

Rohit Kannan, Ph.D.

Mathematical Optimizer

Curriculum Vitae

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🎓 [Google Scholar](#)

EDUCATION

| | | | |
|---------|-------------------------------|---------------------------------------|------|
| Ph.D. | Chemical Engineering | Massachusetts Institute of Technology | 2018 |
| M.S. | Chemical Engineering Practice | Massachusetts Institute of Technology | 2014 |
| B.Tech. | Chemical Engineering | Indian Institute of Technology Madras | 2012 |

PROFESSIONAL APPOINTMENTS

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|--|------------|
| Assistant Professor, Grado Department of Industrial and Systems Engineering, Virginia Tech | since 2023 |
| Faculty Researcher Guest, Los Alamos National Laboratory | 2023–2025 |
| Postdoctoral Associate, Applied Mathematics & Plasma Physics, Los Alamos National Laboratory | 2021–2023 |
| Postdoctoral Associate, Wisconsin Institute for Discovery, University of Wisconsin-Madison | 2018–2020 |
| Engineering Consultant, Alcon, Fort Worth, TX | 2013 |
| Engineering Consultant, Corning Inc., Corning, NY | 2013 |
| Research Intern, Laboratory of Computational Systems Biotechnology, EPFL, Switzerland | 2011 |
| Research Intern, Technology Transfer Laboratory, Orchid Chemicals and Pharmaceuticals, India | 2010 |

SELECTED HONORS AND AWARDS

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| Excellence in Teaching Spotlight , Center for Excellence in Teaching and Learning, Virginia Tech | 2024 |
| VT Presidential Principles of Community Group Award (as part of the ISE InclusiveVT Committee) | 2024 |
| Received several “Thank-a-Teacher notes” from students | 2023–2025 |
| New Faculty Mentoring Grant, Virginia Tech | 2024 |
| Center for Nonlinear Studies Postdoctoral Fellowship, Los Alamos National Laboratory | 2021–2022 |
| Best Paper Award, 2015 AIChE Annual Meeting | 2015 |
| George M. Keller Graduate Fellowship, MIT | 2012–2013 |
| Oil and Natural Gas Corporation Scholarship, Government of India | 2012 |
| Reliance Heat Transfer Award for academic excellence, IIT Madras | 2012 |
| Institute Merit Award for academic excellence, IIT Madras | 2010 & 2011 |
| Prof. M. Ramanujam Memorial Award, IIT Madras | 2011 |
| EPFL, DAAD WISE , and MITACS Globalink Summer Research Fellowships (chose EPFL) | 2011 |
| Top 10 Ranks in the Regional Mathematics Olympiad, India | 2004, 2006 & 2008 |
| Selected for the Indian National Informatics and Chemistry Olympiads (top 1%) | 2008 |

FUNDING HISTORY

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| Principal Investigator, “ <i>Iterative Design of Metal-Organic Frameworks Using Surrogate-Based Global Optimization</i> ,” Institute for Critical Technology and Applied Science (ICTAS) Engineering Faculty Organization-Opportunity (EFO-O) Seed Grant Program, Virginia Tech. | 2024–2025 |
| Co-PI: Luke Achenie. Total Amount: \$10,000. Personal Share: \$10,000. | |
| Principal Investigator, “ <i>Using Graph Convolutional Neural Networks to Accelerate Solutions to Hard Nonconvex Optimization Problems</i> ,” Applied Machine Learning Summer Research Fellowship Program, Information Science and Technology Institute, Los Alamos National Laboratory. | 2023 |
| Co-PIs: Harsha Nagarajan and Deepjyoti Deka. Total Amount: \$25,000. (Used to fund Erin George’s summer internship at LANL.) | |
| Co-Investigator, “ <i>Learning to Accelerate Global Solutions for Non-Convex Optimization</i> ,” Laboratory Directed Research & Development, Los Alamos National Laboratory. | 2022–2025 |
| PIs: Harsha Nagarajan and Deepjyoti Deka. Total Amount: \$1,013,000. (Used, in part, to fund 25% of my postdoctoral appointment at LANL.) | |

Co-Investigator, "Stochastic Optimization Models for Enhancing the Resilience of the Power Grid,"

2022

Center for Nonlinear Studies Summer Student Program, Los Alamos National Laboratory.

