

Tara Javidi

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Electrical and Computer Engineering
University of California, San Diego

Education

University of Michigan, Ann Arbor, MI

Ph.D., Electrical Engineering and Computer Science: Systems August 2002
Major: Communications; Minor: Control
Dissertation: "Resource Allocation: Issues and Applications in Networks"

Master of Science, Applied Mathematics August 1999
Focus: Mathematics of Optimization and Stochastic Processes

Master of Science, Electrical Engineering and Computer Science: Systems May 1998
Major: Communications; Minor: Control

Sharif University of Technology, Tehran, Iran

Baccalaureate of Science, Electrical Engineering June 1996
Major: Electronics

Honors/ Awards

National Science Foundation, Early Career (CAREER) award April 2004

Barbour Scholarship: Rackham School of Graduate Studies, University of Michigan September 1999

Ranked first in the nationwide entrance exam for Iranian universities (among 300,000 examinees) June 1992

Awards for distinction from

- Presidential Office, Tehran, Iran
- The Ministry of Higher Education, Tehran, Iran
- Educational Vice-President, Sharif University of Technology, Tehran, Iran
- Iranian Women Association, Tehran, Iran

IEEE Senior Member

Work Experience

University of California, San Diego

Professor
Electrical and Computer Engineering Department, University of California, San Diego July 2016-present

Associate Professor
Electrical and Computer Engineering Department, University of California, San Diego July 2010-June 2016

Assistant Professor
Electrical and Computer Engineering Department, University of California, San Diego Jan 2005-June 2010

University of Washington, Seattle

Assistant Professor
Electrical Engineering Department, University of Washington, Seattle Sept 2002-Dec 2004

Research Focus: Wireless communication, Stochastic Control and Scheduling, Network Information Theory, Cross-layer Wireless Network Design, Radio-aware Mesh Networking

Center Affiliations: Center for Wireless Communications (CWC), Center for Information Theory and Applications (ITA-CALIT2), Center for Networked Systems (CNS), Advanced Network Science Group (ANS-CALIT2)

Teaching: Dynamical Systems under Uncertainty (ECE272A); Stochastic Processes and Markov Chains (EE508); Computer and Communications Networks (EE566, ECE257A); Digital Communications: Information Theory and Coding (ECE154C); Introduction to Stochastic Processes (ECE153); Discrete Signals and Systems (EE341, ECE161A); Microeconomics and Distributed Optimizations in Networks (EE597)

Campus Service: Academic Senate (Undergraduate Council, Committee on Diversity and Equity (CDE), UC Affirmative Action Committee (UCAAD)). UCSD Senate Council (CDE Chair). ECE Faculty Search Committee. JSOE Diversity Council. IDEA Student Center Advisory Board. Faculty Advisor to UCSD Student Chapter of Society of Women Engineers (SWE). ECE Diversity and Outreach Chair.

