

Curriculum Vitae

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Curriculum Vita

Junshan Zhang

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Ira A. Fulton School of Engineering, Arizona State University

Education

Aug. 2000 **Ph.D.**, ECE, Purdue University, West Lafayette, IN 47907.
Dec. 1996 **M.Sc.**, Mathematical Statistics, University of Georgia, Athens, GA 30602.
July 1993 **B.E.**, EE, Huazhong Univ. of Science & Technology (HUST), China.

Professional Experience

07/2015 -, *Ira A. Fulton Chair Professor*, School of ECEE, ASU, Tempe, AZ 85287.
08/2015–08/2017, *Co-founder and CTO*, Smartiply Inc, Basking Ridge, NJ 07920.
07/2010–, *Professor*, School of ECEE, ASU, Tempe, AZ 85287.
07/2009–, *Graduate Faculty*, Computer Science program, ASU, Tempe, AZ 85287.
08/2005–06/2010, *Associate Professor*, School of ECEE, ASU, Tempe, AZ 85287.
05/2007–06/2007, *Visiting Associate Professor*, Dept. EE, Princeton University
01/2007–03/2007, *Visiting Associate Professor*, Dept. of ECE, Univ. of Illinois at Urbana Champaign
08/2000–07/2005, *Assistant Professor*, Department of EE, ASU, Tempe, AZ 85287.
01/1997–06/2000, *Research Assistant*, School of ECE, Purdue Univ., West Lafayette, IN 47907.
09/1995–12/1996, *Teaching Assistant*, Dept. of Statistics, Univ. of Georgia, Athens, GA 30602.

Awards and Distinctions:

- Keynote Speaker of 16th conference on Modeling and Optimization in Mobile, Ad-Hoc and Wireless Networks (WiOPT'2018).
- WiOPT 2018 Best Student Paper award, 2018.
- Plenary speaker at ICNC 2018, Maui, Hawaii.
- IEEE ICC 2017 Best Paper Award.
- Kenneth C. Sevcik Outstanding Student Paper Award of ACM SIGMETRICS 2016.
- IEEE Wireless Communications Technical Committee Recognition Award 2016.
- IEEE INFOCOM 2014 Best Paper Award Runner-up.
- Keynote speaker at WASA 2014.
- IEEE Fellow (for contributions on cross-layer optimizations in wireless networks), Class of 2012.
- IEEE INFOCOM 2009 Best Paper Award Runner-up.
- IEEE ICC 2008 Best Paper Award.
- ONR YIP (Office of Naval Research Young Investigator) award, 2005.
- NSF CAREER award, 2003.

- Editor-in-Chief, IEEE Transactions on Wireless Communications, 01/01/2019–.
- General chair of ACM/IEEE SEC 2017.
- General Co-chair of WiOPT 2016.
- TPC Program Co-chair of ACM MOBIHOC 2015.
- IEEE Communications Society Award Committee member (2015–2017).
- IEEE Communications Society Distinguished Lecturer (2013–2014).
- TPC co-chair of INFOCOM 2012.
- TPC co-chair of ICC 2012.
- Interviewed by Wall Street Journal (personal technology) on CDMA vs. GSM technologies for next generation iPhone on Oct. 7th 2010.
- One journal paper was featured by the Technical Insights division of Frost & Sullivan, the largest global growth consulting firm www.ti.frost.com.
- One-year earlier tenure promotion, 2005.
- Outstanding Research Award from IEEE Phoenix Section, 2003.
- TPC Co-chair of WICON 2008.
- General chair of CTW 2007.
- TPC co-chair of IPCCC 2006.
- TPC vice-chair of ICCCN 2006.

Entrepreneurship: Building on my research findings, I Co-founded Smartiply Inc. in 2015, a Fog Computing startup company delivering boosted connectivity and embedded artificial intelligence.

Principal Areas of Teaching and Research

- Research:**
- Internet of Things (IoT): Fog computing, cyber physical systems
 - Wind/solar generation forecasting and integration in smart grid
 - Data Science: data privacy and security, network economics for IoT data management
 - Network optimization and control, wireless communications, information theory
- Teaching:**
- Wireless Networks
 - Random Signal Theory
 - Circuit Theory
 - Communication Networks
 - Information Theory

References for Tenure/Promotion

- Have served as a reference for tenure/promotion cases at many universities, including Princeton University, Carnegie Mellon University, Univ of Pennsylvania, Ohio State University, and many other Universities.

Honor Societies and Other Honors: IEEE, ACM, ASEE

Publications and Patents

Patents Filed

1. J. Zhang and M. He and L. Yang and V. Vittal, "System and Method for Wind Generation Forecasting," US patent # 9460478 (awarded on Oct 4, 2016).
2. J. Zhang and L. Yang and M. He and V. Vittal, "Support Vector Machine (SVM) Enhanced Markov Models for Short-Term Wind Farm Generation Forecast," US patent 14/572,385(awarded on Jan. 15, 2019).
3. J. Zhang and X. Chen and Z. Zhang, "System and Method for Social Aware Cooperative Device-to-Device Communications," US patent # 14/717,634 (awarded in Aug. 2018).
4. J. Zhang, "Internet of Things (IoT) Companion Device," US Patent 15/430,270 (pending).
5. J. Zhang, "Fog Local Processing and Relaying for Mitigating Latency and Bandwidth Bottlenecks in Live AR/VR Streaming," US Patent 62/384,142 (pending).
6. J. Zhang, K. Pillalamarri, S. Li, A. Gilanis and R. Bajpai, "Wi-Fi AP based Intelligent Fog Agent," US Patent 62/384,116 (pending).
7. J. Zhang, "Fog Data Agent for Connected Cars," US Patent no. 62/507,175 (pending).
8. J. Zhang, J. Chen, and R. Liu, "Systems and Methods for Fog-computing enabled Framing and Streaming of Digital Content," AzTE provisional patent.
9. J. Zhang, A. Bhattacharya and J. Jensen, "System and Methods for Fog-empowered Platform for real-time screen sharing and collaborative content creation sharing," AzTE provisional patent.
10. T. Werho, J. Zhang, and V. Vittal, "The induced Markov chain forecasting model and automatic parameter selection procedure," AzTE provisional patent.