PIs: Harsha Nagarajan and Deepjyoti Deka. Total Amount: \$10,000.

(Used to fund 50% of Mithun Goutham's summer internship at LANL.)

RESEARCH INTERESTS

Methodologies: Optimization under uncertainty, Global optimization, Machine learning-guided optimization, Computational optimization algorithms.

Applications: Energy systems, Process systems engineering.

PUBLICATIONS

Underlined Authors are Graduate Students I have Supervised or Mentored

Peer-Reviewed Journal Papers

11. **R. Kannan**, H. Nagarajan, and D. Deka (2025), "Strong Partitioning and a Machine Learning Approximation for Accelerating the Global Optimization of Nonconvex QCQPs," Forthcoming in *INFORMS Journal on Computing*. [[PDF](#)]
10. E. M. Turan, J. Jäschke, and **R. Kannan** (2025), "Bounding-Focused Discretization Methods for the Global Optimization of Nonconvex Semi-Infinite Programs," Online First, *Computational Optimization and Applications*. [[URL](#)] [[PDF](#)]
9. **R. Kannan**, G. Bayraksan, and J. R. Luedtke (2025), "Technical Note: Data-Driven Sample Average Approximation with Covariate Information," Ahead of Print, *Operations Research*. [[URL](#)] [[PDF](#)]
8. **R. Kannan**, G. Bayraksan, and J. R. Luedtke (2024), "Residuals-Based Distributionally Robust Optimization with Covariate Information," *Mathematical Programming (Series A)*, 207(1–2), pp. 369–425. [[URL](#)] [[PDF](#)]
7. A. Subramanian, **R. Kannan**, F. Holtorf, T. A. Adams II, T. Gundersen, and P. I. Barton (2023), "Optimization Under Uncertainty of a Hybrid Waste Tire and Natural Gas Feedstock Flexible Polygeneration System Using a Decomposition Algorithm," *Energy*, 284, 129222, pp. 1–11. [[OA URL](#)]
6. **R. Kannan** and J. R. Luedtke (2021), "A Stochastic Approximation Method for Approximating the Efficient Frontier of Chance-Constrained Nonlinear Programs," *Mathematical Programming Computation*, 13(4), pp. 705–751. [[URL](#)] [[PDF](#)]
5. **R. Kannan**, J. R. Luedtke, and L. A. Roald (2020), "Stochastic DC Optimal Power Flow with Reserve Saturation," *Electric Power Systems Research* (special issue for the XXI Power Systems Computation Conference), 189, 106566, pp. 1–9. [[URL](#)] [[PDF](#)]. *Featured on the UW-Madison College of Engineering Website*. [[URL](#)]
4. **R. Kannan** and P. I. Barton (2018), "Convergence-Order Analysis of Branch-and-Bound Algorithms for Constrained Problems," *Journal of Global Optimization*, 71(4), pp. 753–813. [[URL](#)] [[PDF](#)]
3. **R. Kannan** and P. I. Barton (2017), "The Cluster Problem in Constrained Global Optimization," *Journal of Global Optimization*, 69(3), pp. 629–676. [[URL](#)] [[PDF](#)]
2. **R. Kannan** and A. K. Tangirala (2014), "Correntropy-Based Partial Directed Coherence for Testing Multivariate Granger Causality in Nonlinear Processes," *Physical Review E*, 89(6), 062144, pp. 1–15. [[URL](#)] [[PDF](#)]

Technical Reports

1. **R. Kannan**, G. Bayraksan, and J. R. Luedtke (2021), "Heteroscedasticity-Aware Residuals-Based Contextual Stochastic Optimization," arXiv preprint arXiv:2101.03139. [[PDF](#)]

Working Papers

5. E. George, **R. Kannan**, H. Nagarajan, and D. Deka, "Learning to Accelerate the Global Optimization of QCQPs: An End-to-End Graph-Based Stochastic Partitioning Approach."
4. M. Goutham, **R. Kannan**, D. Deka, H. Nagarajan, and R. Bent (2023), "Operational Resilience Enhancement of Electric Grids using Uncertain Hurricane Forecasts."
3. **R. Kannan**, N. Ho-Nguyen, and J. R. Luedtke, "Data-Driven Multistage Stochastic Optimization on Time Series."

