

Ali Tajer

Curriculum Vitæ

Electrical, Computer, and Systems Engineering
Jonsson Engineering Center 6040
Rensselaer Polytechnic Institute
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Education

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|-------------|---|
| 2007-2010 | Columbia University , New York City, NY
Ph.D., Electrical Engineering, (May 2010)
<i>Advisor: Xiaodong Wang (Ph.D., Princeton University)</i>
M.A., Statistics (May 2009)
M.Phil., Electrical Engineering (May 2009) |
| 1998 - 2004 | Sharif University of Technology
M.Sc., Electrical Engineering (June 2004)
<i>Advisor: Babak H. Khalaj (Ph.D., Stanford University)</i>
B.Sc., Electrical Engineering, (June 2002) |

Academic Employment

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|--------------|---|
| 2019-present | Rensselaer Polytechnic Institute , Troy, NY
Associate Professor
Electrical, Computer, and Systems Engineering |
| 2014-2018 | Rensselaer Polytechnic Institute , Troy, NY
Assistant Professor
Electrical, Computer, and Systems Engineering |
| 2012-2014 | Wayne State University , Detroit, MI
Assistant Professor
Electrical and Computer Engineering |
| 2010-2012 | Princeton University , Princeton, NJ
Postdoctoral Research Associate
Electrical Engineering Department
<i>Host: H. Vincent Poor (Ph.D., Princeton University)</i> |
| 2010-2012 | Columbia University , New York City, NY
Adjunct Assistant Professor
Electrical Engineering Department |

Awards

External Honors and Awards

2019	Summer Faculty Fellowship, AFRL
2016	Faculty Early Career Development Award (CAREER), NSF
2015	Elevated to <i>Senior Member</i> , IEEE
2012	Nominated for the IEEE Signal Processing Best Paper Award <i>Selected from the papers appeared in the society's 7 Transactions (5-year window).</i>
2011	Nominated for the IEEE Signal Processing Young Author Best Paper Award <i>Selected from the papers appeared in the society's 7 Transactions (5-year window).</i>
2011	Jury Award – School of Engineering and Applied Sciences, Columbia University
2010	Ph.D. Thesis Distinction, Columbia University <i>Awarded Annually to at most 1% of all the Ph.D. graduates in Engineering, Arts, and Sciences</i>

Rensselaer Honors and Awards

2024	School of Engineering Research Excellence Award, Rensselaer Polytechnic Institute (Senior Faculty)
2021	James M. Tien '66 Early Career Award for Faculty
2018	School of Engineering Classroom Excellence Award, Rensselaer Polytechnic Institute
2017	School of Engineering Research Excellence Award, Rensselaer Polytechnic Institute (Junior Faculty)

Editorial Boards

2024-present	Senior Area Editor, <i>IEEE Transactions on Signal Processing</i>
2022-present	Associate Editor, <i>IEEE Transactions on Information Theory</i>
2022-2024	Editor, <i>IEEE Signal Processing Society Education Center Editorial Board</i>
2019-2024	Associate Editor, <i>IEEE Transactions on Signal Processing</i>
2013-2020	Editor, <i>IEEE Transactions on Communications</i>
2014-2020	Editor, <i>IEEE Transactions on Smart Grid</i>
2018-2019	Associate Editor, <i>IET Transactions on Smart Grid</i>
2018-2019	Associate Editor, <i>Springer Journal of Modern Power Systems and Clean Energy</i>
2016-2017	Guest Editor, <i>IEEE Signal Processing Magazine</i>
2014-2016	Guest Editor-in-Chief, <i>IEEE Transactions on Smart Grid</i>

Teaching Experience

Rensselaer Polytechnic Institute

Instructor's Score

Spring 2025	Engineering Probability	TBD
Fall 2024	Introduction to Stochastic Signals & Systems	TBD
Spring 2024	Information Theory & High-dimensional Statistics	4.66/5.00
Fall 2023	Introduction to Stochastic Signals & Systems	4.33/5.00
Fall 2022	Introduction to Stochastic Signals & Systems	4.33/5.00
Spring 2022	Trustworthy Machine Learning	
Fall 2021	Engineering Probability	3.52/5.00
Spring 2021	Information Theory & High-dimensional Statistics	4.13/5.00
Fall 2020	Multidisciplinary Design Laboratory	
Summer 2020	Engineering Probability	4.25/5.00
Spring 2020	Signals & Systems	4.36/5.00
Fall 2019	Engineering Probability	4.65/5.00
Spring 2019	Signals & Systems	4.65/5.00
Fall 2018	Information Theory & High-dimensional Statistics	4.75/5.00
Fall 2017	Information Theory & High-dimensional Statistics	4.75/5.00
Spring 2017	Wireless Data Communications	4.50/5.00
Fall 2016	Signals & Systems	4.58/5.00
Spring 2016	Digital Communications	4.25/5.00
Spring 2015	Signals & Systems	4.67/5.00
Spring 2015	Digital Communications	4.50/5.00
Fall 2014	Signals & Systems	3.88/5.00

Wayne State University

Instructor's Score

Winter 2014	Linear Networks & Systems Analysis	4.00/5.00
Fall 2013	Digital Signal Processing	4.00/5.00
Winter 2013	Linear Networks & Systems Analysis	4.50/5.00
Fall 2012	Digital Signal Processing	4.00/5.00

Columbia University

Spring 2012	MIMO Wireless Communications	4.29/5.00
Fall 2011	Digital Communications	4.57/5.00
Spring 2011	MIMO Wireless Communications	4.30/5.00
Fall 2010	Digital Communications	4.88/5.00

Student Research Advising

Doctoral Thesis Advisees

2019-present	Anmol Dwivedi (B. Tech., National Institute of Technology, Tiruchirappalli)
2021-present	Zirui Yan (B.A., University of Science and Technology of China)
2022-present	Shiuli Subhra Ghosh (M.Sc., Chennai Mathematical Institute)
2022-present	Emre Acartürk (B.Sc., Bilkent University)
2023-present	Meltem Tatlı (B.Sc., Bilkent University)
2024-present	Raj Bakhunchhe (B.Sc., Kathmandu University)
2019-2024	Arpan Mukherjee (M.Tech., IIT-Kharagpur) <i>Postdoctoral Research Associate at Imperial College London</i>
2020-2024	Kamron Fazel (B.Sc., Rensselaer Polytechnic Institute, M.Sc., Pennsylvania State University) <i>Research Scientist, Naval Research Naval Research Laboratory</i>
2020-2024	Burak Varıcı (B.Sc., Bogazici University) <i>Postdoctoral Research Associate at Carnegie Mellon University</i>
2016-2020	Saurabh Sihag (B.Tech./M.Tech, IIT-Kharagpur) <i>Postdoctoral Research Associate at the University of Pennsylvania</i>
2016-2020	Maha Zohdy (B.Sc., Cairo University and M.Sc., Nile University) <i>Research Scientist at Mathworks, Natick, MA</i>
2014-2018	Javad Heydari, Ph.D. (B.Sc./M.Sc. Sharif University of Technology) <i>AI/Machine Learning research scientist at LG Electronics, Santa Clara, CA</i>
2013-2018	Saeid Balaneshin, Ph.D. <i>Applied Scientist, Zillow, Seattle, WA</i>
2015-2016	Samia Kazemi <i>Ph.D student in ECSE at Rensselaer</i>
2015-2016	Mengheng Xue
2014-2015	Mateo Mengis, M.Sc. <i>Automation Engineer, Harris Group, Portland, OR</i>
2011-2014	Zhe Wang (B.Sc./M.Sc. Shanghai Jiao Tong University) <i>Researcher in China</i>
2013-2014	İslam Şafak Bayram (postdoc, Ph.D. from North Carolina State University) <i>Lecturer, University of Strathclyde, Glasgow, Scotland</i>

Publications

A Patents

- P5. Shiuli Subhra Ghosh and Anmol Dwivedi and Ali Tajer and Kyongmin Yeo and Wesley M. Gifford, "Cascading Anomaly Prediction via Causal Inference, U.S. Patent Application No. 18/915,503
- P4. Ali Tajer, Narayan Prasad, and Xiaodong Wang, "Robust Linear Precoder Designs for Multi-Cell Downlink Transmission", U.S. Patent 8,520,762
- P3. Ali Tajer, Narayan Prasad, and Xiaodong Wang, "Robust Linear Precoder Designs for Multi-Cell Downlink Transmission", U.S. Patent 8,520,763
- P2. Ali Tajer, Narayan Prasad, and Xiaodong Wang, "Robust Linear Precoder Designs for Multi-Cell Downlink Transmission", U.S. Patent 8,385,454
- P1. Ali Tajer, Narayan Prasad, and Xiaodong Wang, "Distributed Beamforming and Rate Allocation in Multi-antenna Cognitive Radio Networks", U.S. Patent, Application 2009/0323619 A1.

