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## Education

Indian Institute of Technology Kanpur, India	Electrical Engineering	2009	B. Tech.
California Institute of Technology, Pasadena, CA.	Electrical Engineering	2012	M.S.
California Institute of Technology, Pasadena, CA.	Electrical Engineering	2014	Ph.D.

Graduate advisors: Steven H. Low, Adam Wierman, K. Mani Chandy, Babak Hassibi (Caltech)  
Postdoctoral sponsor: Eilyan Bitar (Cornell)

## Professional Positions

2016 –	U. Illinois Urbana-Champaign	Associate Professor (2023–), Assistant Professor (2016–2023), Dept. of Electrical and Computer Engineering, Coordinated Science Laboratory, Information Trust Institute.
2014 – 2015	Cornell U.	Postdoctoral Fellow, Atkinson Center for a Sustainable Future.
2009 – 2014	Caltech	Engineering and Applied Science Division Fellow, Research Assistant, Teaching Assistant, Postdoctoral Scholar.
2010 – 2012	Southern California Edison	Professional trainee at Advanced Tech. division.

## Honors and Awards

- Received the Stanley Helm Fellowship in Electrical and Computer Engineering at the University of Illinois at Urbana-Champaign, 2022.
- Received the National Science Foundation CAREER Award, 2021.
- Selected among outstanding reviewers for the IEEE Transactions on Power Systems and among the best reviewers for the IEEE Transactions on Smart Grid, both in 2019.
- Recognized in UIUC's list of teachers ranked as excellent by their students in Falls of 2016, 2017, 2018, 2019, 2021 and Springs of 2018, 2019, 2023.
- Received the Atkinson Center Postdoctoral Fellowship in Sustainability at Cornell University, 2014.
- Co-received the best paper award in system operations and market economics at the IEEE Power and Energy Society General Meeting, 2013, 2019, 2023.
- Received the Engineering and Applied Science Division fellowship for graduate study at Caltech, 2009.

- Awarded the Directors' Gold Medal for outstanding all round achievement and leadership among students graduating at IIT Kanpur, 2009.
- Received the academic excellence award for 3 consecutive years at IIT Kanpur (2006-08).
- Received the Goldman Sachs Global Leadership Award (2007).
- Selected among 40 students in India for the Kishore Vaigyanik Protsahan Yojna (KVPY) fellowship (2003), funded by the Government of India for research-minded students in science.

## External Research Support

- PSERC grant on "Toward Large-Scale DER Aggregation: Competitive Aggregation Operation Support and ISO-Aggregator-Utility Coordination", 2023, [Co-PI, Collaborators: Cornell and Arizona State].
- PSERC grant on "Data-Driven Stability Analysis of IBR-rich Grids with Hybrid EMT Phasor Models", 2023, [Co-PI, Collaborator: Arizona State].
- C3.ai DTI grant on "Private Cyber-Secure Data-Driven Control of Distributed Energy Resources", 2021, [PI].
- NSF CAREER award on "Risk-Sensitive Market Design for Power Systems: Scalable Learning and Pricing", 2021, [PI].
- NSF CPS Medium grant on "Empowering Prosumers in Electricity Markets Through Market Design and Learning", 2020, [Collaborators: Texas A&M and U. Michigan].
- NSF EPCN grant on "Dynamic Data Analytics for the Power Grid via Koopman and Perron-Frobenius Operators", 2020, [Collaborators: Clemson U.].
- C3.ai DTI grant on "Dynamic Resource Management in Response to Pandemics", 2020, [PI].
- PSERC grant on "Market and Control Mechanisms Enabling Flexible Service Provision by Grid-Edge Resources Within End-to-End Power Systems", 2020, [Co-PI, Collaborator: Iowa State].
- PSERC grant on "Risk-Sensitive Security-Constrained Economic Dispatch via Critical Region Exploration", 2019, [PI].
- Siebel Energy Institute on "Privacy by Design for Smart Energy and Transportation", 2018, [PI].
- PSERC grant on "Coordination Mechanisms for Seamless Operation of Interconnected Power Systems", 2017, [PI].
- Siebel Energy Institute on "Incentives, Choices, and Analytics for Electric Vehicle Fleets in Jointly Managing Urban Traffic and the Smart Grid", 2017, [Co-PI].