2. **R. Kannan**, **A. Subramanian**, and **P. I. Barton**, "GOSSIP: Decomposition Software for the Global Optimization of Nonconvex Two-Stage Stochastic Mixed-Integer Nonlinear Programs."
1. **R. Kannan** and **P. I. Barton**, "Integrating Benders Decomposition and Lagrangian Relaxation for Solving Two-Stage Stochastic Mixed-Integer Nonlinear Programs."

Peer-Reviewed Conference Papers

2. **E. M. Turan**, **R. Kannan**, and **J. Jäschke** (2022), "Design of PID Controllers Using Semi-Infinite Programming," *Proceedings of the 14th International Symposium on Process Systems Engineering*, pp. 439–444. [[URL](#)] [[PDF](#)]
1. **R. Kannan** and **P. I. Barton** (2016), "The Cluster Problem in Constrained Global Optimization," *Proceedings of the 13th Global Optimization Workshop (GOW'16)*, pp. 9–12. [[OA URL](#)]

Theses

2. Ph.D.: "Algorithms, Analysis, and Software for the Global Optimization of Two-Stage Stochastic Programs," *Massachusetts Institute of Technology*, 2018. [[URL](#)] [[PDF](#)]
1. B.Tech.: "Partial Directed Coherence for Nonlinear Granger Causality: A Generalized Correlation Function-Based Approach," *Indian Institute of Technology Madras*, 2012.

TEACHING

- Instructor, Department of Industrial and Systems Engineering, Virginia Tech 2023–present

[SPOT evaluations](#) (max. value = 6) correspond to the question "Overall, the instructor's teaching was effective." Students submitted "Thank-a-Teacher notes" through the [Center for Excellence in Teaching and Learning](#).

| Term | Course | Enrollment | SPOT Mean, Median | # Thank You Notes |
|------|--|------------|-------------------|-------------------|
| Sp25 | ISE 5406: Nonlinear Programming | 15 | 5.46, 6 | 5 |
| Fa24 | ISE 3434: Deterministic Operations Research II | 12 | 5.10, 5 | 2 |
| Sp24 | ISE 5406: Nonlinear Programming | 13 | 4.64, 5 | 4 |
| Fa23 | ISE 6514: Advanced Math Programming | 11 | 5.90, 6 | 2 |

Course Syllabi

- ISE 3434 (Undergraduate): complexity theory, integer programming, nonlinear programming, stochastic programming, machine learning, and modeling languages and optimization software.
- ISE 5406 (Graduate): convex analysis and optimization, generalizations of convexity, first and second-order optimality conditions, algorithms for unconstrained and constrained nonlinear optimization.
- ISE 6514 (Graduate): convex analysis, optimality conditions, duality, linear programming, decomposition methods, conic programming (SOCPs, SDPs), solution approaches, applications in OR, energy, ML.

- Teaching Assistant, Department of Chemical Engineering, Massachusetts Institute of Technology 2015
- Teaching assistant for the graduate-level "Chemical Reactor Engineering" course (≈ 50 students).
 - Designed homework exercises in MATLAB and Q-Chem, and co-moderated online discussion forums.

STUDENT SUPERVISION

Current Students

Ph.D. Students

- [Chris Raymond-Bertrand](#), since Fall 2025.
Rehmert-Nachlas Graduate Fellowship, ISE Department, Virginia Tech, 2025–2026.
- [Dhruva Sundararajan](#), since Fall 2024.
John Grado Jr. Graduate Teaching Assistantship, ISE Department, Virginia Tech, 2024–2025.

M.S. Students

- [Atharva Anchalwar](#), since Spring 2025. Co-advised with Dr. Luke Achenie in Chemical Engineering.
- [Hiral Makwana](#), since Summer 2024. Co-advised with Dr. Eduardo Molina in Sustainable Biomaterials.
- [Padmapriya Rengasamy](#), since Spring 2025. Co-advised with Dr. Luke Achenie in Chemical Engineering.

B.S. Students

- [Antonio Ortega Vicente](#), since Fall 2025.
- [Gavin Esperanza](#), since Spring 2025.
- [Jude Sanborn](#), since Spring 2025.
Outstanding Junior Award, ISE Department, Virginia Tech, 2025.
- Senior Design Advisor for the following student groups (8 students in total):
 - Christopher Lee, Rithvik Mantha, Maguire McMahon, and Sydney Weeks, "LMI Resource Optimization Tool (ResOTo) version 2.0," 2024–2025.
Honorable Mention, Process Improvement Track, 7th Andrew P. Sage Memorial Design Competition.
 - Aidan Ford, Kareem Hamadeh, Finn Rooney, and Thomas Smiddy, "Amtrak Equipment Inventory Analysis," 2023–2024.