Publications

Journal Publications

1. T. Javidi, N. Song, and D. Teneketzis. Expected Makespan Minimization in Two Interconnected Queues on Identical Parallel Machines. *Journal of Probability in Engineering and Information Science*, vol. 15, pp 409-443, 2001
2. T. Javidi and D. Teneketzis. An Approach to Connection Admission Control in Single-hop Multi-service Wireless Networks with QoS Requirements. *IEEE Transactions on Vehicular Technology*, July 2003
3. T. Javidi and D. Teneketzis. Sensitivity Analysis for Optimal Routing in Wireless Ad Hoc Networks in Presence of Error in Channel Quality Estimation. *IEEE Transactions on Automatic Control*, August 2004
4. J. Price and T. Javidi. Decentralized Rate Assignments in a Multi-Sector CDMA Network, *IEEE Transactions on Wireless Communications*, December 2006
5. P. Elia, S. Kittipiyakul, T. Javidi, Cooperative Diversity Schemes for Asynchronous Wireless Networks, *Wireless Personal Communications, Springer Netherlands*, Volume 43, No 1, October, 2007
6. S. Kittipiyakul and T. Javidi, Resource allocation in OFDMA with time-varying channel and bursty arrivals, *IEEE Communications Letters*, v. 11, no. 9, pp. 708-710, Sept 2007
7. J. Price and T. Javidi, Leveraging Downlink for Efficient Uplink Allocation in a Single-Hop Wireless Network, *IEEE Transactions on Information Theory*, v. 53. no. 11, pp. 4330-4339, Nov 2007
8. S. Kittipiyakul and T. Javidi. Optimal Operating Point for MIMO Multiple-access Channel with Bursty Traffic. *IEEE Trans. Wireless Communication*, v. 6. no. 12, pp. 4464-4474, December 2007.
9. J. Price and T. Javidi, Distributed Rate Assignments for Simultaneous Interference and Congestion Control in CDMA-Based Wireless Networks. *IEEE Transactions on Vehicular Technology*, Volume 57, Issue 3, pp. 1980 - 1985, May 2008
10. D. Klein, P. Lee, K. Morgansen, T. Javidi, Integration of Communication and Control using Discrete Time Kuramoto Models for Multi-vehicle Coordination over Broadcast Networks, *IEEE Journal of Selected Areas in Communications*, v. 26. no. 4. May 2008
11. N. Ehsan and T. Javidi, Delay Optimal Transmission Policy in a Wireless Multi-access Channel. *IEEE Transactions on Information Theory*, Volume 54, Issue 8, pp. 3745 – 3751, August 2008
12. J. Price and T. Javidi. Network Coding Games with Unicast Flows. *IEEE Journal on Selected Areas in Communications*, Volume 26, Issue 7, pp. 1302 – 1316, September 2008
13. T. Javidi. Cooperative and Non-cooperative Resource Sharing in Networks: A Delay Perspective. *IEEE Transactions on Automatic Control*, Volume 53, Number 9, pp 2134-2142, October 2008
14. S. Kittipiyakul, P. Elia, T. Javidi. High-SNR Analysis of Outage-Limited Communications with Bursty and Delay-Limited Information. *IEEE Transactions on Information Theory*, Volume 55, Issue 2, pp. 746–763, February 2009
15. S. Kittipiyakul and T. Javidi, Delay-Optimal Server Allocation in Multi-Queue Multi-Server Systems with Time-Varying Connectivities. *IEEE Transaction on Information Theory*. Volume 55, Number 5, pp 2319-2333, April 2009
16. S. Haji Ali Ahmad, M. Liu, T. Javidi, Q. Zhao, and B. Krishnamachari, Optimality of Myopic Sensing in Multi-Channel Opportunistic Access. *IEEE Transactions on Information Theory*. Volume 55, Issue 9, pp 4040 - 4050, September 2009
17. E. Ardestanizadeh, M. Franceschetti, T. Javidi, and Y. H. Kim, The Secrecy Capacity of the Wiretap Channel with Rate-limited Feedback. *IEEE Transactions on Information Theory*. Volume 55, Issue 12, pp 5353 - 5361, December 2009
18. R. Pagliari, M.E. Yildiz, S. Kirti, K. Morgansen, T. Javidi, and A. Scaglione. A Simple and Scalable Algorithm for Alignment in Broadcast Networks. *IEEE Journal on Selected Areas in Communications*, Volume 28, Issue 7, pp 1190 - 1199, August 2010
19. V. Subramanian, T. Javidi, and S. Kittipiyakul. Many-Sources Large Deviations for Max-Weight Scheduling. *IEEE Transactions on Information Theory*, Volume 57, Issue 4, pp 2151 - 2168, March 2011
20. M. Naghshvar, H. Zhuang, and T. Javidi. A General Class of Throughput Optimal Routing Policies in Multi-hop Wireless Networks. *IEEE Transactions on Information Theory*, Volume 58, Issue 4, pp 2175 - 2193, 2012

