vol. 85, p. 94-103, 2014.
28. Mohammad Rahdar, **Lizhi Wang**, and Guiping Hu, “Potential competition for biomass between biopower and biofuel under RPS and RFS2,” *Applied Energy*, vol. 119, p. 10-20, 2014.
27. Zhaoyang Duan, Brittni Gutierrez, and **Lizhi Wang**, “Forecasting plug-in electric vehicles sales and the diurnal recharging load curve,” *IEEE Transactions on Smart Grid*, vol. 5(1), p. 527-535, 2014.
26. Pan Xu and **Lizhi Wang**, “An exact algorithm for the bilevel mixed integer linear programming problem under three simplifying assumptions,” *Computers & Operations Research*, vol. 41, p. 309-318, 2014.
25. Leilei Zhang, Guiping Hu, **Lizhi Wang**, and Yihsu Chen, “A Bottom-up biofuel market equilibrium model for policy analysis,” *Annals of Operations Research*, p. 1-27, 2013.
24. Yihsu Chen and **Lizhi Wang**, “Renewable portfolio standards in the presence of green consumers and emissions trading,” *Networks and Spatial Economics*, vol. 13(2), p. 149-181, 2013.
23. **Lizhi Wang**, “Branch-and-bound algorithms for the partial inverse mixed integer linear programming problem,” *Journal of Global Optimization*, vol. 55(3), p. 491-506, 2013.
22. **Lizhi Wang** and Chung-Li Tseng, “Towards a sustainable future of energy infrastructure,” *Journal of Energy Engineering*, vol. 138(2), p. 31-32, 2012.

21. Diego Mejia-Giraldo, Jose Villarreal-Marimon, Yang Gu, Yanyi He, Zhaoyang Duan, and **Lizhi Wang**, “Sustainability and resiliency measures for long-term investment planning in integrated energy and transportation infrastructures,” *Journal of Energy Engineering*, vol. 138(2), p. 87-94, 2012.
20. Yanyi He, **Lizhi Wang**, and Jianhui Wang, “Cap-and-trade vs. carbon taxes: A quantitative comparison from a generation expansion planning perspective,” *Computers & Industrial Engineering*, vol. 63(3), p. 708-716, 2012.
19. Zhaoyang Duan and **Lizhi Wang**, “Heuristic algorithms for the inverse mixed integer linear programming problem,” *Journal of Global Optimization*, vol. 51(3), p. 463-471, 2011.
18. Pan Xu, **Lizhi Wang**, and William Beavis, “An optimization approach to gene stacking,” *European Journal of Operational Research*, vol. 214(1), p. 168-178, 2011.
17. Guiping Hu, **Lizhi Wang**, Susan Arendt, and Randy Boeckenstedt, “Analyzing sustainable, localized food production systems with a systematic optimization model,” *Journal of Hunger & Environmental Nutrition*, vol. 6(2), p. 220-232, 2011.
16. Ying Zhou, **Lizhi Wang**, and James McCalley, “Designing effective incentives for renewable energy generation expansion,” *Applied Energy*, vol. 88(6), p. 2201-2209, 2011.
15. Guiping Hu, **Lizhi Wang**, Susan Arendt, and Randy Boeckenstedt, “Towards a more sustainable local food production system – from a system modeling perspective,” *Journal of Hunger and Environmental Nutrition*, vol. 6, p. 125-127, 2011.
14. Guiping Hu, **Lizhi Wang**, and Bopaya Bidanda, “A game theory model for analysing market competition in sustainable manufacturing industry,” *International Journal of Sustainable Manufacturing*, vol. 2(2), p. 161-179, 2011.
13. Guiping Hu, **Lizhi Wang**, Susan Arendt, and Randy Boeckenstedt, “An optimization approach to assessing self-sustainability potential of food demand in the Midwestern United States,” *Journal of Agriculture, Food Systems, and Community Development*, vol. 2(1), p. 1-13, 2011.
12. **Lizhi Wang**, Anhua Lin, and Yihsu Chen, “Potential impacts of recharging plug-in hybrid electric vehicles on locational marginal prices,” *Naval Research Logistics*, vol. 57(8), p. 686-700, 2010.
11. Arka Ghosh, Sarah M. Ryan, **Lizhi Wang**, and Ananda Weerasinghe, “Optimal prices and production rate in a closed loop supply chain under heavy traffic,” *Stochastic Models*, vol. 26(4), p. 549-593, 2010.
10. Maitri Thakur, **Lizhi Wang**, and Charles R. Hurburgh, “A multi-objective optimization approach to balancing cost and traceability in bulk grain handling,” *Journal of Food Engineering*, vol. 101(2), p. 193-200, 2010.
9. Ying Zhou and **Lizhi Wang**, “A new hybrid inexact logarithmic-quadratic proximal method for nonlinear complementarity problems,” *International Journal of Operations Research and Information Systems*, vol. 1(3), p. 1-13, 2010.