## Publications

### Preprint (Working Paper)

- [P1]: A. R. R. Matavalam, B. Hou, H. Choi, S. Bose, and U. Vaidya, "Data-Driven Transient Stability Analysis Using the Koopman Operator", Submitted, 2023.
- [P2]: B. Hou, S. Sanjari, A. Koppel, and S. Bose, "Compressed Online Learning of Conditional Mean Embedding", Submitted, 2024.

### Journal

- [J1]: S. Bose, V. Khaitan, and A. Chaturvedi, "A Low-Cost Algorithm to Find the Minimum Sampling Frequency for Multiple Bandpass Signals", IEEE Signal Processing Letters, vol. 15, pp. 877 – 880, 2008.

- [J2]: S. Bose, D. F. Gayme, K. M. Chandy, and S. H. Low, "Quadratically constrained quadratic programs on acyclic graphs with application to power flow", *IEEE Transactions on Control of Network Systems*, vol. 2, no. 3, pp. 278 – 287, 2014.
- [J3]: S. Bose, C. Wu, Y. Xu, A. Wierman, and H. Mohesenan-Rad, "A Unifying Market Power Measure for Deregulated Transmission-Constrained Electricity Markets", *IEEE Transactions on Power Systems*, vol. 30, no. 5, pp. 2338 – 2348, 2014.
- [J4]: S. Bose, S. H. Low, T. Teeraratkul, and B. Hassibi, "Equivalent Relaxations of Optimal Power Flow", *IEEE Transactions on Automatic Control*, vol. 60, no. 3, pp. 729 – 742, 2015.
- [J5]: C. Thrampoulidis, S. Bose, and B. Hassibi, "Optimal Placement of Distributed Energy Storage in Power Networks", *IEEE Transactions on Automatic Control*, vol. 61, no. 2, pp. 416 – 429, 2015.
- [J6]: Y. Guo, S. Bose, and L. Tong, "On Robust Tie-line Scheduling in Multi-Area Power Systems", *IEEE Transactions on Power Systems*, vol. 33, no. 4, pp. 4144–4154, 2018.
- [J7]: D. Fooladivanda, H. Xu, A.D. Domínguez-García, and S. Bose, "Offer Strategies for Wholesale Energy and Regulation Markets", *IEEE Transactions on Power Systems*, vol. 33, no. 6, pp. 7305–7308, 2018.
- [J8]: T. T. Doan, S. Bose, D. H. Nguyen, and C. L. Beck, "Convergence of the Iterates in Mirror Descent Methods", *IEEE Control Systems Letters*, vol. 3, no. 1, pp. 114–119, 2019.
- [J9]: D. Cai, S. Bose, and A. Wierman, "On the Role of a Market Maker in Networked Cournot Competition", *INFORMS Mathematics of Operations Research*, vol. 44, no. 3, pp. 1122–1144, 2019.
- [J10]: K. Alshehri, M. Ndrio, S. Bose, and T. Başar, "Quantifying Market Efficiency Impacts of Aggregated Distributed Energy Resources", *IEEE Transactions on Power Systems*, vol. 35, no. 5, pp. 4067–4077, 2020.
- [J11]: U. K. Mukherjee, S. Bose, A. Ivanov, S. Souyris, S. Seshadri, P. Sridhar, R. Watkins, and Y. Xu, "Evaluation of Reopening Strategies for Educational Institutions During COVID-19 Through Agent Based Simulation", *Scientific Reports*, vol. 11, no. 1, pp. 1–24, 2021.
- [J12]: K. Alshehri, S. Bose, and T. Başar, "Centralized Volatility Reduction for Electricity Markets", *International Journal of Electrical Power and Energy Systems*, vol. 133, pp. 107101, 2021.
- [J13]: A. N. Madavan and S. Bose, "A Stochastic Primal-Dual Method for Optimization with Conditional Value at Risk Constraints", *Springer Journal of Optimization Theory and Applications*, vol. 190, pp. 428–460, 2021.
- [J14]: M. Ndrio, A. Winnicki, and S. Bose, "Pricing Economic Dispatch with AC Power Flow via Local Multipliers and Conic Relaxation", Accepted at the *IEEE Transactions on Control of Network Systems*, 2022.
- [J15]: S. Souyris, S. Hao, S. Bose, A. C. England III, A. Ivanov, U. K. Mukherjee and S. Seshadri, "Detecting and Mitigating Simultaneous Waves of COVID-19 Infections", *Scientific Reports*, vol. 12, no. 1, pp. 1-13, 2022.
- [J16]: M. Ndrio, S. Bose, Y. Guo, and L. Tong, "Coordinated Transaction Scheduling in Multi-Area Electricity Markets: Equilibrium and Learning", *IEEE Transactions on Power Systems*, vol. 38, no. 2, pp. 996 - 1008, 2023.
- [J17]: A. N. Madavan, N. Dahlin, S. Bose and L. Tong, "Risk-Based Hosting Capacity Analysis in Distribution Systems", *IEEE Transactions on Power Systems*, vol. 38, no. 1, pp. 355 - 365, 2024.
- [J18]: B. Hou, S. Bose, L. Marla and K. Haran, "Impact of Aviation Electrification on Airports: Flight Scheduling and Charging", Accepted at the *IEEE Transactions on Intelligent Transportation Systems*, 2023.