21. A. Bhorkar, M. Naghshvar, T. Javidi and B. Rao. An Adaptive Opportunistic Routing Scheme for Wireless Ad-hoc Networks. *IEEE/ACM Transaction on Networking*, Volume 20, Issue 1, January 2012
22. E. Ardestanizadeh, M. A. Wigger, Y.H. Kim, and T. Javidi. Linear-Feedback Sum-Capacity for Gaussian Multiple Access Channels. *IEEE Transactions on Information Theory*, Vol. 58, No. 1, pp 224-236, 2012
23. M. Naghshvar and T. Javidi. Sequentiality and Adaptivity Gains in Active Hypothesis Testing. *IEEE Journal of Selected Topics in Signal Processing*, Vol. 7, No. 5, October 2013
24. M. Naghshvar and T. Javidi. Active Sequential Hypothesis Testing. *Annals of Statistics*. Vol 41. No 6. December 2013
25. A. Sarwate and T. Javidi. Distributed Learning of Distributions via Social Sampling. *IEEE Transactions on Automatic Control*. Vol 60. Issue 1. January 2015
26. A. Bhorkar, T. Javidi, and A. Snoeren. Achieving Congestion Diversity in Multi-hop Wireless Mesh Networks. *IEEE Transactions on Mobile Computing*, Vol. 14. Issue: 3. 2015
27. M. Naghshvar, T. Javidi, M. Wigger. Extrinsic Jensen–Shannon Divergence: Applications to Variable-Length Coding. *IEEE Transactions on Information Theory*. Vol 61. Issue: 7. April 2015
28. M. Naghshvar, T. Javidi, and K. Chaudhuri. Bayesian Active Learning With Non-Persistent Noise. *IEEE Transactions on Information Theory*. Vol 61. Issue: 7. July 2015
29. M. Mousavi, L. Duan, T. Javidi, and A. K. Ellerbee Bowden. Iterative re-weighted approach to high-resolution optical coherence tomography with narrow-band sources. *Optics Express* Vol 24. Issue: 2. February 2016
30. A. Bhorkar, M. Naghshvar, and T. Javidi. Opportunistic Routing with Congestion Diversity in Wireless Ad-hoc Networks. *IEEE/ACM Transaction on Networking*. Issue 2, April 2016
31. M. Chowdhury, M. Rao, Y. Zhao, T. Javidi, A. Goldsmith. Benefits of Storage Control for Wind Power Producers in Power Markets. *IEEE Transactions on Sustainable Energy*. Issue 4, October 2016
32. M. Alizadeh, H-T. Wai, M. Chowdhury, A. Goldsmith, A. Scaglione, T. Javidi. Optimal Pricing to Manage Electric Vehicles in Coupled Power and Transportation Networks. to appear in *IEEE Transactions on Control of Network Systems*
33. C. Wang and T. Javidi. Adaptive Policies for Scheduling with Reconfiguration Delay: An End-to-End Solution for All-Optical Data Centers. accepted for publication in *IEEE/ACM Transactions on Networking*.

Tutorials and Workshops

1. Information Acquisition, Controlled Sensing and Active Hypothesis Testing. Tutorial at IEEE Conference on Decision and Control (CDC), December 2015
2. Information acquisition, controlled sensing, and sequential refinement of belief. Invited Tutorial at IEEE International Symposium on Information Theory (ISIT), July 2014
3. Theory and Practice of Opportunistic Routing in Wireless Multi-hop Networks. ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc) 2013
4. Opportunistic Routing in Wireless Networks: A Stochastic/Adaptive Control Approach. International Conference on Cognitive Radio Oriented Wireless Networks (CROWNCOM) 2010

Manuscripts and Book Chapters

1. Tara Javidi and Eric Van Buhler (2016), "Opportunistic Routing in Wireless Networks", *Foundations and Trends® in Networking*: Vol. 11: No. 1-2, pp 1-137.
2. J. Price and T. Javidi, On Dual Methods for Adaptive Distributed Resource Allocation in Wireless Networks: A Taxonomy of Practical Challenges in CDMA, in *Resource Allocation in Next Generation Wireless Networks*, Eds. Wei Li and Yi Pan, Nova Science Publishers, 2005

Selected List of Conference Publications (Refereed)

1. C. Wang, S.T. Maguluri, and T. Javidi. Heavy Traffic Queue Length Behavior in Switches with Reconfiguration Delay. to appear in the *Proceedings of IEEE International Conference on Computer Communication (INFOCOM)*. May 2017
2. Songbai Yan, Kamalika Chaudhuri and Tara Javidi. Active Learning from Imperfect Labelers. In *Proceedings of Neural Information Processing Systems (NIPS)*, December 2016
3. M. Rao, A. Kipnis, T. Javidi, Y. Eldar, and A. Goldsmith. System Identification from Partial Samples: Non-Asymptotic Analysis. to appear in the *Proceedings of 55th IEEE Conference on Decision and Control*. December 2016