Alumni

- [Soham Mehra](#), B.S. in ISE, 2025. First Position: Co-Founder and Chief Technology Officer, Morph Labs.

Student Mentorship**Ph.D. Students**

- [Erin George](#) (UCLA), "Graph Convolutional Neural Networks to Accelerate Solutions to Nonconvex Optimization," Applied Machine Learning Summer Research Fellow, *Los Alamos National Laboratory*, 2023. Role: Primary Mentor. Co-Mentors: Dr. Harsha Nagarajan and Dr. Deepjyoti Dekka. First Position: NSF Postdoctoral Fellow, UC San Diego.
- [Mithun Goutham](#) (OSU), "Stochastic Optimization Models for Enhancing the Resilience of the Power Grid," Summer Student at the Center for Nonlinear Studies, *Los Alamos National Laboratory*, 2022. Role: Primary Mentor. Co-Mentors: Dr. Harsha Nagarajan and Dr. Deepjyoti Dekka. First Position: Assistant Teaching Professor, Illinois Institute of Technology.
- [Avinash Subramanian](#) (NTNU), "Optimization under Uncertainty of Hybrid Feedstock Polygeneration Systems," Ph.D. Student, Department of Energy & Process Engineering, *Norwegian University of Science and Technology*, 2021. Role: Mentor. Ph.D. Advisors: Dr. Truls Gundersen and Dr. Johannes Jäschke. First Position: Research Scientist, SINTEF, Norway.

SERVICE**Committees and Editorial Service**

- Thesis Committee Member for the following Ph.D. students (excluding my advisees):
 - Dhruvajyoti Gupta (ISE), 2025–present.
Advisor: Dr. Zhenyu Kong.
 - Asha Barua (ISE), 2025–present.
Advisor: Dr. Sajad Khodadadian.
 - Wasif Jawad Hussain (ECE), 2025–present.
Advisors: Dr. Harpreet Dhillon and Dr. Mike Buehrer.
 - Hyunwoo Lee (ISE), 2023–present.
Advisors: Dr. Esra Büyüktaktın Toy and Dr. Robert Hildebrand.

- Daniel Alfredo Neira-González (ISE), 2023–present.
Advisors: Dr. Subhash Sarin and Dr. Manish Bansal.

➤ Invited External Examiner for the following students:

- Mari E. Rugland, “An object-oriented framework for the optimization of flexible renewable energy systems,” M.Sc. thesis, Department of Chemical Engineering, *Norwegian University of Science and Technology* (NTNU), 2021. Advisors: Dr. Johannes Jäschke, Dr. Truls Gundersen, and Avinash Subramanian.
- Petter E. Nordby, “Optimization of flexible renewable energy systems under uncertainty,” Master’s thesis, Department of Energy & Process Engineering, *Norwegian University of Science and Technology* (NTNU), 2021. Advisors: Dr. Truls Gundersen, Dr. Johannes Jäschke, and Avinash Subramanian.

➤ Invited Peer-Reviewer for the following funding programs:

- Ad hoc reviewer for the U.S. Air Force Office of Scientific Research, 2025.
- Ad hoc reviewer for the U.S. National Science Foundation, 2025.
- Panelist for the U.S. National Science Foundation, 2024.

➤ Invited Peer-Reviewer for the following journals and conferences ([Web of Science Reviewer Profile](#)):

- *Operations Research*
- *Mathematical Programming*
- *SIAM Journal on Optimization*
- *Journal of Global Optimization*
- *Mathematics of Operations Research*
- *Set-Valued and Variational Analysis*
- *IIE Transactions*
- *Annals of Operations Research*
- *Electric Power Systems Research*
- *Computers and Chemical Engineering*
- *Chemical Engineering Science*
- *Journal of Optimization Theory and Applications*
- *Computational Optimization and Applications*
- *INFORMS Journal on Computing*
- *Optimization Methods and Software*
- *Optimization Letters*
- *INFORMS Journal on Optimization*
- *Industrial and Engineering Chemistry Research*
- *IEEE Transactions on Control Systems Technology*
- *IEEE Transactions on Automation Science and Engineering*
- *American Control Conference*