- [J19]: A. Ivanov, S. Bose, U. K. Mukherjee, S. Seshadri, R. Watkins, A. C. England III, M. E. Ahsen, and J. Suriano, "COVID-19 Test-to-Stay Program for K-12 Schools: Opt-In Versus Opt-Out Policies", *iScience*, vol. 27, no. 1, pp. 108770, 2023.
- [J20]: C. Chen, S. Bose, T. D. Mount, and L. Tong, "Wholesale Market Participation of DERAs: DSO-DERA-ISO Coordination", Accepted at the *IEEE Transactions on Power Systems*, 2023.
- [J21]: H. Liu, S. Bose, D. H. Nguyen, Y. Guo, T. T. Doan and C. L. Beck, "Distributed Dual Subgradient Methods with Averaging and Applications to Grid Optimization", Accepted at the *Springer Journal of Optimization Theory and Applications*, 2024.
- [J22]: N. Dahlin, S. Bose, and V. V. Veeravalli, "Controlling a Markov Decision Process with an Abrupt Change in the Transition Kernel", Accepted at a Special Issue on Control, Teams, and Games of Applied and Computational Mathematics, (extended version of an ACC 2023 paper), 2024.
- [J23]: X. Cheng, T. Mamalis, S. Bose and L. R. Varshney, "On Carsharing Platforms with Electric Vehicles as Energy Service Providers", Accepted at the *IEEE Transactions on Intelligent Transportation Systems*, 2024.
- [J24]: B. Hou, A. R. R. Matavalam, S. Bose, and U. Vaidya, "Propagating Uncertainty Through System Dynamics in Reproducing Kernel Hilbert Space", Accepted in *Physica D: Nonlinear Phenomena*, Special issue: Topics at the Interface of Machine Learning and Dynamical Systems, 2024.
- [J25]: S. Sanjari, S. Bose, and T. Başar, "Incentive Designs for Stackelberg Games with a Large Number of Followers and their Mean-Field Limits", Accepted in *Springer Dynamic Games and Applications*, 2024.

### Book Chapter

- [B1]: S. Bose and S. H. Low, "Some Emerging Challenges in Electricity Markets", In *Smart Grid Control: Overview and Research Opportunities*, Editors: J. Stoustrup, A. Annaswamy, A. Chakraborty, and Z. Qu, Springer, Cham, Switzerland, pp. 29-45, 2019.