4. T. Aktash, G. Quer, T. Javidi, and R. Ramesh. From Connected Vehicles to Mobile Relays: Enhanced Wireless Infrastructure for Smarter Cities. to appear in the *Proceedings of IEEE Globecom Conference*. December 2016
5. N. Ronquillo and T. Javidi. Multi-band Noisy Spectrum Sensing with Codebooks. in *Proceedings of Asilomar Conference on Signals, Systems, and Computers*, November 2016 [invited]
6. S. Chiu and T. Javidi. Sequential Measurement-Dependent Noisy Search. *Proceedings of IEEE Information Theory Workshop (ITW)*, September 2016
7. A. Lalitha and T. Javidi. Reliability of Sequential Hypothesis Testing Can Be Achieved by an Almost-Fixed-Length Test. in *Proceedings of the IEEE International Symposium on Information Theory (ISIT)*, July 2016.
8. Y. Lu, T. Javidi, and S. Lazebnik. Adaptive Object Detection Using Adjacency and Zoom Prediction. in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, June 2016. [spotlight]
9. A. Lalitha, T. Javidi. On Concentration of Learning Rate in Distributed Hypothesis Testing. in *Proceedings of Asilomar Conference on Signals, Systems, and Computers*, November 2015 [invited]
10. S. Yan, K. Chaudhuri and T. Javidi. Active Learning from Noisy and Abstention Feedback, Allerton Conference on Communication, Control and Computing, 2015
11. A. Lalitha, T. Javidi. On the Rate of Learning in Distributed Hypothesis Testing. in *proceedings of 53rd Annual Allerton Conference on Communication, Control and Computing*, October 2015 [invited]
12. Yongxi Lu and Tara Javidi. Efficient Object Detection for High Resolution Images. in *proceedings of 53rd Annual Allerton Conference on Communication, Control and Computing*, October 2015
13. P. Ling, G. Papen, and T. Javidi. RoXOR: Re-Thinking Retransmissions in WiFi. in *Proceedings of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, August 2015
14. R. Milind, M. Chowdhury, Y. Zhao, T. Javidi, A. Goldsmith. Value of Storage for Wind Power Producers in Forward Power Markets. *Proceedings of American Control Conference (ACC)*, July 1-3, 2015
15. P. Mansourifard, B. Krishnamachari, T. Javidi. Tracking of Real-Valued Markovian Random Processes with Asymmetric Cost and Observation. *Proceedings of American Control Conference (ACC)*, July 1-3, 2015
16. Y. Kaspi, O. Shayevitz, T. Javidi. Searching for Multiple Targets with Measurement Dependent Noise. *Proceedings of the IEEE International Symposium on Information Theory (ISIT)*, June 2015
17. T. Javidi, C. Wang, T. Aktash. A Novel Data Center Network Architecture with Zero in-Network Queuing. *Proceedings of the 2015 IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, May 2015 [invited]
18. T. Aktas, C. Wang, T. Javidi. WiCOD: Wireless Control Plane Serving an all-Optical Data Center. *Proceedings of the 2015 IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, May 2015
19. C. Wang, T. Javidi, G. Porter. End-to-End Scheduling for All-Optical Data Centers. in *Proceedings of IEEE International Conference on Computer Communication (INFOCOM)*, April 2015
20. T. Javidi, Y. Kaspi, H. Tyagi. Gaussian Estimation under Attack Uncertainty. in *Proceedings of IEEE Information Theory Workshop (ITW)*, April 2015
21. Y. Kaspi, O. Shayevitz, T. Javidi. Searching with Measurement Dependent Noise. in *Proceedings of IEEE Information Theory Workshop (ITW)*, November 2014
22. M. Alizadeh, H.T. Wai, A. Scaglione, A. Goldsmith, Y. Fan, and T. Javidi. Optimized Path Planning for Electric Vehicle Routing and Charging. *Proceedings of the 52nd Allerton Conference on Communications, Control, and Computation*, October 2014
23. A. Lalitha, A.D. Sarwate, T. Javidi. Social Learning and Distributed Hypothesis Testing, *Proceedings of the 2014 IEEE International Symposium on Information Theory (ISIT)*, 2014
24. S. Park, T. Javidi, and A. Goldsmith. Optimal strategies for dynamic joint source-channel coding with feedback. *Proceedings of IEEE International Symposium on Information Theory (ISIT)*, 2014
25. M. Mousavi, K. L. Lurie, J. A. Land, T. Javidi, A. K. Ellerbee. Telemedicine + OCT: toward design of optimized algorithms for high-quality compressed images. *SPIE*. February 2014.
26. T. Javidi. Information Acquisition and Utilization Problems. In *Proceedings of IEEE Global Conference on Signal and Information Processing*, December 2013 [invited]
27. P. Tehrani, Q. Zhao, T. Javidi. Opportunistic Routing under Unknown Stochastic Models. in *Proc. of IEEE Workshops on Computational Advances in Multi-Channel Sensor Array Processing (CAMSAP)*, December, 2013
28. M. Naghshvar, T. Javidi, and K. Chaudhuri, Extrinsic Jensen–Shannon Divergence and Noisy Bayesian Active Learning. *Proceedings of Annual Allerton Conference on Communication, Control and Computation*, October 2013