B Books

- B2. Ali Tajer, Samir M. Perlaza, and H. Vincent Poor, editors. *Advanced Data Analytics for Power Systems*. Cambridge University Press, Cambridge, UK, February 2021. ISBN-13: 9781108859806 (615 pages).

- B1. *I. Safak Bayram and Ali Tajer. *Plug-in Electric Vehicle Grid Integration*. Artech House, Cambridge, MA, July 2017. ISBN-13: 978-1630810511 (276 pages).

C Book Chapters

- BC4. *Saurabh Sihag and Ali Tajer. *Security and Resilience in Cyber-Physical Systems: Detection, Estimation and Control*, chapter Secure Estimation under Model Uncertainty. Springer, 2022.
- BC3. *Javad Heydari and Ali Tajer. *Data Analytics for Power Systems*, chapter Controlled Sensing Theory and Applications to Anomaly Detection in Power Systems. Cambridge University Press, Cambridge, UK, 2021.
- BC2. Ali Tajer and Xiaodong Wang. *Spectrum Sharing in Wireless Networks: Fairness, Efficiency, and Security*, chapter Capacity Scaling of MIMO Broadcast Channels with Finite-rate Feedback. CRC Press, 2016.
- BC1. Ali Tajer, Soumya Kar, and H. Vincent Poor. *Smart Grid Communications and Networking*, chapter Distributed State Estimation: A Learning-based Framework. Cambridge University Press, Cambridge, UK, 2012.

D Peer-Reviewed Journal Articles

Published/Accepted for Publication

- J64. *Shiuli Subhra Ghosh, Anmol Dwivedi, Ali Tajer, Kyongmin Yeo, and Wesley M. Gifford. Cascading Anomaly Prediction via Causal Inference. *IEEE Transactions on Power Systems*, (accepted for publication, December 2024).
- J63. *Arpan Mukherjee and Ali Tajer. Efficient Best Arm Identification in Stochastic Bandits: Beyond β -optimality. *IEEE Transactions on Information Theory*, (accepted for publication, September 2024).
- J62. *Anmol Dwivedi, Santiago Paternain, and Ali Tajer. Blackout Mitigation via Physics-guided RL. *IEEE Transactions on Power Systems*, (accepted for publication, September 2024).
- J61. *Anamitra Chaudhuri, Georgios Fellouris, and Ali Tajer. Round Robin Active Sequential Change Detection for Dependent Multi-Channel Data. *IEEE Transactions on Information Theory*, 70(12):9327–9351, December 2024.
- J60. *P. N. Karthik, Vincent Y. F. Tan, Arpan Mukherjee, and Ali Tajer. Optimal Best Restless Markov Arm Identification with Fixed Confidence. *IEEE Transactions on Information Theory*, 70(10):7349–7384, October 2024.
- J59. *Zirui Yan, Arpan Mukherjee, Burak Varıcı, and Ali Tajer. Robust Causal Bandits for Linear Time-varying Models. *IEEE Journal of Selected Areas in Information Theory*, 5:78 – 93, March 2024.
- J58. *Anmol Dwivedi and Ali Tajer. GRNN-based real-time fault chain prediction. *IEEE Transactions on Power Systems*, 39(1):934–946, January 2024.
- J57. *Burak Varıcı, Dmitriy Katz-Rogozhnikov, Ali Tajer, Dennis Wei, and Prasanna Sattigeri. Separability Analysis for Causal Discovery in Mixture of DAGs. *Transactions on Machine Learning Research*, October 2023.
- J56. *Burak Varıcı, Karthikeyan Shanmugam, Prasanna Sattigeri, and Ali Tajer. Causal Bandits for Linear Structural Equation Models. *Journal of Machine Learning Research*, 24(297):1–29, September 2023.
- J55. *Arpan Mukherjee and Ali Tajer. SPRT-based Efficient Best Arm Identification in Stochastic Bandits. *Journal of Selected Areas in Information Theory*, 4:128 – 143, June 2023.
- J54. *Saurabh Sihag and Ali Tajer. Estimating Structurally Similar Graphical Models. *IEEE Transactions on Information Theory*, 69(2):1093–1124, February 2023.
- J53. *Maha Zohdy, Ali Tajer, and Shlomo Shamai (Shitz). Broadcast Approach to Uplink NOMA: Queuing Delay Analysis. *Entropy*, 24(12), November 2022.
- J52. *Arpan Mukherjee, Ali Tajer, Pin-Yu Chen, and Payel Das. Active Sampling of Multiple Sources for Sequential Estimation. *IEEE Transactions on Signal Processing*, 70:4571–4585, 2022.
- J51. *Saurabh Sihag, Ali Tajer, and Urbashi Mitra. Adaptive Graph-constrained Group Testing. *IEEE Transactions on Signal Processing*, 70:381 – 396, 2022.