Professional and Institutional Service

- Program Committee, Refereed Papers, INFORMS Optimization Society Conference 2026
- [Elected Vice-Chair of Global Optimization](#), INFORMS Optimization Society 2025–2026
 - Cluster Chair, Global Optimization, 2025 INFORMS Annual Meeting
 - Cluster Chair, Global Optimization, 2026 INFORMS Optimization Society Conference
- Served in the following committees at Virginia Tech:
 - InclusiveVT Committee, ISE Department 2023–2025
 - Graduate Admissions Committee, ISE Department 2023–2025
- Invited Talk, “Virtual Welcome Back Symposium on Practical Strategies to Enhance Student Learning,” Center for Excellence in Teaching and Learning, Virginia Tech 2025
- Judge, ISE Graduate Research Poster Competition, Virginia Tech 2023, 2024
- Moderator, ISE Senior Design Symposium, Virginia Tech 2025
- Session Chair at the following conferences:
 - “Advances in Deterministic Global Optimization,” *INFORMS Annual Meeting* 2025
 - “Recent Advances in Mixed-Integer and Global Optimization,” *INFORMS Annual Meeting* 2025
 - “Contextual Stochastic Optimization” (Minisymposium and Invited Session), *International Conference on Stochastic Programming* 2025
 - “Mixed-Integer Programming-Based Techniques for the Global Optimization of MINLPs,” *International Conference on Continuous Optimization* 2025
 - “Learning and Optimization Techniques for Uncertain Systems,” *INFORMS Annual Meeting* 2024

- "Advances in Deterministic Global Optimization," *INFORMS Optimization Society Conference* 2024
 - "Machine Learning for Discrete and Global Optimization I & II," *INFORMS Annual Meeting* 2023
 - "Learning-Assisted Dynamic Decision-Making Under Uncertainty," *INFORMS Annual Meeting* 2022
 - "Global Optimization of Stochastic and Semi-Infinite Programs," *INFORMS Annual Meeting* 2022
 - "Computational Stochastic Programming," *INFORMS Annual Meeting* 2018
- Organizer of monthly teleconference meetings on "Optimization Under Uncertainty" as part of the [DOE MACSER Project](#) (\approx 15 participants) 2018–2020

Educational Outreach

- Organizer of four two-hour hands-on sessions titled "Crack the Code: An Interactive Journey Through Optimization," C-Tech² High School Program, Virginia Tech. [[Slides](#)] 2025
- Panelist, TechGirls (International High School Exchange Program), Virginia Tech 2025
- Panelist, Watford Engineering Experience, High School Program, Virginia Tech 2025
- Panelist, Alpha Pi Mu Undergraduate Research Panel, Virginia Tech 2024
- Guest Lecturer, ISE 5024 (Graduate Seminar Series), Virginia Tech 2023, 2024
- Math Lecturer for the IIT Joint Entrance Exam (IIT JEE) 2016
- Recorded [online video lectures](#) for the entrance exam to the IITs as part of an MIT team
 - [Featured on MIT OpenCourseWare](#) and supported by the MIT Office of Digital Learning
- Math Olympiad Trainer, Science and Math Academy for Real Talents, Chennai, India 2008–2011
- Coached \approx 30 middle-school and high-school students each year for the Math Olympiad
 - One trainee was among the 40 students selected to represent India at the 2010 *International Math Olympiad Training Camp*
- Volunteer, National Services Scheme, IIT Madras 2008–2009
- Volunteered for the "Science Activities" team of the National Services Scheme at IIT Madras
 - Designed and demonstrated science experiments to students in underprivileged schools

PROFESSIONAL MEMBERSHIPS

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|---|------------|
| Institute for Operations Research and the Management Sciences (INFORMS) | since 2014 |
| American Institute of Chemical Engineers (AIChE) | since 2014 |
| Mathematical Optimization Society (MOS) | since 2016 |
| Institute of Industrial and Systems Engineers (IISE) | since 2024 |