### Conference

- [C1]: E. Bodine-Baron, S. Bose, B. Hassibi, and A. Wierman, "Minimizing the Social Cost of an Epidemic", *International Conference on Game Theory for Networks*, 2011.
- [C2]: S. Bose, D. F. Gayme, S. H. Low, and K. M. Chandy, "Optimal Power Flow over Tree Networks", *Allerton Conference on Communication, Control and Computing*, 2011.
- [C3]: S. Bose, D. F. Gayme, U. Topku, and K. M. Chandy, "Optimal Placement of Energy Storage in the Grid", *IEEE Conference on Decision and Control*, 2012.
- [C4]: S. Bose, S. H. Low, and K. M. Chandy, "Equivalence of Branch Flow and Bus Injection Models", *Allerton Conference on Communication, Control and Computing*, 2012.
- [C5]: C. Thrampoulidis, S. Bose, and B. Hassibi, "Optimal Large-scale Storage Placement in Single Generator Single Load Networks", *IEEE Power and Energy Society General Meeting*, 2013.
- [C6]: C. Thrampoulidis, S. Bose, and B. Hassibi, "On the Distribution of Energy Storage in Electricity Grids", *IEEE Conference on Decision and Control*, 2013.
- [C7]: C. Wu, S. Bose, A. Wierman, and H. Mohesenan-Rad, "A Unifying Approach to Assessing Market Power in Deregulated Electricity Markets", *IEEE Power and Energy Society General Meeting*, 2013. *Selected as a prize paper.*

- [C8]: S. Bose, D. Cai, S. H. Low, and A. Wierman, "The Role of a Market Maker in Networked Cournot Competition", IEEE Conference on Decision and Control, 2014.
- [C9]: S. Bose and E. Bitar, "Variability and the Locational Marginal Value of Energy Storage", IEEE Conference on Decision and Control, 2014.
- [C10]: S. Bose, "On the Design of Wholesale Electricity Markets under Uncertainty", Allerton Conference on Communication, Control and Computing, 2015.
- [C11]: R. Louca, S. Bose, and E. Bitar, "A Bound on the Minimum Rank of Solutions to Sparse Linear Matrix Equations", American Control Conference, 2016.
- [C12]: Y. Xu, D. Cai, S. Bose, and A. Wierman, "On the Efficiency of Networked Stackelberg Competition", Conference on Information Sciences and Systems, 2017.
- [C13]: K. Alshehri, S. Bose, and T. Başar, "Cash-Settled Call Options for Wholesale Electricity Markets", International Federation of Automatic Control World Congress, 2017.
- [C14]: T. T. Doan, S. Bose, and C. L. Beck. "Distributed Lagrangian Method for Tie-line Scheduling in Power Grids under Uncertainty", ACM Greenmetrics, 2017.
- [C15]: S. Pushpak, U. Vaidya, and S. Bose, "Stochastic Small Signal Stability of Power System with Random Wind", IEEE Probabilistic Methods Applied to Power Systems Conference, 2018.
- [C16]: M. Ndrilo, S. Bose, Y. Guo, and L. Tong, "Coordinated Transaction Scheduling in Multi-Area Power Systems with Strategic Participants", IEEE Power and Energy Society General Meeting, 2019. *Selected as a prize paper.*
- [C17]: A. N. Madavan, S. Bose, Y. Guo, and L. Tong, "Risk-Sensitive Security-Constrained Economic Dispatch via Critical Region Exploration", IEEE Power and Energy Society General Meeting, 2019. *Selected as one of the best papers submitted to the conference.*
- [C18]: T. Mamalis, S. Bose, and L. R. Varshney, "Business-to-Peer Carsharing Systems with Electric Vehicles", Conference on Information Sciences and Systems, 2019.
- [C19]: T. Mamalis, S. Bose, and L. R. Varshney, "Ridesharing Systems with Electric Vehicles", American Control Conference, 2019.
- [C20]: K. Alshehri, M. Ndrilo, S. Bose, and T. Başar, "The Impact of Aggregating Distributed Energy Resources on Electricity Market Efficiency", Conference on Information Sciences and Systems, 2019.
- [C21]: A. N. Madavan and S. Bose, "Risk-Sensitive Energy Procurement with Uncertain Wind", IEEE Global Conference on Signal and Information Processing, 2019.
- [C22]: A. Winnicki, M. Ndrilo, and S. Bose, "On Convex Relaxation-Based Distribution Locational Marginal Prices", Innovative Smart Grid Technologies, 2020.
- [C23]: B. Hou, S. Bose, and K. Haran, "Powering Electric Aircraft at O'Hare Airport: A Case Study", IEEE Power and Energy Society General Meeting, 2020.
- [C24]: S. Gade, A. Winnicki, and S. Bose, "On Privatizing Equilibrium Computation in Aggregate Games over Networks", International Federation of Automatic Control World Congress, 2020.
- [C25]: M. Ndrilo, K. Alshehri, and S. Bose, "A Scalar-Parameterized Mechanism for Two-Sided Markets", International Federation of Automatic Control World Congress, 2020.
- [C26]: M. Ndrilo, A. N. Madavan, and S. Bose, "Pricing Conditional Value at Risk-Sensitive Economic Dispatch", IEEE Power and Energy Society General Meeting, 2021.
- [C27]: S. Bose, S. Souyris, U. K. Mukherjee, A. Ivanov, S. Seshadri, A. C. England III, and Y. Xu, "Control of Epidemic Spreads via Testing and Lock-Down", IEEE Conference on Decision and Control, 2021.