- J50. *Ali Tajer, Javad Heydari, and H. Vincent Poor. Active Sampling for the Quickest Detection of Markov Networks. *IEEE Transactions on Information Theory*, 68(4):2479–2508, April 2022.
- J49. *Anmol Dwivedi, Sihui Wang, and Ali Tajer. Discriminant Analysis under f -divergence Measures. *Entropy*, 24(2), 2022.
- J48. *Anmol Dwivedi and Ali Tajer. Scalable Quickest Line Outage Detection and Localization Via Graph Spectral Analysis. *IEEE Transactions on Power Systems*, 37(1):590–602, January 2022.
- J47. Ali Tajer, Avi Steiner, and Shlomo Shamai (Shitz). The Broadcast Approach in Communication Networks. *Entropy*, 23(1):1–137, January 2021.
- J46. *Maha Zohdy, Ali Tajer, and Shlomo Shamai (Shitz). Distributed Interference Management: A Broadcast Approach. *IEEE Transactions on Communications*, 69(1):149 – 163, January 2021.
- J45. *Saurabh Sihag and Ali Tajer. Secure Estimation under Causative Attacks. *IEEE Transactions on Information Theory*, 66(8):5145 – 5166, August 2020.
- J44. *Maha Zohdy, Ali Tajer, and Shlomo Shamai (Shitz). Broadcast Approach to Multiple Access with Local CSIT. *IEEE Transactions on Communications*, 67(11):7483–7498, November 2019.
- J43. Trevor Allen, Ali Tajer, and Naofal Al-Dhahir. Secure Alamouti Multiple Access Channel Transmissions with Multi-Antenna Eavesdroppers. *IEEE Wireless Communications Letters*, 8(5):1510–1513, October 2019.
- J42. *Saurabh Sihag and Ali Tajer. Optimal Network Parameter Estimation: Single-shot Exchange of Local Decisions. *IEEE Signal Processing Letter*, 26(9):1280–1284, September 2019.
- J41. *Ali Tajer, Saurabh Sihag, and Khawla Alnajjar. Non-linear State Recovery in Power System under Random and Structured Attacks. *Springer Journal of Modern Power Systems and Clean Energy*, 7(5):1071 – 1080, September 2019.
- J40. *Maha Zohdy and Ali Tajer. Broadcast Approach for the Single-user Energy Harvesting Channel. *IEEE Transactions on Communications*, 67(5):3192 – 3204, May 2019.
- J39. *Javad Heydari and Ali Tajer. Quickest Search and Learning over Correlated Sequences: Theory and Application. *IEEE Transactions on Signal Processing*, 67(3):638 – 651, March 2019.
- J38. Ali Tajer. False Data Injection Attacks on Electricity Markets by Limited Adversaries: Stochastic Robustness. *IEEE Transactions on Smart Grid*, 10(1):128–138, January 2019.
- J37. *Ali Tajer, Maha Zohdy, and Khawla Alnajjar. Resource Allocation under Sequential Resource Access. *IEEE Transactions on Communications*, 66(11):5608–5620, November 2018.
- J36. *Mateo R. Mengis and Ali Tajer. Data Injection Attacks on Electricity Markets by Limited Adversaries: Worst-case Robustness. *IEEE Transactions on Smart Grid*, 9(6):5710–5720, November 2018.
- J35. *Saurabh Sihag and Ali Tajer. Power System State Estimation under Model Uncertainty. *Journal of Selected Topics in Signal Processing*, 12(4):593–606, August 2018.
- J34. *Samia Kazemi and Ali Tajer. Multiaccess Communication via a Broadcast Approach Adapted to the Multiuser Channel. *IEEE Transactions on Communication*, 66(8):3341–3353, August 2018.
- J33. *Javad Heydari and Ali Tajer. Quickest Localization of Anomalies in Power Grids: A Stochastic Graphical Approach. *IEEE Transactions on Smart Grid*, 9(6):4679–4688, August 2018.
- J32. Ali Tajer. Load Forecasting via Diversified State Prediction in Multi-Area Power Networks. *IEEE Transactions on Smart Grid*, 8(6):2675 – 2684, November 2017.
- J31. *Javad Heydari and Ali Tajer. Quickest Search for Local Structures in Random Graphs. *IEEE Transactions on Signal and Information Processing over Networks – Special Issue on Graph Signal Processing*, 3(3):528–538, September 2017.
- J30. Trevor Allen, Ali Tajer, and Naofal Al-Dhahir. Secure Alamouti MAC Transmissions. *IEEE Transactions on Wireless Communication*, 16(6):3674–3687, June 2017.
- J29. *I. Safak Bayram and Ali Tajer. Exploiting PEV Batteries for V2X Applications. *IEEE Smart Grid Newsletter*, May 2017.

- J28. *I. Safak Bayram, Ali Tajer, Mohamed Abdallah, and Khalid Qaraqe. A Stochastic Sizing Approach for Sharing-based Energy Storage. *IEEE Transactions on Smart Grid*, 8(3):1075–1084, May 2015.
- J27. Hana Godrich, Arye Nehorai, Ali Tajer, M. Sabrina Greco, and Changshui Zhang. Special Article Series on Signal Processing Education via Hands-on and Design Projects. *IEEE Signal Processing Magazine*, 34(1):13, January 2017.
- J26. *Javad Heydari, Ali Tajer, and H. Vincent Poor. Quickest Linear Search over Correlated Sequences. *IEEE Transactions on Information Theory*, 62(10):5786–5808, October 2016.
- J25. Mahdi Ashraphijou, Ali Tajer, Chen Gong, and Xiaodong Wang. A Receiver-centric Approach to Interference Management: Fairness and Outage Optimization. *IEEE Transactions on Information Theory*, 62(10):5619–5642, October 2016.
- J24. Ali Tajer, Ian Dobson, Soumya Kar, Javad Lavaei, and Le Xie. Theory of Complex Systems with Applications to Smart Grid Operations. *IEEE Transactions on Smart Grid*, 7(4):1949–1950, July 2016.
- J23. *Ali Tajer and Javad Heydari. Quickest Wideband Spectrum Sensing over Correlated Channels. *IEEE Transactions on Communication*, 63(9):3082–3091, September 2015.
- J22. I. Safak Bayram, Ali Tajer, Mohamed Abdallah, and Khalid Qaraqe. Capacity Planning Frameworks for Electric Vehicle Charging Stations With Multiclass Customers. *IEEE Transactions on Smart Grid*, 6(4):1934–1943, July 2015.
- J21. Ali Tajer, Venugopal V. Veeravalli, and H. Vincent Poor. Outlying Sequence Detection in Large Data Sets: A Data-driven Approach. *IEEE Signal Processing Magazine - Special Issue on Signal Processing for Big Data*, 31(5):44–56, September 2014.
- J20. Weiqiang Xu, Ali Tajer, and Xiaodong Wang. Power Allocation in MISO Interference Channels with Stochastic CSIT. *IEEE Transactions on Wireless Communications*, 13(3):1716–1727, March 2014.
- J19. Chen Gong, Ali Tajer, and Xiaodong Wang. Distributed Real-time Energy Scheduling in SmartGrid: Stochastic Model and Fast Optimization. *IEEE Transactions on Smart Grid*, 4(3):1476 – 1489, September 2013.
- J18. Ali Tajer and H. Vincent Poor. Quick Search for Rare Events. *IEEE Transactions on Information Theory*, 59(7):4462 – 4481, July 2013.
- J17. Guido H. Jajamovich, Ali Tajer, and Xiaodong Wang. Minimax-Optimal Hypothesis Testing with Estimation-dependent Costs. *IEEE Transactions on Signal Processing*, 60(12):6151–6165, December 2012.
- J16. Shuguang Cui, Z. Han, Soumya Karand Tùng T. Kim, H. Vincent Poor, and Ali Tajer. Coordinated Data-Injection Attack and Detection in the Smart Grid: A Detailed Look at Enriching Detection Solutions. *IEEE Signal Processing Magazine*, 29(5):106–115, September 2012.
- J15. Ali Tajer, Rui M. Castro, and Xiaodong Wang. Adaptive Sensing of Congested Spectrum Bands. *IEEE Transactions on Information Theory*, 58(9):6110– 6125, September 2012.
- J14. Chen Gong, Ali Tajer, and Xiaodong Wang. Group Decoding for Multi-Relay Assisted Interference Channel. *EEE Journal of Selected Areas in Communications*, 30(8):1489 – 1499, August 2012.
- J13. Ali Tajer and Xiaodong Wang. $(n; K)$ -user Interference Channel: Degrees of Freedom. *IEEE Transactions on Information Theory*, 58(8):5338 – 5353, August 2012.
- J12. George V. Moustakides, Guido H. Jajamovich, Ali Tajer, and Xiaodong Wang. Joint Detection and Estimation: Optimum Tests and Applications. *IEEE Transactions on Information Theory*, 58(7):4215–4229, July 2012.
- J11. Chen Gong, Omar Abu-Ella, Ali Tajer, and Xiaodong Wang. Constrained Group Decoder for Interference Channels. *Journal of Communications, Special Issue on Future Directions in Computing and Networking*, 7(5):382–390, May 2012.
- J10. *Zhe Wang, Ali Tajer, and Xiaodong Wang. Communication of Energy Harvesting Tags. *IEEE Transactions on Communications*, 60(4):1159 – 1166, April 2012.
- J9. Chen Gong, Ali Tajer, and Xiaodong Wang. Interference Channels with Partial Group Decoding. *IEEE Transactions on Communications*, 59(11):3059 – 3071, November 2011.