8. **Lizhi Wang** and Nan Kong, "Security constrained economic dispatch: A Markov decision process approach with embedded stochastic programming," *International Journal of Operations Research and Information Systems*, vol. 1(2), p. 1-16, 2010.
7. Cara Dienes and **Lizhi Wang**, "Using a capacity control model to define optimal green hotel renovation schedule requirements," *International Journal of Operations and Quantitative Management*, vol. 16(1), p. 255-283, 2010.
6. Guiping Hu, **Lizhi Wang**, and Bopaya Bidanda, "A market analysis on green production lines penetrating into original equipment manufacturers (OEMS)," *Rio's International Journal on Sciences of Industrial and Systems Engineering and Management*, vol. 3(3), p. 28-48, 2009.
5. **Lizhi Wang**, "Cutting plane algorithms for the inverse mixed integer linear programming problem," *Operations Research Letters*, vol. 37(2), p. 114-117, 2009.
4. Matthew M. Bunce, **Lizhi Wang**, and Bopaya Bidanda, "Leveraging six sigma with industrial engineering tools in crateless retort production," *International Journal of Production Research*, vol. 46(23), p. 6701-6719, 2008.
3. Guiping Hu, **Lizhi Wang**, Steven Fetch, and Bopaya Bidanda, "A multi-objective model for project portfolio selection to implement lean and six sigma concepts," *International Journal of Production Research*, vol. 46(23), p. 6611-6625, 2008.
2. **Lizhi Wang** and Mainak Mazumdar, "Using a system model to decompose the effects of influential factors on locational marginal prices," *IEEE Transactions on Power Systems*, vol. 22(4), p. 1456-1465, 2007.
1. **Lizhi Wang**, Mainak Mazumdar, Matthew Bailey and Jorge Valenzuela, "Oligopoly models for market price of electricity under demand uncertainty and unit reliability," *European Journal of Operational Research*, vol. 181(3), p. 1309-1321, 2007.

BOOK CHAPTERS Yanyi He, **Lizhi Wang**, and Jianhui Wang, "Comparing the effectiveness of cap-and-trade and carbon taxes policies in generation expansion planning," book chapter in *Handbook of Power Systems: CO₂*, Springer, 2010.

Eduardo Ibáñez, Konstantina Gkritza, James McCalley, Dionysios Aliprantis, Robert Brown, Arun Somani, and **Lizhi Wang**, "Interdependencies between energy and transportation systems for national long term planning," book chapter in *Sustainable and Resilient Critical Infrastructure Systems: Simulation, Modeling, and Intelligent Engineering*, Springer, 2010.

Guiping Hu, **Lizhi Wang** and Bopaya Bidanda, "Project management in a sustainable world circa 2025," book chapter in *Project Management Circa 2025*, Project Management Institute, 2009.

PROFESSIONAL SERVICES Department editor, *IISE Transactions*, 2018-present.

SERVICES

Associate editor, *Journal of Energy Engineering*, 2012-present.

Associate editor, *Energy Systems*, 2011-2018.

Board director, IISE, Operations Research Division, 2017-present.

Chair, Teaching Excellence Award committee in the OR Division at IISE, 2019-2020.

Chair, Undergraduate Research Award committee in the OR Division at IISE, 2019.

Track chair of OR Division, IISE Annual Conference, 2018, 2019, 2020.

Session Chair, INFORMS, “Operations research for plant breeding”, Mineapolis, 2017.

Session Chair, INFORMS, “Operations research for plant breeding”, Mineapolis, 2016.

Session Chair, INFORMS, “Investment in power systems”, Mineapolis, 2013.

Member, INFORMS, best ENRE publication in the Environment and Sustainability area, 2012.

Session Chair, INFORMS, “Bioenergy Policies”, Phoenix, 2012.

Cluster Chair, Energy ENRE Section at International INFORMS, 2012.

NSF proposal review panelist, 2011, 2020.

ARPA-E proposal review panelist, 2020.

Guest editor, *Journal of Energy Engineering*, special issue on “challenges and opportunities in the 21st century energy infrastructure”, 2010-2012.

Session Chair, INFORMS, “Plug-in Electric Vehicles”, Charlotte, 2011.

Member, INFORMS, ENRE student paper competition committee, 2011.

Member, IEEE, PES student poster competition committee, 2011.

Chair, INFORMS, ENRE best paper award committee, 2010.

Session Chair, INFORMS, “Energy Policies”, Austin, 2010.

Session Chair, INFORMS, “Computational Optimization”, Austin, 2010.

Session Chair, IERC, “Integer Programming and Applications”, Cancún, Mexico, 2010.

Cluster Chair, Energy ENRE Section at INFORMS, 2009.

Session Chair, IERC, “Computational Optimization”, Miami, Florida, 2009.

Session Chair, INFORMS Regional Conference, “OR Applications on Energy and Natural Resources”, Arizona State University, 2009.

DOE proposal reviewer, 2009.

NSF proposal review panelist, 2008.

Session Chair, INFORMS, “Mixed Integer Programming and Extensions”, Washington, D.C., 2008.

Session Chair, IERC, “Sustainable Development”, Nashville, Tennessee, 2007.