RESEARCH IN THE INDUSTRY

- Engineering Consultant, Alcon, Fort Worth, TX 2013
- Led an MIT team to design a measure of residual stress in molded intraocular lens wafers
 - Increased bioavailability of an ophthalmic drug through experiments and pharmacokinetic modeling
- Engineering Consultant, Corning Inc., Corning, NY & Wilmington, NC 2013
- Led an MIT team to model the effects of oxygen on the cure rate of UV-curable acrylate polymers
 - Accelerated cell media development by identifying key components using statistical analysis
- Research Intern, Orchid Chemicals and Pharmaceuticals, India 2010
- Designed and implemented solutions to scale up the production of a research drug
 - Investigated methods for increasing the size of drug crystals to reduce filtration time

TECHNICAL SKILLS

- C++ & C • Julia • MATLAB • Fortran • Shell Scripting
- Python • R • GAMS • Git • Cluster Computing

PRESENTATIONS

(Excludes presentations where I was not the speaker or main author.)

Plenary

2. "A Stochastic Approximation Method for Approximating the Efficient Frontier of Chance-Constrained Nonlinear Programs," CAST Division Plenary, *AIChE Annual Meeting*, Nov. 2021.
1. "GOSSIP: Decomposition Software for the Global Optimization of Nonconvex Two-Stage Stochastic Mixed-Integer Nonlinear Programs," CAST Division Plenary, *AIChE Annual Meeting*, Nov. 2016.

Invited

40. "Learning to Accelerate the Global Optimization of QCQPs: Strong Partitioning and an End-to-End Graph ML-Based Approach," *8th International Conference on Continuous Optimization (ICCOPT)*, July 2025.
39. "Data-Driven Multistage Stochastic Optimization on Time Series," *INFORMS Annual Meeting*, Oct. 2024.
38. "Learning to Accelerate the Global Optimization of Quadratically-Constrained Quadratic Programs," *25th International Symposium on Mathematical Programming*, July 2024.
37. "Bounding-Focused Discretization Methods for the Global Optimization of Nonconvex Semi-Infinite Programs," *INFORMS Optimization Society Conference*, March 2024.
36. "LE²GO: Learning An End-to-End Partitioning Policy for the Global Optimization Of QCQPs," *INFORMS Annual Meeting*, Oct. 2023.
35. "Data-Driven Multistage Stochastic Optimization on Time Series," *16th International Conference Stochastic Programming (ICSP)*, July 2023.
34. "Learning to Accelerate the Global Optimization of Quadratically-Constrained Quadratic Programs," *SIAM Conference on Optimization*, May 2023.
33. "Learning-Assisted Data-Driven Optimization," Department of Chemical and Biological Engineering, *South Dakota School of Mines and Technology*, March 2023.
32. "Learning-Assisted Data-Driven Optimization," Grado Department of Industrial and Systems Engineering, *Virginia Tech*, Feb. 2023.
31. "Integrating Time Series Predictions Within Multistage Stochastic Optimization," *INFORMS Annual Meeting*, Oct. 2022.
30. "Data-Driven Multistage Stochastic Optimization on Time Series," *7th International Conference on Continuous Optimization (ICCOPT)*, July 2022.
29. "Learning-Assisted Data-Driven Optimization Under Uncertainty," School of Mathematics, *University of Edinburgh*, April 2022.
28. "Learning-Assisted Data-Driven Optimization Under Uncertainty," Department of Mechanical and Manufacturing Engineering, *University of Calgary*, Feb. 2022.
27. "Learning-Assisted Data-Driven Optimization Under Uncertainty," School of Industrial Engineering and Management, *Oklahoma State University*, Feb. 2022.
26. "Residuals-Based Distributionally Robust Optimization with Covariate Information," *INFORMS Annual Meeting*, Oct. 2021.
25. "Stochastic DC Optimal Power Flow With Reserve Saturation," *Los Alamos—Arizona Days*, May 2021.
24. "A Modular Framework for Integrating Machine Learning within Stochastic Optimization," Department of Mathematical Sciences, *Florida Institute of Technology*, March 2021.
23. "A Modular Framework for Integrating Machine Learning within Stochastic Optimization," Department of Chemical and Biomolecular Engineering, *Clarkson University*, March 2021.