- [C28]: B. Hou, S. Bose, and U. Vaidya, "Sparse Learning of Kernel Transfer Operators", Asilomar Conference on Signals, Systems, and Computers, 2021.
- [C29]: B. Hou, S. Sanjari, N. Dahlin, and S. Bose, "Compressed Decentralized Learning of Conditional Mean Embedding Operators in Reproducing Kernel Hilbert Spaces", Conference of the Association for the Advancement of Artificial Intelligence (AAAI), 2023.
- [C30]: C. Chen, S. Bose, and L. Tong, "DSO-DERA Coordination for the Wholesale Market Participation of Distributed Energy Resources", IEEE Power and Energy Society General Meeting 2023. *Selected as one of the best papers submitted to the conference.*
- [C31]: S. Sanjari, S. Bose, and T. Başar, "Signaling-Based Robust Incentive Designs with Randomized Monitoring", International Federation of Automatic Control World Congress, 2023.
- [C32]: B. Hou, S. Sanjari, N. Dahlin, S. Bose, and U. Vaidya, "Sparse Learning of Dynamical Systems in RKHS: An Operator-Theoretic Approach", International Conference on Machine Learning (ICML), 2023.
- [C33]: N. Dahlin, S. Bose, and V. V. Veeravalli, "Controlling a Markov Decision Process with an Abrupt Change in the Transition Kernel", American Control Conference, 2023.

### Other

- S. Bose, C. Wu, H. Mohesenian-Rad, and A. Wierman, "Assessing Market Power in Deregulated Electricity Markets", IEEE Smart Grid Newsletter, Jan 2014.

### Teaching Activities

- ECE 330 - Power Circuits and Electromechanics
- ECE 530 - Analysis Techniques for Large-scale Electrical Systems
- ECE 365/398BD - Data Science and Engineering, Making Sense of Big Data (Smart Grid)
- ECE 598 SBI - Mathematical Foundations of Electricity Markets
- ECE 576 - Power System Dynamics and Stability
- ECE 490 - Introduction to Optimization
- ECE 476 - Power System Analysis

Guest lectured in ECE 298 AB - Solar Car, ENG 471 - Seminar on Energy and Sustainable Engineering.

### Postdoctoral Mentoring

- Past postdocs: N. Dahlin, S. Sanjari (co-advised with T. Başar), and H. Choi.

### Graduate Advising

- Currently advising B. Hou, A. Guclu, and Y. Wang.
- Past Ph.D. graduates: A. N. Madavan, S. Gade, and M. Ndrilo.
- Worked with K. Alshehri and T. T. Doan
- M.S. advisor for Y. Wang (co-advised with R. Dong), A. N. Madavan, T. Mamalis, and A. Winnicki.
- Master's project advisor for M.Eng. students A. N. Worgu, H. Li, B. Hou, and Z. Yuan.