- J8. Ali Tajer, Aria Nosratinia, and Naofal Al-Dhahir. Diversity Order of In Finite-Length Symbol-by-Symbol Linear Equalization. *IEEE Transactions on Communications*, 59(9):2343 – 2348, September 2011.
- J7. Ali Tajer and Xiaodong Wang. Information Exchange Limits in Multi-cell MIMO Cooperative Networks. *IEEE Transactions on Signal Processing*, 59(6):2927 – 2942, June 2011.
- J6. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Robust Linear Precoder Design for Multi-cell Downlink Transmission. *IEEE Transactions on Signal Processing*, 59(1):235–251, January 2011.
- J5. Ali Tajer and Xiaodong Wang. Multiuser Diversity Gain in Cognitive Networks. *IEEE/ACM Transactions on Networking*, 18(6):1766 – 1779, December 2010.
- J4. Ali Tajer and Aria Nosratinia. Diversity Order in ISI Channels with Single-Carrier Frequency-Domain Equalizers. *IEEE Transactions on Wireless Communications*, 9(3):1022 – 1032, March 2010.
- J3. Ali Tajer, Guido H. Jajamovich, Xiaodong Wang, and George V. Moustakides. Optimal Joint Target Detection and Parameter Estimation by MIMO Radar. *IEEE Journal of Selected Topics in Signal Processing*, 4(1):127–145, January 2010.
- J2. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Beamforming and rate allocation in miso cognitive radio networks. *IEEE Transactions on Signal Processing*, 58(1):362 – 377, January 2010.
- J1. Ali Tajer and Xiaodong Wang. Beacon-Assisted Spectrum Access with Cooperative Cognitive Transmitter and Receiver. *IEEE Transactions on Mobile Computing*, 9(1):112– 126, January 2010.

E Peer-reviewed Conference Papers (Extended Papers)

- EC102. * Zirui Yan and Tajer. Linear Causal Bandits: Unknown Graph and Soft Interventions. In *Proc. Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, December 2024 (**acceptance rate: 26.1%, 27 pages**).
- EC101. * Burak Varıcı, Dmitriy Katz-Rogozhnikov, Dennis Wei, Prasanna Sattigeri, and Ali Tajer. Interventional Causal Discovery in a Mixture of DAGs. In *Proc. Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, December 2024 (**acceptance rate: 26.1%, 35 pages**).
- EC100. * Emre Acartürk, Burak Varıcı, Karthikeyan Shanmugam, and Ali Tajer. Sample Complexity of Interventional Causal Representation Learning. In *Proc. Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, December 2024 (**acceptance rate: 25%, 35 pages**).
- EC99. * Burak Varıcı, Emre Acartürk, Karthikeyan Shanmugam, and Ali Tajer. Linear Causal Representation Learning from Unknown Multi-node Interventions. In *Proc. Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, December 2024 (**acceptance rate: 25%, 33 pages**).
- EC98. * Burak Varıcı, Emre Acartürk, Karthikeyan Shanmugam, and Ali Tajer. General Identifiability and Achievability for Causal Representation Learning. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, Valencia, Spain, May 2024 (**acceptance rate: 27.6%, 26 pages**).
- EC97. * Zirui Yan, Dennis Wei, Dmitriy Katz-Rogozhnikov, Prasanna Sattigeri, and Ali Tajer. General Causal Bandits: General Causal Models and Interventions. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, Valencia, Spain, May 2024 (**acceptance rate: 27.6%, 38 pages**).
- EC96. * Burak Varıcı, Karthikeyan Shanmugam, Prasanna Sattigeri, and Ali Tajer. Scalable Intervention Target Estimation in Linear Models. In *Proc. Conference on Neural Information Processing Systems (NeurIPS)*, Virtual, December 2021 (**acceptance rate: 25.8%, 38 pages**).
- EC95. * Arpan Mukherjee, Ali Tajer, Pin-Yu Chen, and Payel Das. Mean-based Best Arm Identification in Stochastic Bandits under Reward Contamination. In *Proc. Conference on Neural Information Processing Systems (NeurIPS)*, Virtual, December 2021 (**acceptance rate: 25.8%, 22 pages**).
- EC94. * Burak Varıcı, Saurabh Sihag, and Ali Tajer. Learning Shared Subgraphs in Ising Model Pairs. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, San Diego, CA, April 2021 (**acceptance rate: 29.8%, 20 pages**).

- EC93. *Saurabh Sihag and Ali Tajer. Structure Learning with Side Information: Sample Complexity. In *Proc. Conference on Neural Information Processing Systems (NeurIPS)*, Vancouver, Canada, December 2019 (**acceptance rate: 21.1%, 18 pages**).

F Peer-reviewed Conference Papers

- C92. *Anmol Dwivedi, Nurali Virani, Santiago Paternain, and Ali Tajer. RL for Mitigating Cascading Failures: Targeted Exploration via Sensitivity Factors. In *Proc. Conference on Neural Information Processing Systems (NeurIPS) – Tackling Climate Change with Machine Learning Workshop*, Vancouver, Canada, December 2024
- C91. *Arpan Mukherjee and Ali Tajer. BAI in Exponential Family: Efficiency and Optimality. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Athens, Greece, July 2024.
- C90. *Zirui Yan, Arpan Mukherjee, Burak Varıcı, and Ali Tajer. Improved Bound for Robust Causal Bandits with Linear Models. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Athens, Greece, July 2024.
- C89. *Burak Varıcı, Emre Acartürk, Karthikeyan Shanmugam, and Ali Tajer. Score-based Causal Representation Learning from Interventions: Nonparametric Identifiability. In *Proc. Conference on Neural Information Processing Systems (NeurIPS) – Workshop on Causal Representation Learning*, New Orleans, LA, December 2023.
- C88. Jiajin Zhang, Hanqing Chao, Amit Dhurandhar, Pin-Yu Chen, Ali Tajer, Yangyang Xu, and Pingkun Yan. Spectral Adversarial MixUp for Few-Shot Unsupervised Domain Adaptation. In *Proc. International Conference on Medical Image Computing and Computer Assisted Intervention*, Vancouver, Canada, October 2023.
- C87. Jiajin Zhang, Hanqing Chao, Amit Dhurandhar, Pin-Yu Chen, Ali Tajer, Yangyang Xu, and Pingkun Yan. When Neural Networks Fail to Generalize? A Model Sensitivity Perspective. In *Proc. AAAI Conference on Artificial Intelligence*, Washington, D.C., February 2023.
- C86. *Burak Varıcı, Karthikeyan Shanmugam, Prasanna Sattigeri, and Ali Tajer. Intervention Target Estimation in the Presence of Latent Variables. In *Proc. The Conference on Uncertainty in Artificial Intelligence (UAI)*, Amsterdam, Netherlands, August 2022.
- C85. *Arpan Mukherjee and Ali Tajer. SPRT-Based Best Arm Identification in Stochastic Bandits. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Espoo, Finland, July 2022.
- C84. *Zirui Yan, Quan Xiao, Tianyi Chen, and Ali Tajer. Federated Multi-armed Bandit via Uncoordinated Exploration. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Singapore, May 2022.
- C83. *Javad Heydari and Ali Tajer. Active Sampling for Binary Gaussian Model Testing in High Dimensions. In *Proc. International Conference on Machine Learning (ICML)*, Virtual, July 2021.
- C82. Anamitra Chaudhuri, Georgios Fellouris, and Ali Tajer. Sequential Change Detection of a Correlation Structure under a Sampling Constraint. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Melbourne, Australia, June 2021.
- C81. *Arpan Mukherjee, Ali Tajer, Pin-Yu Chen, and Payel Das. Active Binary Classification of Random Fields. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Melbourne, Australia, June 2021.
- C80. *Anmol Dwivedi, Sihui Wang, and Ali Tajer. Linear Discriminant Analysis under f -divergence Measures. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Melbourne, Australia, June 2021.
- C79. *Saurabh Sihag, Ali Tajer, and Urbashi Mitra. Two-stage Graph-constrained Group Testing: Theory and Application. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Toronto, Canada, June 2021.
- C78. *Arpan Mukherjee, Ali Tajer, Pin-Yu Chen, and Payel Das. Active Estimation from Multimodal Data. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Toronto, Canada, June 2021.
- C77. *Saurabh Sihag and Ali Tajer. Approximate Recovery Of Ising Models with Side Information. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Los Angeles, CA, June 2020.