22. "A Modular Framework for Integrating Machine Learning within Stochastic Optimization," Systems and Industrial Engineering Department, *University of Arizona*, Feb. 2021.
21. "Data-Driven Sample Average Approximation with Covariate Information," *INFORMS Annual Meeting*, Nov. 2020.
20. "Stochastic DC Optimal Power Flow with Reserve Saturation," *INFORMS Annual Meeting*, Nov. 2020.
19. "Data-Driven Stochastic Optimization with Covariate Information," Mathematics & Computer Science Division, *Argonne National Laboratory*, Sep. 2020.
18. "Predict, then Smart Optimize with Stochastic Programming," Center for Nonlinear Studies, *Los Alamos National Laboratory*, July 2020.
17. "Predict, then Smart Optimize with Stochastic Programming," *IPAM Workshop on Intersections between Control, Learning and Optimization*, Feb. 2020.
16. "GOSSIP: Decomposition Software for the Global Optimization of Nonconvex Two-Stage Stochastic Mixed-Integer Nonlinear Programs," *INFORMS Annual Meeting*, Nov. 2018. Session: Computational Stochastic Programming.
15. "Algorithms, Analysis, and Software for the Global Optimization of Chemical Process Systems Under Uncertainty," *ExxonMobil Research and Engineering*, Clinton, NJ, Dec. 2017.
14. "Algorithms, Analysis, and Software for the Global Optimization of Chemical Process Systems Under Uncertainty," *Lawrence Berkeley National Laboratory*, Nov. 2017.
13. "Algorithms, Analysis, and Software for the Global Optimization of Chemical Process Systems Under Uncertainty," Wisconsin Institute for Discovery, *University of Wisconsin-Madison*, Oct. 2017.
12. "Optimization of Chemical Process Systems Under Uncertainty," *Rockwell Automation R&D*, Austin, TX, March 2017.
11. "Convergence-Order Analysis of Lower Bounding Schemes for Constrained Global Optimization Problems," *5th International Conference on Continuous Optimization (ICCOPT)*, Aug. 2016.

Contributed

10. "Learning to Accelerate the Global Solution of Quadratically-Constrained Quadratic Programs," *AIChE Annual Meeting*, Nov. 2022.
9. "Tighter Lower Bounds for Semi-Infinite Programming Using Parametric Sensitivity Theory," *AIChE Annual Meeting*, Nov. 2022.
8. "Data-Driven Multistage Stochastic Optimization on Time Series," *AIChE Annual Meeting*, Nov. 2021.
7. "Data-Driven Sample Average Approximation with Covariate Information," *AIChE Annual Meeting*, Nov. 2021.
6. "Residuals-Based Distributionally Robust Optimization with Covariate Information," *Robust Optimization Webinar*, April 2021.
5. "The Cluster Problem in Constrained Global Optimization," *AIChE Annual Meeting*, Nov. 2016.
4. "The Cluster Problem in Constrained Global Optimization," *13th Global Optimization Workshop*, Aug. 2016.
3. "Convergence-Order Analysis of Branch-and-Bound Algorithms for Constrained Problems," *AIChE Annual Meeting*, Nov. 2015.
2. "A Software Framework for the Global Optimization of Nonconvex Two-Stage Stochastic Programs," *AIChE Annual Meeting*, Nov. 2015.
1. "A Decomposition Strategy for a Class of Nonconvex Two-Stage Stochastic Programs," *AIChE Annual Meeting*, Nov. 2014.

Poster

7. "Integrated Learning and Optimization," 3rd Annual Wisconsin Institute for Discovery Symposium, *University of Wisconsin-Madison*, Aug. 2020.

6. "Predict, then Smart Optimize with Stochastic Programming," *IPAM Workshop on Intersections between Control, Learning and Optimization*, Feb. 2020.
5. "A Stochastic Approximation Method for Chance-Constrained Nonlinear Programs," *AIChE Annual Meeting*, Nov. 2019.
4. "Optimization & Control of Chemical Process Systems Under Uncertainty," *AIChE Annual Meeting*, Nov. 2019.
3. "Stochastic Approximation for Chance-Constrained NLPs," *Computing in Engineering Forum, University of Wisconsin-Madison*, Sept. 2019.
2. "Stochastic Approximation for Chance-Constrained NLPs," *ICERM Workshop on Optimization of Systems Impacted by Rare, High-Impact Random Events*, June 2019.
1. "Optimizing Uncertain Systems with Reliability Requirements," *2nd Annual Wisconsin Institute for Discovery Symposium, University of Wisconsin-Madison*, June 2019.