29. P. Mansourifard, B. Krishnamachari, and T. Javidi. Bayesian Congestion Control over a Markovian Network Bandwidth Process, in Proceedings of *Asilomar Conference on Signals, Systems, and Computers*, November 2013 [invited]
30. M. Naghshvar and T. Javidi. Two-Dimensional Visual Search. in Proceedings of *International Symposium Information Theory (ISIT)*, July 2013
31. T. Javidi and A. Goldsmith. Dynamic Joint Source–Channel Coding with Feedback. in Proceedings of *International Symposium Information Theory (ISIT)*, July 2013
32. M. Naghshvar and T. Javidi. Rate–Reliability Tradeoff in Two-Dimensional Visual Search. in Proceedings of *Iran Workshop on Communication and Information Theory (IWCIT)*, May 2013 [Invited]
33. P. Mansourifard, T. Javidi, and B. Krishnamachari. Optimality of Myopic Policy for a Class of Monotone Affine Restless Multi-Armed Bandits. in Proceedings of *IEEE Conference on Decision and Control (CDC)*, December, 2012.
34. M. Naghshvar, T. Javidi, and K. Chaudhuri. Noisy Bayesian active learning. in Proceedings of *fiftieth Annual Allerton Conference on Communication, Control and Computation*, October 2012 [Invited]
35. M. Naghshvar and T. Javidi. Optimal reliability over a DMC with feedback via deterministic sequential coding. in Proceedings of *IEEE International Symposium of Information Theory and Applications (ISITA)*, October 2012
36. M. Naghshvar, M. Wigger, and T. Javidi, Optimal reliability over a class of binary-input channels with feedback. in Proceedings of *IEEE Information Theory Workshop (ITW)*, September 2012 [Invited]
37. M. Naghshvar and T. Javidi. Extrinsic Jensen–Shannon divergence with application in active hypothesis testing. in Proceedings of *IEEE International Symposium on Information Theory (ISIT)*, July 2012
38. M. Naghshvar and T. Javidi. Active Sequential Hypothesis Testing: Sequentiality and Adaptivity Gains. in Proceedings of *Conference on Information Sciences and Systems (CISS)*. Princeton, NJ. 2012 [Invited]
39. A. Sarwate and T. Javidi. Opinion Dynamics and Distributed Learning of Distributions, Proceedings of the *forty-ninth Annual Allerton Conference on Communication, Control and Computation*, 2011 [Invited]
40. M. Naghshvar and T. Javidi. Performance Bounds for Active Sequential Hypothesis Testing. in Proceedings of *IEEE International Symposium on Information Theory (ISIT)*, August 2011
41. S. Bodas and T. Javidi. Scheduling for multi-channel wireless networks: Small delay with polynomial complexity. in Proceedings of *International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, May 2011
42. A. Bhorkar, T. Javidi, A. Snoren. Achieving congestion diversity in wireless ad-hoc networks. in Proceedings of *IEEE International Conference on Computer Communication (INFOCOM)*, April 2011
43. A. Bhorkar and T. Javidi. No Regret Routing for ad-hoc wireless networks. in Proceedings of *Asilomar Conference on Signals, Systems, and Computers*, November 2010
44. M. Naghshvar and T. Javidi. Variable-length coding with noiseless feedback and finite messages. in Proceedings of *Asilomar Conference on Signals, Systems, and Computers*, November 2010
45. M. Naghshvar and T. Javidi. Information utility in active sequential hypothesis testing. In Proceedings of *Forty-eighth Annual Allerton Conference on Communication, Control, and Computing*, Monticello, Illinois, 2010
46. M. Naghshvar, H. Zhuang, and T. Javidi. A class of throughput optimal routing policies. in Proceedings of *IEEE Information Theory Workshop (ITW)*, August 2010
47. M. Naghshvar and T. Javidi. Active M-ary Sequential Hypothesis Testing. in *Proceedings of IEEE International Symposium on Information Theory (ISIT)*, 2010
48. E. Ardestanizadeh, M. A. Wigger, Y.-H. Kim, and T. Javidi. Linear Sum Capacity for Gaussian Multiple Access Channel With Feedback. in Proceedings of *IEEE International Symposium on Information Theory (ISIT)*, 2010
49. M. Naghshvar and T. Javidi. Opportunistic Routing with Congestion Diversity in Wireless Multi-hop Networks. in Proceedings of *IEEE International Conference on Computer Communication (INFOCOM)*, March 2010
50. M. Naghshvar and T. Javidi. Opportunistic routing with congestion diversity and tunable overhead. in Processing of *International Symposium on Communications, Control and Signal (ISCCSP)*, March 2010
51. E. Ardestanizadeh, T. Javidi, Y.-H. Kim and M. Wigger. On the Sum Capacity of Gaussian Multiple Access Channel with Feedback. In Proceedings of *Forty-seventh Annual Allerton Conference on Communication, Control, and Computing*, Monticello, Illinois, 2009
52. K. Stamatiou, F. Rossetto, M. Haenggi, T. Javidi, J. Zeidler, and M. Zorzi, “A delay-minimizing routing strategy for wireless multi-hop networks”, Proc. 5th Workshop on Spatial Stochastic Models for Wireless Networks (SpaSWiN 2009), Seoul, Korea, June 26, 2009