- C76. * Maha Zohdy, Ali Tajer, and Shlomo Shamai (Shitz). Interference Management without CSIT: A Broadcast Approach. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Los Angeles, CA, June 2020.
- C75. * Ali Tajer and Guangtao Zheng. Learning the Wireless Interference Graph via Local Probes. In *Proc. International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, Atlanta, GA, May 2020.
- C74. * Javad Heydari and Ali Tajer. Quickest Search for a Change Point. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Paris, France, July 2019.
- C73. * Saurabh Sihag and Ali Tajer. Structure Learning of Similar Ising Models: Information-theoretic Bounds. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Paris, France, July 2019.
- C72. * Saurabh Sihag and Ali Tajer. Secure Estimation under Causative Attacks. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Paris, France, July 2019.
- C71. * Saurabh Sihag and Ali Tajer. Sample Complexity of Joint Structure Learning. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Brighton, UK, April 2019.
- C70. * Maha Zohdy and Ali Tajer. A Broadcast Approach to the Single-user Energy Harvesting Channel. In *Proc. IEEE Global Communications Conference (GLOBECOM)*, Abu Dhabi, UAE, December 2018.
- C69. * Maha Zohdy, Samia Kazemi, and Ali Tajer. A Broadcast Approach to Multiple Access with Partial CSIT. In *Proc. IEEE Global Communications Conference (GLOBECOM)*, Abu Dhabi, UAE, December 2018.
- C68. * Saurabh Sihag and Ali Tajer. Non-Linear State Estimation in Power Systems under Model Uncertainty. In *Proc. IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Anaheim, CA, Nov. 2018.
- C67. * Javad Heydari and Ali Tajer. Quickest Search for a Change Window. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, Oct. 2018.
- C66. * Ali Tajer and Maha Zohdy. Resource Allocation under Sequential Resource Access: Theory and Application. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, October 2018.
- C65. * Samir M. Perlaza, Ali Tajer, and H. Vincent Poor. Simultaneous Energy and Information Transmission: A Finite Block-length Analysis. In *Proc. International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, Kalamata, Greece, June 2018.
- C64. * Javad Heydari and Ali Tajer. Controlled Sensing for Multi-hypothesis Testing with Co-dependant Actions. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Vail, CO, June 2018.
- C63. * Saurabh Sihag and Ali Tajer. Scalable Network Parameter Estimation in the Presence of Anomalies. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Calgary, Canada, April 2018.
- C62. * Saurabh Sihag and Ali Tajer. Distributed Estimation under Network Model Uncertainty. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Calgary, Canada, April 2018.
- C61. * Saurabh Sihag, Javad Heydari, and Ali Tajer. Sequential Estimation of Distributed Parameters in Networks. In *Proc. IEEE Conference on Information Sciences and Systems (CISS)*, Princeton, NJ, March 2018.
- C60. Ali Tajer. Data Injection Attacks in Electricity Markets: Stochastic Robustness. In *Proc. IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Montreal, Canada, November 2017.
- C59. * Saurabh Sihag and Ali Tajer. Secure parameter estimation: Fundamental tradeoffs. In *Proc. IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Montreal, Canada, November 2017.
- C58. * Javad Heydari, Zeyu Sun, and Ali Tajer. Quickest line outage localization under unknown model. In *Proc. IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Montreal, Canada, November 2017.
- C57. Ali Tajer. Quickest search for a transient change in a time series. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, October 2017.
- C56. * Samia Kazemi and Ali Tajer. A broadcast approach to multiple access adapted to the multiuser channel. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Aachen, Germany, June 2017.

- C55. * Javad Heydari and Ali Tajer. Quickest search and learning over multiple sequences. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Aachen, Germany, June 2017.
- C54. * Javad Heydari and Ali Tajer. Quickest change detection in structured data with incomplete information. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, New Orleans, LA, March 2017.
- C53. Trevor Allen, Ali Tajer, and Naofal Al-Dhahir. Reduced-feedback an-aided secure alamouti mac transmissions. In *Proc. IEEE Global Communications Conference (GLOBECOM)*, Washington, D.C., December 2016.
- C52. * Mengheng Xue and Ali Tajer. Robust false data injection attacks in electricity markets by limited adversaries. In *Proc. Annual Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, November 2016.
- C51. * Javad Heydari and Ali Tajer. Quickest combined anomaly detection and estimation in networked data. In *Proc. Annual Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, November 2016.
- C50. * Javad Heydari and Ali Tajer. Quickest search for local structures in line networks. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, October 2016.
- C49. * Javad Heydari, Ali Tajer, and H. Vincent Poor. Quickest detection of markov networks. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Barcelona, Spain, June 2016.
- C48. * Javad Heydari and Ali Tajer. A graphical approach to quickest outage localization in power grids. In *Proc. IEEE Workshop on Statistical Signal Processing (SSP)*, Palma de Mallorca, Spain, June 2016.
- C47. * Javad Heydari, Ali Tajer, and H. Vincent Poor. Quickest search over correlated sequences under model uncertainty. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Shanghai, China, March 2016.
- C46. * Javad Heydari, Ali Tajer, and H. Vincent Poor. Quickest Detection of Gauss-Markov Random Fields. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, October 2015.
- C45. * Javad Heydari and Ali Tajer. Quickest Linear Search over Correlated Sequences. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Hong Kong, China, June 2015.
- C44. * Ali Tajer and Javad Heydari. Quickest Spectrum Sensing over Correlated Channels. In *Proc. International Conference on Communications (ICC)*, London, UK, June 2015.
- C43. * I. Safak Bayram, Ali Tajer, Mohamed Abdallah, and Khalid Qaraqe. Energy Storage Sizing for Peak Hour Utility Applications. In *Proc. International Conference on Communications (ICC)*, London, UK, June 2015.
- C42. Hamideh Zebardast, Ali Tajer, Behrouz Maham, and Mohsen Rezaee. Relay X Channel without Channel State Information at the Transmit Sides: Degrees of Freedom. In *Proc. IEEE Wireless Communications and Networking Conference (WCNC)*, New Orleans, LA, March 2015.
- C41. Ali Tajer. Diversified parameter estimation in complex networks. In *Proc. IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Atlanta, GA, December 2014.
- C40. * Javad Heydari and Ali Tajer. Quickest Sequential Search over Correlated Sequences. In *Proc. Annual Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, November 2014.
- C39. Ali Tajer. Energy grid state estimation under random and structured bad data. In *Proc. IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM)*, Coruna, Spain, June 2014.
- C38. * Saeed Balaneshin, Ali Tajer, and H. Vincent Poor. Quick search for correlated rare events in high-dimensional data. In *Proc. International Symposium on Communications, Control, and Signal Processing*, Athens, Greece, May 2014.
- C37. Ali Tajer and H. Vincent Poor. Adaptive Block Sampling for Spectrum Sensing. In *Proc. IEEE International Workshop on Computational Advances in Multi-sensor Adaptive Processing (CAMSAP)*, Saint Martin, December 2013.
- C36. * Khalid Kalbat and Ali Tajer. Learning-based distributed load forecasting in energy grids. In *Proc. IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Austin, TX, December 2013.
- C35. Ali Tajer and H. Vincent Poor. Quick Search for Rare Events through Sequential Group Sampling. In *Proc. Annual Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, November 2013.