Referee for

- *Operations Research*
- *Management Science*
- *Omega*
- *Naval Research Logistics*
- *European Journal of Operational Research*
- *SIAM Journal on Optimization*
- *IEEE Transactions on Power Systems*
- *Energy Policy*
- *Transportation Research Part B*
- *Applied Energy*
- *Electrical Power and Energy Systems*
- *IEEE Transactions on Automation Science and Engineering*
- *IEEE Transactions on Smart Grid*
- *IISE Transactions*
- *Tourism Management*
- *Computers & Operations Research*
- *Computers & Industrial Engineering*
- *Genetics*
- *G3*
- *TAAG*

DEPARTMENT AND **Member**

COLLEGE SERVICE

- Professional development committee, College of Engineering, 2015-2017, 2019, 2020.
- Honors and awards and scholarships committee, IMSE department, 2015-2018.
- Curriculum committee, IMSE department, 2018-present.
- Preliminary review committee, 2017.
- Regions review committee, IMSE department, 2015.
- Graduate committee, IMSE department, 2008-2014.
- Department chair search committee, engineering college, 2011.
- Fact finding committee for tenure and promotion, IMSE department, 2013.

Chair, PhD dissertation committee:

- Ye Han, Ph.D., 2017, on plant breeding
- Mohammad Radar, Ph.D., 2016, on bioenergy systems
- Bokan Chen, Ph.D., 2016, on transmission planning
- Zhaoyang Duan, Ph.D., 2014, on inverse optimization and PHEV
- Yanyi He, Ph.D., 2013, on power systems investment
- Pan Xu, Ph.D., 2012, on bilevel optimization and plant breeding
- Yijian Zhang, Ph.D., 2019, on approximation optimization algorithms
- Maryam Nikouei-Mehr, Ph.D., 2020, on optimization and data mining

- Saeed Khaki, Ph.D., expected 2021
- Javad Ansarifar, Ph.D., expected 2021
- Faezeh Akhavizadegan, Ph.D., expected 2021
- Zerui Zhang, Ph.D., expected 2022
- Zahra Khalilzadeh, Ph.D., expected 2024
- Zheng Ni, Ph.D., expected 2024
- Yanbin Chen, Ph.D., expected 2025

Chair, M.S. dissertation committee:

- Jeremy Latham, 2021, on crop yield prediction
- Preetam Kulkarni, 2018, on the bullwhip effect.
- Matthew Goiffon, 2016, on genome selection
- Ying Zhou, 2010, on environmental policies

Member, dissertation committee, IMSE department: Daniel Bumblauskas (Ph.D.), Gunhyung Cho (M.S.), Shantha Daniel (Ph.D.), Dan Hu (Ph.D.), Shiyang Huang (Ph.D.), Nan Gao (Ph.D.), Guo Ge (Ph.D.), Jong-Seok Lee (Ph.D.), Xiaopeng Ning (Ph.D.), Bill Rowcliffe (Ph.D.), Karla Valenzuela (Ph.D.), Didem Sari (Ph.D.), Yan Wang (Ph.D.), Xiang Wu (Ph.D.), Yijiang Zhang (Ph.D.).

Member, dissertation committee, ABE department: Maitri Thakur (Ph.D.)

Member, dissertation committee, ECpE department: Naresh Acharya (Ph.D.), Hua Bai (Ph.D.), Trishna Das (Ph.D.), Diego Mejia Giraldo (Ph.D.), Yang Gu (Ph.D.), Venkat Kumar Krishnan (Ph.D.), Hongyan Li (Ph.D.), Mei Li (Ph.D.), Long Long (Ph.D.), Magesh Paramasivam (Ph.D.), Qihui Qi (MS), Ashraf Radaideh (Ph.D.), Ramzi Saifan (Ph.D.), Subhadarshi Sarkar (Ph.D.), Wei Sun (Ph.D., as advisor for the IE minor), Abhinav Venkatraman (Ph.D.), Jose Villarreal-Marimon (M.S.), Di Wu (Ph.D.), Gang Wu (Ph.D.), Mat Wymore (Ph.D.), Jie Yan (Ph.D.), Nanpeng Yu (Ph.D.), Qun Zhou (Ph.D.)

Member, dissertation committee, AeroE department: Daniel Zhou (Ph.D.), Guodong Zhu (Ph.D.).

Member, dissertation committee, Agronomy department: John Cameron (Ph.D.), Andreomar Kurek (Ph.D.), Haley Trumpy (Ph.D.), Vishnu Ramasubramanian (Ph.D.).

Member, dissertation committee, College of Business: David Correll (Ph.D.), David Cortes (Ph.D.), Larry Fan (Ph.D.), Shih-Hao Lu (Ph.D.).

Faculty Advisor of SPEED Program, Brittni Gutierrez, on PHEV sales forecasting.

Faculty Advisor of University Honors Program, Carl Kirpes, on impact of PHEVs on electricity prices.

Faculty Advisor Summer Research Grant, Carl Kirpes, on locational marginal prices.