53. R. N. Swamy and T. Javidi, Optimal Code Length for Bursty Sources with Deadlines, *IEEE International Symposium on Information Theory*, 2009
54. A. Bhorkar, M. Naghshvar, T. Javidi, B. Rao, An Adaptive Opportunistic Routing Scheme for Wireless Ad-hoc Networks, in Proceedings of *IEEE International Symposium on Information Theory*, 2009
55. P. Nuggehalli, J. Price and T. Javidi. Pricing and QoS in Wireless Random Access Networks," IEEE Globecom Conference, 2008.
56. R. N. Swamy and T. Javidi, "Delay Analysis of Block Coding over a Noisy Channel with Limited Feedback," Asilomar Conference on Signals, Systems and Computers, 2008.
57. J. Price and T. Javidi, "A Game-Theoretic Approach to Coding for Information Networks," Allerton Conference on Communication, Control and Computing, 2008. [invited]
58. S. Kittipiyakul, T. Javidi, and V. G. Subramanian, "Many-Sources Large Deviations for Max-Weight Scheduling," Allerton Conference on Communication, Control and Computing, 2008.
59. E. Ardetanzadeh, M. Franceschetti, T. Javidi, and Y. H. Kim, "Wiretap Channel with Rate-limited Feedback," ISIT'08.
60. T. Javidi, B. Krishnamachari, Q. Zhao, M. Liu, "Optimality of Myopic Sensing in Multi-Channel Opportunistic Access," In Proceedings of *IEEE International Communications Conference*, May 2008
61. J. Price and T. Javidi. On Pricing Methods to Address Preference Revelation and Distributed Control in Random Access Networks. In Proceedings of *Asilomar Conference on Signals, Systems, and Computers*, November 2007. [Invited]
62. P. Gupta and T. Javidi, Towards Throughput and Delay Optimal Routing for Wireless Ad-Hoc Networks. In Proceedings of *Asilomar Conference on Signals, Systems, and Computers*, November 2007. [Invited]
63. S. Kittipiyakul and T. Javidi, Relay scheduling and cooperative diversity for delay-sensitive and bursty traffic. In Proceedings of *Allerton Conference on Communication, Control, and Computing*, Sept. 2007 [invited]
64. P. Elia, S. Kittipiyakul, T. Javidi. Cooperative diversity in wireless networks with stochastic and bursty traffic. *IEEE International Symposium on Information Theory*, Nice, France, June 24, 2007
65. J. Price and T. Javidi, Network Coding for Resource Redistribution in a Unicast Network. In Proceedings of the *45th Annual Allerton Conference on Communication, Control, and Computing*, Sept. 26, 2007, [Invited]
66. P. Elia, S. Kittipiyakul, T. Javidi, "On the responsiveness-diversity-multiplexing tradeoff," *Int'l Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, Limassol, Cyprus, April 16, 2007
67. D. Lim, J. Shim, T. Simunic Rosing, and T. Javidi, "Scheduling Data Delivery in Heterogenous Wireless Sensor Networks," *IEEE International Symposium on Multimedia*, December 2006.
68. Y. Lin, T. Javidi, R. L. Cruz and L. B. Milstein, Distributed Link Scheduling, Power Control and Routing for Multi-h message: %3CCADJsjXBKT4ZgczJ2VTEj=G3vRA9uVNF7M21jUfSd5ng-yjURBg@mail.gmail.com%3E op Wireless MIMO Networks. In Proceedings of *Asilomar Conference on Signals, Systems, and Computers*, November 2006. [Invited]
69. J. Price and T. Javidi, Leveraging Downlink for Optimal Uplink Allocation: An Incentive Compatible Approach, In Proceedings of Asilomar Conference on Signals, Systems, and Computers, November 2006.
70. T. Javidi, Cooperation and Resource Sharing in Data Networks: A Delay Perspective. In Proceedings of *Allerton Conference on Communication, Control, and Computing*, October 2006.
71. J. Price and T. Javidi. Leveraging Downlink for Regulation of Uplink CDMA. In Proceedings of the *IEEE Globecom Conference*, November 2006
72. S. Kittipiyakul and T. Javidi. Optimal Operating Point in MIMO Channel for Delay-Sensitive and Bursty Traffic. in Proceedings of the *IEEE International Symposium on Information Theory*, July 2006
73. M. Arisoylu, T. Javidi and R. L. Cruz. End-to-End and Mac-Layer Fair Rate Assignment in Interference Limited Wireless Access Networks. In Proceedings of the *IEEE Communication Conference*, June 2006
74. J. Price and T. Javidi, Jointly Optimal MAC and Transport Layers in CDMA Broadband Networks. In Proceedings of *IEEE Conference on Decision and Control*, December, 2005. [invited]
75. T. Javidi, M. Liu, and R. Vijayakumar. Revisiting Saturation Throughput in 802.11. In proceedings of the *43rd Allerton Conference on Communication, Control, and Computing*, September 2005 [invited]
76. J. Price and T. Javidi, Modular design for optimal cross-layer flow control in CDMA networks. In Proceedings of *European Wireless Conference*, Nicosia, Cyprus, April, 2005
77. M. Arisoylu, R. L. Cruz, and T. Javidi, Rate Assignment in Micro-Buffered High Speed Networks. In proceedings of the *43rd Allerton Conference on Communication, Control, and Computing*, September 2005
78. S. Kittipiyakul and T. Javidi. Subcarrier allocation in OFDMA systems: beyond water-filling. In Proceedings of *Asilomar Conference on Signals, Systems, and Computers*. Nov. 2004
79. S. Kittipiyakul and T. Javidi. A Fresh Look at Optimal Subcarrier Allocation in OFDMA Systems. *IEEE*