- C34. Ali Tajer and H. Vincent Poor. Quick Search for Rare Spectrum Opportunities. In *Proc. European Signal Processing Conference*, Marrakech, Morocco, September 2013.
- C33. Ali Tajer and H. Vincent Poor. Quick Spectrum Access via Block Sampling. In *Proc. IEEE Vehicular Technology Conference Fall*, Las Vegas, NV, August 2013.
- C32. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Design of Coordinated Multi-Point (CoMP) Transmission and Reception Schemes for the 4G Cellular Downlink. In *Proc. Annual Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, November 2012.
- C31. Ali Tajer and H. Vincent Poor. Hypothesis testing for partial sparse recovery. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, October 2012.
- C30. Ali Tajer and H. Vincent Poor. Cost of Proportional Fairness in Multiuser Networks. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, October 2012.
- C29. C. S. Leberknight and Ali Tajer and M. Chiang and H. Vincent Poor. Identifying Communities of Interest Using Side Information. In *Proc. IEEE Workshop on Statistical Signal Processing (SSP)*, Ann Arbor, MI, August 2012.
- C28. H. Godrich, A. Tajer, and H.V. Poor. Distributed target tracking in multiple widely separated radar architectures. In *Proc. IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM)*, Hoboken, NJ, June 2012.
- C27. Ali Tajer and H. Vincent Poor. Quick Partial Sparse Support Recovery. In *Proc. IEEE Information Theory and Applications (ITA)*, San Diego, CA, February 2012.
- C26. Chen Gong, Ali Tajer, and Xiaodong Wang. Group Decoding for Interference Channels. In *Proc. International Conference on Computing, Networking and Communications*, Manu, HI, January 2012.
- C25. Chen Gong, Ali Tajer, and Xiaodong Wang. A Practical Coding Scheme for Interference Channel using Constrained Partial Group Decoder. In *Proc. IEEE Global Communications Conference (GLOBECOM)*, Houston, TX, December 2011.
- C24. Ali Tajer, Soumya Kar, H. Vincent Poor, and Shuguang Cui. Distributed joint cyber attack detection and state recovery in smart grids. In *Proc. IEEE Smart Grid Communication Conference*, Brussels, Belgium, October 2011.
- C23. Guido H. Jajamovich, Ali Tajer, and Xiaodong Wang. Optimal combined detection and estimation. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, October 2011.
- C22. Ali Tajer and H. Vincent Poor. Adaptive Sampling for Sparse Recovery. In *Proc. Workshop on Information Theoretic Methods in Science and Engineering*, Helsinki, Finland, August 2011.
- C21. Ali Tajer, H. Vincent Poor, and Xiaodong Wang. Partial Group Decoding for Interference Channels. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Saint Petersburg, Russia, August 2011.
- C20. Ali Tajer, Xiaodong Wang, and H. Vincent Poor. Coordination Limits in MIMO Networks. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Saint Petersburg, Russia, August 2011.
- C19. Ali Tajer and Xiaodong Wang. $(n;K)$ -user Interference Channel: Degrees of Freedom. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Saint Petersburg, Russia, August 2011.
- C18. Ali Tajer and H. Vincent Poor. Quick Search via Adaptive Sampling. In *International Workshop on Sequential Methodologies*, Palo Alto, CA, June 2011.
- C17. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Fair Rate Adaptation in Multiuser Interference Channels. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Austin, TX, June 2010.
- C16. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Robust Beamforming for Multi-cell Downlink Transmission. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Austin, TX, June 2010.
- C15. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Robust Transceiver Design for the Multi-user Interference Channel. In *Proc. International Conference on Communications (ICC)*, Cape Town, South Africa, May 2010.
- C14. Ali Tajer, Rui M. Castro, and Xiaodong Wang. Adaptive spectrum sensing for agile cognitive radios. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Dallas, TX, March 2010.

- C13. Ali Tajer, Rui M. Castro, and Xiaodong Wang. Adaptive spectrum sensing for agile cognitive radios. In *Proc. IEEE Information Theory and Applications (ITA)*, San Diego, CA, February 2010.
- C12. Ali Tajer, Guido H. Jajamovich, Xiaodong Wang, and George V. Moustakides. Finite-sample optimal joint target detection and parameter estimation by MIMO radars. In *Proc. the Forty-Third Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, CA, Nov. 2009.
- C11. Ali Tajer, Guido H. Jajamovich, Xiaodong Wang, and George V. Moustakides. Finite-sample optimal joint target detection and parameter estimation by MIMO radars. In *Proc. IEEE Military Communications Conference (MILCOM)*, Boston, MA, Oct. 2009.
- C10. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Distributed Beamforming and Rate Allocation in Multi Antenna Cognitive Radio Networks. In *Proc. International Conference on Communications (ICC)*, Dresden, Germany, June 2009.
- C9. Ali Tajer and Xiaodong Wang. Beacon-Assisted Spectrum Access with Cooperative Cognitive Transmitter and Receiver. In *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Taiwan, March 2009.
- C8. Ali Tajer and Xiaodong Wang. Multiuser Diversity Gain in Cognitive Networks with Distributed Spectrum Access. In *Proc. IEEE Conference on Information Sciences and Systems (CISS)*, Baltimore, MD, March 2009.
- C7. Ali Tajer, Narayan Prasad, and Xiaodong Wang. Distributed Rate Allocation in MISO Cognitive Networks. In *Proc. IEEE Information Theory and Applications (ITA)*, San Diego, CA, February 2009.
- C6. Ali Tajer and Xiaodong Wang. Opportunistic Multi-Antenna Downlink Transmission with Finite-Rate Feedback. In *Proc. Allerton Conference on Communication, Control, and Computing*, Monticello, IL, September 2008.
- C5. Ali Tajer and Aria Nosratinia. Diversity Order of MMSE Single-Carrier Frequency Domain Linear Equalization. In *Proc. IEEE Global Communications Conference (GLOBECOM)*, Washington, D.C., November 2007.
- C4. Ali Tajer and Aria Nosratinia. Opportunistic Cooperation via Partner Selection with Minimal Information Exchange. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Nice, France, June 2007.
- C3. Ali Tajer, Aria Nosratinia, and Naofal Al-Dhahir. MMSE Infinite Length Symbol-by-Symbol Linear Equalization Achieves Full Diversity. In *Proc. IEEE International Symposium on Information Theory (ISIT)*, Nice, France, June 2007.
- C2. Ali Tajer and Aria Nosratinia. A Broadcasting Relay for Orthogonal Multiuser Channels. In *Proc. IEEE Global Communications Conference (GLOBECOM)*, San Francisco, CA, November 2006.
- C1. Ali Tajer and Babak H. Khalaj. Performance Enhancement of Cellular OFDM Based Wireless LANs by Exploiting Spatial Diversity Techniques. In *Proc. International Conference of Signal Processing*, Ankara, Turkey, 2004.

Editorship & Service

Research Proposal Reviews

- NSF Panel Reviewer, CISE (CAREER) 2024
- DoE Panel Reviewer 2024
- NSF Panel Reviewer, ENG 2024
- NSF Panel Reviewer, CISE (CAREER) 2023
- NSF Panel Reviewer, ENG (2) 2022
- NSF Panel Reviewer, ENG 2022
- NSF Panel Reviewer, CISE 2022
- NSF Panel Reviewer, CISE (AI Institute) 2021
- NSF Panel Reviewer, ENG (CAREER) 2020
- NSF Panel Reviewer, CISE (CAREER) 2020
- NSF Panel Reviewer, CRII 2020
- NSF Panel Reviewer, CISE 2020

- Natural Sciences and Engineering Research (Canada) 2020
- NSF Panel Reviewer, CISE 2019
- DoE Panel Reviewer 2019
- NSF Panel Reviewer, Big Data 2018
- NSF Panel Reviewer, Big Data 2017
- Israel Science Foundation 2017
- US-Israel Binational Science Foundation 2017
- NSF Panel Reviewer, Big Data 2016
- NSF Panel Reviewer, CISE 2016
- NSF Panel Reviewer, EARS 2015
- NSF Panel Reviewer, CISE 2015
- Israel Science Foundation 2015
- NSF Panel Reviewer, RIPS 2014
- NSF Panel Reviewer, Big Data 2014
- AFOSR/DDDS 2014
- NSF Panel Reviewer, ENG 2013