### Undergraduate Advising

Mentored J. Weinberg, W. Jones, S. Kalidindi, A. Ganti, D. Khandelwal, V.M. Gonzalo, B. Zhao, J. Patel, Y. Zhou, D.Y. Arana, and P. Teckchandani.

## Invited Talks

- ISN Seminar at Cornell University at Ithaca (2012).
- Special seminar at the University of British Columbia (2014).
- Special seminar at Washington University, St. Louis (2014).
- Special seminar at the University of California Berkeley (2014).
- Conference on Information Sciences and Systems at Baltimore (Mar 2014).
- MPE 2013+ Workshop on Data-aware Energy Use at San Diego (Sep 2014).
- SIAM Conference on Optimization at San Diego (May 2014).
- Special seminar at the University of Texas at Austin (2015).
- Special seminar at Massachusetts Institute of Technology (2015).
- Special seminar at University of Illinois Urbana Champaign (2015).
- INFORMS Applied Probability Society Conference at Istanbul (Jul 2015).
- 53rd Annual Allerton Conference on Communication, Control, and Computing at Monticello (Sep 2015).
- 2016 Information Theory and Applications Workshop at San Diego (Feb 2016).
- The 5th Midwest Workshop on Control and Game Theory at Lafayette (Apr 2016).
- IEEE seminar at Indian Institute of Technology at Kanpur, India (Jul 2016).
- 2017 Information Theory and Applications Workshop at San Diego (Feb 2017).
- International Institute for Carbon-Neutral Energy Research (I<sup>2</sup>CNER)'s Annual Symposium on Applied Math Challenges in Energy & the Next-Generation Electric Grid in Kyushu Japan (Feb, 2017).
- Conference on Information Sciences and Systems at Baltimore (Mar 2017).
- SmartGrid Seminar at Stanford University (Mar 2017).
- The 6th Midwest Control Theory Workshop 2017 at University of Michigan (Apr 2017).
- American Control Conference Workshop at Seattle (May 2017).
- INFORMS Applied Probability Society Conference at Evanston (Jul 2017).
- Power Systems Engineering Research Center Webinar (Nov 2017).
- EE and WESEP Seminar at Iowa State University (Apr 2018).
- EE, University of Notre Dame (Jul 2018).
- Control Day Guest Speaker, Pacific Northwest National Laboratory (Aug 2018).
- Fourth workshop on Management and Control of Energy Supply-demand Networks with Renewables, University of Notre Dame (Oct 2018).
- INFORMS Annual Meeting, Phoenix (Nov 2018).
- Los Alamos National Laboratory, Los Alamos (Jun 2019).
- Transactive Theory Workshop at the IEEE Power and Energy Society General Meeting, Atlanta (Aug 2019).
- Modeling and Optimization: Theory and Applications Conference at Lehigh University, Bethlehem (Aug 2019).
- Panel talk at the IEEE Power and Energy Society General Meeting, virtual (July 2020).
- IEEE SmartGridComm Conference, virtual (Nov 2020).
- I<sup>2</sup>CNER-IMI International Workshop, virtual (Jan 2021).
- C3.ai Digital Transformation Institute Colloquium, virtual (Feb 2021).
- Communications and Signal Processing Seminar, University of Michigan, virtual (May 2021).
- enOPTIMAL Seminar, Massachusetts Institute of Technology, virtual (May 2021).
- LIONS Seminar, Arizona State University, virtual (Oct 2021).