- Conference on Decision and Control (CDC 2004)*, Dec 2004 [Invited]
80. J. Price and T. Javidi. Cross-Layer (MAC and Transport) Optimal Rate Assignment in CDMA-Based Wireless Broadband Networks. In proceedings of *Asilomar Conference on Signals, Systems, and Computers*, November 2004
 81. T. Javidi. Rate Stable Resource Allocation in OFDM Systems: From Water-filling to Queue-Balancing. *Allerton Conference on Communication, Control, and Computing*, September 2004 [invited]
 82. J. Price and T. Javidi. Joint Scheduling for Self-Configuring Ad-Hoc CDMA Networks. In proceedings of the 42nd *Allerton Conference on Communication, Control, and Computing*, September 2004
 83. T. Javidi. Decentralized Rate Assignment in a Multi-Sector CDMA Network. *Proceedings of IEEE Globecom Conference, November 2004*
 84. T. Javidi and D. Teneketzis. Outage-Based Admission Region in a Cellular Network. In *Proceedings of IEEE Wireless Communications and Networking Conference*, vol. 1, March 2002
 85. T. Javidi and D. Teneketzis. Sensitivity analysis for an optimal routing policy in an ad hoc wireless network. In *Proceedings of Vehicular Technology Conference*, May 2002,
 86. T. Javidi and D. Teneketzis. Ad Hoc Network Routing: Channel Quality Estimation and Robustness. In *Proceedings 40th Allerton Conference on Communication, Control, and Computing*. October 2002
 87. T. Javidi and D. Teneketzis. Resource Allocation in Multi-Service Cellular Networks with Outage-based QoS Requirements. In *Proceedings of 39th Allerton Conference on Communication, Control, and Computing*. Oct. 2001
 88. T. Javidi, R Magill, and T. Hrabik. A High Throughput Scheduling Algorithm for a Buffered Crossbar Switch Fabric. In *Proceedings of IEEE International Conference on Communications*, vol. 5, pp. 1586-1591, 2001