Professional Societies

- *Senior Member*, IEEE
- *Member*, IEEE Information Theory Society
- *Member*, IEEE Signal Processing Society
- *Member*, IEEE Communication Society
- *Member*, IEEE Power System Society
- *Member*, Society for Industrial and Applied Mathematics (SIAM)
- *Member*, New York Academy of Sciences

Service to Professional Societies

• **Finance Chair**

- IEEE International Symposium on Information Theory (ISIT) 2024

• **Technical Societies Committee Member:**

– **Elected Member**

IEEE Signal Processing Theory and Methods 2018 – 2023

IEEE Signal Processing for Communications and Networking 2018 – 2020

– **Invited Member**

IEEE Signal Processing Education Committee 2022 – 2023

IEEE Signal Processing for Communications 2016 – 2022

IEEE Multimedia Communications Technical Committee 2012 – 2014

• **Society Representation**

- IEEE Signal Processing Society’s Representative on the IEEE Smart Grid Initiative 2019 – 2023

- IEEE Signal Processing Society’s Representative on the IEEE Trans. on Smart Grid 2019 – 2023

• **Technical Chair**

- IEEE Global Communications Conf. (Globecom) 2020

- Asilomar Conference on Signals, Systems, and Computers 2020

• **Symposium Chair**

- IEEE Smart Grid Communications (SmartGridComm) 2023

- IEEE Global Communications Conf. (Globecom) 2019

- IEEE Intl. Conf. on Computing, Networking and Communications (ICNC) 2014
- IEEE Intl. Conf. on Communications and Networking 2012
- **Special Session Organizer**
 - Asilomar Conference on Signals, Systems, and Computers 2018
 - Asilomar Conference on Signals, Systems, and Computers 2014
 - IEEE Workshop on CAMSAP 2015
- **Track Chair**
 - IEEE Statistical Signal Processing Workshop 2023
- **Tutorials Chair**
 - IEEE Smart Grid Communications (SmartGridComm) 2020
- **Technical Program Committee**
 - Artificial Intelligence and Statistics (AISTATS) 2025
 - International Conference on Learning Representations (ICLR) 2025
 - The Conference on Uncertainty in Artificial Intelligence (UAI) 2024
 - IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2024
 - IEEE Workshop on Comp. Advances in Multi-Sensor Adaptive Processing (CAMSAP) 2023
 - IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2023
 - IEEE Intl. Workshop on Signal Processing Advances in Wireless Communications (SPAWC) 2022
 - IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2022
 - IEEE International Symposium on Information Theory (ISIT) 2021
 - IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2021
 - IEEE Intl. Workshop on Signal Processing Advances in Wireless Communications (SPAWC) 2021
 - IEEE Smart Grid Communications (SmartGridComm) 2020
 - IEEE International Symposium on Information Theory (ISIT) 2020
 - IEEE Intl. Workshop on Signal Processing Advances in Wireless Communications (SPAWC) 2020
 - IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2020
 - ACM Special Interest Group on Measurement and Evaluation (SIGMETRICS) 2020
 - IEEE Smart Grid Communications (SmartGridComm) 2019
 - IEEE Global Signal and Information Processing (GlobalSIP) 2019
 - IEEE International Symposium on Information Theory (ISIT) 2019
 - IEEE Data Science Workshop (DSW) 2019
 - IEEE Wireless Communications and Networking Conf. (WCNC) 2019
 - IEEE Intl. Workshop on Signal Processing Advances in Wireless Communications (SPAWC) 2019
 - IEEE Intl. Conf. on Communications (ICC) 2019
 - IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2019
 - IEEE Global Signal and Information Processing (GlobalSIP) 2018
 - IEEE Smart Grid Communications (SmartGridComm) 2018
 - IEEE Global Communications Conf. (Globecom) 2018
 - IEEE Intl. Conf. on Communications (ICC) 2018
 - IEEE Intl. Conf. on Computing, Networking and Communications (ICNC) 2018

- IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)	2018
- IEEE Global Communications Conf. (Globecom)	2017
- IEEE Intl. Conf. on Communications (ICC)	2017
- IEEE Global Signal and Information Processing (GlobalSIP)	2017
- IEEE Workshop on Comp. Advances in Multi-Sensor Adaptive Processing (CAMSAP)	2017
- IEEE Smart Grid Communications (SmartGridComm)	2016
- IEEE Global Communications Conf. (Globecom)	2016
- IEEE Global Signal and Information Processing (GlobalSIP)	2016
* Machine Learning for of Cognitive Communications and Radar	
* Signal Processing for Big Data in Wireless Networks	
- IEEE Wireless Communications and Networking Conf. (WCNC)	2016
- IEEE Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)	2015
- IEEE Global Signal and Information Processing (GlobalSIP)	2015
- IEEE Global Communications Conf. (Globecom)	2015
- IEEE Intl. Conf. on Communications (ICC)	2015
- IEEE Global Signal and Information Processing (GlobalSIP)	2014
- IEEE Intl. Symposium on Wireless Personal Multimedia Communication (WMPC)	2014
- IEEE International Wireless Symposium (IWS)	2014
- IEEE International Conf. on Communications (ICC)	2014
- IEEE International Conf. on Connected Vehicles & Expo	2013
- IEEE & CIC International Conf. on Communications	2013
- IEEE Smart Grid Communication Conf. (SmartGridComm)	2013
- IEEE Global Wireless Summit,	2013
- IEEE Wireless Conf. and Networking Conference	2013
- IEEE Global Signal and Information Processing (GlobalSIP)	2013
* Symposium on Network Theory	
* Symposium on New Sensing and Statistical Inference Methods	
* Symposium on Information Processing in Energy Grids	
- IEEE International Wireless Symposium	2013
- IEEE Smart Grid Communications (SmartGridComm)	2012

• **Peer Reviewing (Selected List)**

- IEEE Transactions on Information Theory
- Annals of Statistics
- Bernoulli Journal
- IEEE Transactions on Automatic Control
- IEEE Transactions on Signal Processing
- IEEE Journal of Selected Topics in Signal Processing
- IEEE Transactions on Signal and Information Processing over Networks
- IEEE Transactions on Power Systems
- IEEE Transactions on Smart Grids
- IEEE Transactions on Communications
- IEEE Transactions on Wireless Communications
- IEEE Journal of Selected Areas in Communications
- IEEE Transactions on Mobile Computing
- IEEE Transactions on Vehicular Technology
- IEEE/ACM Transactions on Networking
- IEEE Signal Processing Magazine
- IEEE Communications Magazine
- IEEE Signal Processing Letters
- IEEE Communication Letters
- IEEE Wireless Communications Letters
- EURASIP Journal on Advances in Signal Processing
- EURASIP Journal on Wireless Communications and Networking
- Cambridge University Press
- ASME Journal of Mechanical Design
- Conferences: AISTATS, NeurIPS, COLT, ICML, ISIT, INFOCOM, Globecom, ICC, and ICASSP.