- Power Systems Engineering Research Center Webinar (Nov 2021).
- RSRG Virtual Tea, California Institute of Technology, virtual (Jan 2022).
- Panelist at C3.ai Digital Transformation Institute Symposium at Miami (Mar 2022).
- Panel talk at IEEE Power and Energy Society General Meeting, Denver (July 2022).
- ECEN CESG Seminar at Texas A&M University, Virtual (Sep 2022).
- Talk at the C3.ai Digital Transformation Institute Workshop on Data, Learning, and Markets, in University of Illinois Urbana-Champaign (Oct 2022).
- Talk at Instituto de Investigación Tecnológica, Comillas Universidad Pontificia, Madrid, Spain (Nov 2022).
- Talk at Indian Institute of Technology Bombay, Mumbai, India (Dec 2022).
- Talk at Indian Institute of Technology Bombay, Mumbai, India (Jul 2023).
- Talk at Aalto University, Helsinki, Finland (Nov 2023).
- CCDC Seminar, University of California, Santa Barbara (Jan 2024).
- Power Systems Engineering Research Center Webinar (Mar 2024).
- Conference on Information Sciences and Systems at Princeton (Mar 2024).

## Other Presentations

- Part of DOE MARMET's program at Ameren, St. Louis (May 2018).
- IEEE Smart Grid Webinar (Oct 2018).
- Grainger College of Engineering's Illinois Scholars Undergraduate Research seminar (Nov 2021).
- MIT IDSS-organized workshop "Path from Research to Impact" on COVID-19 (Apr 2021).

## Synergistic Activities

- Served on various committees within UIUC ECE: Power and Energy Systems, Colloquium, Curriculum, Graduate, Public Relations, and Fellowship.
- Served on an ad-hoc subcommittee to evaluate course proposal for UIUC Grainger College of Engineering's M.Eng. program.
- Co-organizer of conference sessions:
  - "Mathematical Challenges in Electric Power System" at Allerton Conference on Communication, Control, and Computing, Monticello, 2017.
  - "Foundations of the Sharing Economy" at Allerton Conference on Communication, Control, and Computing, Monticello, 2017.
  - "Control and Optimization of Electric Power Systems" at Allerton Conference on Communication, Control, and Computing, Monticello, 2018.
  - "Distributed Optimization for Power Systems" at the INFORMS Annual Meeting, Phoenix, 2018.
  - "Risk Management in Energy Systems" at the INFORMS Annual Meeting, virtual, 2020.
- Program Chair for Allerton Conference on Communication, Control, and Computing, Monticello, 2023.
- General Chair for Allerton Conference on Communication, Control, and Computing, Urbana-Champaign, 2024.
- Technical Program Committee members for ACM e-Energy 2016, 2020, 2021, 2022, IEEE SmartGridComm (including workshops) 2014, 2015, 2016, 2017, 2018, ACM Greenmetrics 2016, 2017. Student Travel Grant Chair for IEEE SmartGridComm 2020.
- Served on merit review panels for DOE, ARPA-E and NSF.



- Served as a reviewer for Research Grants Council (RGC) of Hong Kong.
- Part of UIUC's team that served as lead facilitator for the final report of a study managed by the Illinois Commerce Commission, called "NextGrid Illinois: Utility of the Future Study".
- Part of the organizing committee for the Midwest Healthcare Management Conference, Aug 2022.
- Reviewer for journals/conferences: IEEE Transactions on Power Systems, IEEE Transactions on Smart Grid, IEEE Transactions on Automatic Control, IEEE Transactions on Network Science and Engineering, IEEE Transactions on Control of Network Systems, IEEE Transactions on Intelligent Transportation, Elsevier Automatica, INFORMS Operations Research, INFORMS Management Science, Springer Journal of Optimization Theory and Applications, Elsevier Operations Research Letters, IEEE Power and Energy Society Letters, IEEE/ACM Transactions on Networking, Elsevier System and Control Letters, Springer Journal of Global Optimization, Springer Journal of Modern Power Systems and Clean Energy, Springer Journal of Energy Systems, Elsevier Journal on Utilities Policy, Elsevier Energy Reports, Elsevier Journal on Applied Energy, Elsevier International Journal of Electrical Power and Energy Systems, Inderscience International Journal of Power and Energy Conversion, IEEE Conference on Decision and Control, American Control Conference, European Control Conference, North American Power Symposium, Power Systems Computation Conference, IEEE Power and Energy Society General Meeting, etc.