Patents

US Patent: 6915372. Methods and apparatus for managing traffic through a buffered crossbar switch fabric, Issued July 5, 2005

Technical Program Committee (Conferences)

1. IEEE International Symposium on Information Theory, 2009, 2010, 2012, 2013, 2014
2. IEEE INFOCOM 2014 Workshop on Communication and Networking Techniques for Video
3. IEEE INFCOM Conference, 2007, 2009
4. IEEE Conference on Decision and Control, 2009, 2012
5. IEEE Globecom Conference, 2007, 2008, 2009, 2010
6. IEEE WCNC, 2009, 2010, 2011
7. IEEE American Control Conference, 2008, 2013
8. IEEE International Communications Conference, 2008, 2009, 2010, 2011
9. Mobihoc (ACM Int'l Symposium on Mobile Ad Hoc Networking and Computing) 2007, 2011-15
10. IEEE WiOpt, 2006, 2007, 2009, 2011, 2012, 2014, 2015
11. Information Theory and Application (ITA), San Diego, 2006 [Organzier], 2007 [Technical Chair], 2008 and 2011[General Chair], 2012 [Technical Chair]
12. Networking Track Chair, Asilomar Conference on Signals, Systems, and Computers, 2006

PhD Dissertation/Thesis Committee (Chair)

1. Feng Lu
2. Mohammad Naghshvar
3. Abhijeet Bhorkar
4. Ehsan Ardestanizadeh
5. Jennifer Price
6. Somsak Kittipiyakul
7. Mustafa Arisoylu

Professional Services

1. National Science Foundation (NSF), Proposal Review Panel
2. Guest Editor, Journal on Selected Areas in Communications

3. Associate Editor, IEEE/ACM Transactions on Networking (2011-2014)
4. Editor, Information Theory Society Newsletter (2011-2014)
5. Associate Editor, IEEE/ACM Transactions on Information Theory (2014-present)
6. Associate Editor, IEEE/ACM Transactions on Network Science and Engineering (2014-present)
7. Co-Chair of Emerging Wireless Special Interest Group: CommNexus, San Diego
8. Dissertation/doctoral thesis committee (ECE, CSE, MAE, EE Dept at USC)

Funded Projects

1. Cross-layer Network Design. Funded by NSF (CAREER), ARO (Multi University Research Initiative, PI: J. Ziedler), UC-Discovery, and Industrial Members of CWC
2. MIMO Communications and Ad Hoc Networking. Funded by ARO (Multi University Research Initiative, PI: J. Ziedler), UC-Discovery and Industrial Members of CWC
3. Integrated Communications and Control. Funded by AFOSR (Co-PI: K. Morgansen), NSF (Co-PIs: K. Morgansen and A. Scaglione)
4. Diversity Routing in Radio Aware Mesh Networking. Funded by Ericsson and CALIT2 (Co-PI: R. Cruz)
5. Cognitive Radios and Cognitive Networking. Funding Provided by UC-Discovery and Industrial sponsors of CWC (Co-PIs: B. Rao, R. Rao, B. Manoj, J. Zeidler)
6. Controlling Uncertainty and Sequential Belief Refinement. Funded by NSF (CCF-1018722: Single PI).
7. Opinion Dynamic in Social Networks with Social and Private Sampling. Funded by NSF (CCF-1217619: coPI: A. Sarwate, Rutgers)
8. Enhanced Radio Spectrum via Information Acquisition and Learning. Funded by CWC and NSF (AST-1247995, coPI: B. Krishnamachari, USC)
9. Feature-rich Decision Theory. Funded by NSF (CCF-1302588, coPIs: M. Raginsky and S. Lazebnik)
10. Event-based Information Acquisition, Learning, and control. Funded by NSF (CNS-1329819, coPIs: A. Goldsmith, B. Sinopoli)
11. Fundamental Limits of Information with Feedback. Funded by NSF (CCF-1513883, coPIs: A. Wagner, S. Verdu)