Service

Service to the Institute

University, School, and Departmental Committees

- Curriculum Committee for Masters in Quantum Science and Engineering 2024 – present
- Quantum Computing Advisory Committee (Institute) 2023 – present
- Associate Graduate Program Director (ECSE) 2022 – present
- AI/ML Area Chair (ECSE) 2019 - present
- Graduate Admission Committee (ECSE) 2015 – 2019, 2020 – present
- Faculty Recruitment Committee (ECSE) 2015 – present
- Graduate Studies Committee (ECSE) 2014 – present
- Communications, Information, and Signals and Systems (ECSE) 2014 - present
- Faculty Senate, Senator (Institute) 2019 – 2021
- Faculty Award Committee (ECSE) 2019 – 2020
- School of Engineering Awards Committee (SoE) 2019 – 2020
- RPI-IBM AI Research Collaboration Core (Institute) Hiring Committee 2019 – 2020
- Cybersecurity Analysis Team (Institute) 2019 – 2020
- Data Dexterity Task Force (SoE) 2018 – 2019
- Faculty Recruitment Committee (ECSE), Chair 2018 – 2019
- Cyber Security Task Force (Institute) 2018
- Seminar Series Organizer (WSU, ECE) 2013 – 2014
- Graduate Studies Committee (WSU, ECE) 2012 – 2014

Other Service and Administration Activities

- Undergraduate Research Symposium – Judge Apr. 2018
- High School Research Program – Judge Aug. 2017
- Undergraduate Research Symposium – Judge Apr. 2017
- IEEE Signal Processing Distinguished Lectures – Organizer 2016 – present

Professional and Public Lectures

Plenary Talks

- IEEE Smart Grid Communications Conference (Miami, FL) Nov. 2015
Title: *Data-adaptive Agile Line Outage Detection and Localization*
- Cyber Physical Systems Week (Philadelphia, PA) Apr. 2013
Title: *Non-asymptotic Composite Hypothesis Testing: Theory and Applications*

Invited Talks

- [Causal Representation Learning](#)
 - IT70. Indian Institute of Science (Bengaluru, India) Nov. 2024
 - IT69. Google DeepMind Nov. 2024
 - IT68. Massachusetts Institute of Technology (Cambridge, MA) Oct. 2024
- [Causal Bandits](#)
 - IT67. Google DeepMind Nov. 2024
 - IT66. University of Illinois, Urbana-Champaign (Urbana, IL) Sep. 2023
 - IT65. National University of Singapore (Singapore) Jan. 2023

IT64. University of Southern California (Los Angeles, CA)	Oct. 2022
• <i>Best Arm Identification in Stochastic Bandits</i>	
IT63. International Workshop on Applied Probability	Jun. 2023
IT62. National University of Singapore (Singapore)	Jan. 2023
IT61. University of Illinois, Urbana-Champaign (Urbana, IL)	Oct. 2022
IT60. INRIA (Nice, France)	Jun. 2022
• <i>Secure Estimation in Adversarial Environments</i>	
IT59. Air Force Research Lab (Rome, NY)	May 2019
• <i>Active Sensing for Quickest Event Detection in Networks</i>	
IT58. Shannon YouTube Channel	Nov. 2019
IT57. National Science Foundation	Nov. 2019
IT56. California Institute of Technology (Pasadena, CA)	Nov. 2018
IT55. University of California, Berkeley (Berkeley, CA)	Oct. 2018
• <i>Controlled Sensing under Correlated Actions</i>	
IT54. Information Theory and Application (U. of California San Diego, La Jolla, CA)	Feb. 2018
• <i>Optimization under Sequential Resource Access</i>	
IT53. Sharif University of Technology (Tehran, Iran)	Feb. 2018
• <i>Quickest Search for Local Structures in Random Graphs</i>	
IT52. Syracuse University (Syracuse, NY)	Feb. 2018
IT51. Shanghai Jiao Tong University (Shanghai, China)	Oct. 2017
IT50. Tongji University (Shanghai, China)	Oct. 2017
IT49. Southeast University - School of Information Science and Eng'g (Nanjing, China)	Oct. 2017
IT48. Southeast University - School of Mathematics (Nanjing, China)	Oct. 2017
IT47. University of Science and Technology of China (Hefei, China)	Oct. 2017
IT46. Carnegie Mellon University (Pittsburgh, PA)	May 2017
IT45. Information Theory and Application (U. of California San Diego, La Jolla, CA)	Feb. 2017
IT44. Texas A&M University - Doha (Doha, Qatar)	Jan. 2017
IT43. State University of New York - Albany (Albany, NY)	Nov. 2016
IT42. Lund University	Aug. 2016
• <i>Quickest Search for Anomalies in Networked Data</i>	
IT41. General Electric (Schenectady, NY)	May 2016
IT40. Information Theory and Application (U. of California San Diego, La Jolla, CA)	Feb. 2016
IT39. Boğaziçi University (Istanbul, Turkey)	Nov. 2015
IT38. Sabanci University (Istanbul, Turkey)	Nov. 2015
IT37. Koç University (Istanbul, Turkey)	Nov. 2015
IT36. University of Pittsburgh (Pittsburgh, PA)	Feb. 2014
IT35. New Jersey Institute of Technology (Newark, NJ)	Feb. 2014
IT34. Illinois Institute of Technology (Chicago, IL)	Jan. 2014
• <i>Fundamental Limits of Spectrum Sensing</i>	

IT33. National Science Foundation (Arlington, VA)	Mar. 2016
IT32. American Association for Advancement of Science (Washington, D.C.)	Mar. 2012
• <i>Data-adaptive Agile Line Outage Detection and Localization</i>	
IT31. IEEE Statistical Signal Processing Workshop (Palma de Mallorca, Spain)	Jun. 2016
IT30. University of Vermont (Burlington, VT)	Oct. 2015
• <i>Search for Correlation Structures in Networked Data</i>	
IT29. Tufts University (Medford, MA)	Sep. 2015
IT28. Worcester Polytechnic Institute (Worcester, MA)	Sep. 2015
IT27. Rensselaer Polytechnic Institute - Computer Science Department (Troy, NY)	May 2015
IT26. Information Theory and Application (U. of California San Diego)	Feb. 2015
• <i>Coordination Limits in Wireless Networks</i>	
IT25. Imperial College London (London, UK)	Apr. 2014
IT24. Rensselaer Polytechnic Institute Troy, NY)	Mar. 2014
IT23. Purdue University (West Lafayette, IN)	Mar. 2014
IT22. George Mason University (Fairfax, VA)	Mar. 2014
IT21. Pennsylvania State University (State College, PA)	Mar. 2014
IT20. Virginia Polytechnic Institute and State University (Blacksburg, VA)	Feb. 2014
IT19. Georgia Institute of Technology (Atlanta, GA)	Mar. 2012
IT18. University of Minnesota (Minneapolis, MN)	Mar. 2012
IT17. University of Massachusetts (Amherst, MA)	Mar. 2012
IT16. Boston University (Boston, MA)	Mar. 2012
IT15. Tufts University (Medford, MA)	Mar. 2012
IT14. Qualcomm, Inc. (San Diego, MA)	Jan. 2012
• <i>Quick Search over Correlated Sequences</i>	
IT13. Information Theory and Application (U. of California San Diego, La Jolla, CA)	Feb. 2014
• <i>Distributed Inference and Resource Management in Power Systems</i>	
IT12. Temple University (Philadelphia, PA)	Nov. 2013
IT11. New Jersey Institute of Technology (Newark, NJ)	Feb. 2013
IT10. New York University (Brooklyn, NY)	Apr. 2012
IT9. Wayne State University (Detroit, MI)	Mar. 2012
• <i>Quick Search for Rare Events</i>	
IT8. Information Theory and Application (U. of California San Diego, La Jolla, CA)	Feb. 2012
IT7. Rutgers University (New Brunswick, NJ)	Nov. 2011
IT6. Stanford University (Palo Alto, CA)	Jun. 2011
• <i>Interference Management via Group Decoding</i>	
IT5. University of Illinois Chicago (Chicago, IL)	Mar. 2011
IT4. Alcatel Lucent Bell Labs (Murray Hill, NJ)	Mar. 2011
IT3. Information Theory and Application (U. of California San Diego, La Jolla, CA)	Feb. 2011
IT2. Broadcom	Jun. 2010
IT1. Alcatel Lucent Bell Labs (Murray Hill, NJ)	Apr. 2010