Journal papers

1. M. Wu and S. He and Y. Zhang and J. Chen and Y. Sun and Y. Liu and J. Zhang and H. V. Poor, "A Tensor-Based Framework for Studying Eigenvector Multicentrality in Multilayer Networks," *Proceedings of the National Academy of Sciences (PNAS)*, accepted.
2. W. Wang and L. Ying and J. Zhang, "The Value of Privacy: Strategic Data Subjects, Incentive Mechanisms and Fundamental Limits," *ACM Transactions on Economics and Computation*, to appear.
3. Xuanyu Cao and Junshan Zhang and H. Vincent poor and Z. Tian, "Differentially Private ADMM for Regularized Consensus Optimization," submitted to *IEEE Transactions on Automatic Control*.

4. Xuanyu Cao and Junshan Zhang and H. Vincent poor, "Online Stochastic Optimization with Time-Varying Distributions," submitted to *IEEE Transactions on Automatic Control*.
5. Xuanyu Cao and Junshan Zhang and H. Vincent poor, "Data Center Demand Response with On-site Renewable Generation: A Bargaining Approach," *IEEE/ACM Transactions on Networking*, to appear.
6. Xuanyu Cao and Junshan Zhang and H. Vincent poor, "A Virtual-Queue Based Algorithm for Constrained Online Convex Optimization with Applications to Data Center Resource Allocation," *IEEE Journal of Selected Topics in Signal Processing*, p. 703-716, Aug. 2018.
7. Xuanyu Cao and Junshan Zhang and H. Vincent poor, "Joint Energy Procurement and Demand Response Towards Optimal Deployment of Renewables," *IEEE Journal of Selected Topics in Signal Processing*, p. 657-672, Aug. 2018.
8. Te-Chuan Chiu and Aichun Pang and Junshan Zhang, "Latency-Driven Fog Cooperation Approach in Fog Radio Access Networks," *IEEE Transactions on Services Computing*, to appear.
9. X. Wang and L. Duan and J. Zhang, "Mobile Social Services with Network Externality: From Separate Pricing to Bundled Pricing," *IEEE Transactions on Network Science and Engineering*, to appear.
10. Z. Zhang and S. He and J. Chen and J. Zhang, "REAP: An Efficient Incentive Mechanism for Reconciling Aggregation Accuracy and Individual Privacy in Crowdsensing," *IEEE Transactions on information forensics and security*, p. 2995-3007, Dec. 2018.
11. M. Zhang and J. Chen and L. Yang and J. Zhang, "Dynamic Pricing for Privacy-Preserving Mobile Crowdsensing: A Reinforcement Learning Approach," *IEEE Network Magazine*, accepted.
12. Mengyuan Zhang and Lei Yang and Shibo He and Ming Li and Junshan Zhang, "Privacy-Preserving Data Aggregation for Mobile Crowdsensing with Externality: An Auction Approach," submitted to *IEEE/ACM Transactions on Networking (TON)*.
13. M. Zhang and L. Yang and X. Gong and S. He and J. Zhang, "Wireless Service Pricing Competition under Network Effect, Congestion Effect, and Bounded Rationality," *IEEE Transactions on Vehicular Technology*, p. 7497-7507, Aug. 2018.
14. Mojtaba Vaezi and Hazer Inaltekin and Wonjae Shin and H. Vincent Poor and Junshan Zhang, "Social-Aware User Cooperation in Full-Duplex and Half-Duplex Multi-Antenna System," *IEEE Transactions on Communications*, p. 3309-3321, Aug. 2018.
15. Y. Peng and N. Zhang and S. Zhang and L. Yu and J. Zhang and S. Shen, "Content Popularity Prediction Towards Location-Aware Mobile Edge Caching," *IEEE Trans. on Multimedia*, to appear.

16. S. He and D. Shin and J. Zhang and J. Chen and P. Lin, "An Exchange Market Approach to Mobile Crowdsensing: Pricing, Task Allocation, and Walrasian Equilibrium," *IEEE JSAC Special Issue on Human-In-The-Loop Mobile Networks*, 35(4): 921-934 (2017).
17. Mojgan Hedayati-Mehdiabadi and Pranavamoorthy Balasubramanian and Kory W. Hedman and Junshan Zhang, "Market Implications of Wind Reserve Margin," *IEEE Transactions on Power Systems*, p. 5161-5170, Sept. 2018.
18. X. Gong and L. Duan and X. Chen and J. Zhang, "When social network effect meets congestion effect in wireless networks: Data usage equilibrium and optimal pricing , *IEEE Journal on Selected Areas in Communications*, 35(2): 449-462 (2017).
19. X. Gong and X. Chen and K. Xing and D.-H. Shin and M. Zhang and J. Zhang, "From social group utility maximization to personalized location privacy in mobile networks," *IEEE/ACM Transactions on Networking (TON)*, 25(3): 1703-1716 (2017).
20. X. Chen and X. Gong and L. Yang and J. Zhang, "Amazon in the white space: Social recommendation aided distributed spectrum access, *IEEE/ACM Transactions on Networking (TON)*, 25(1): 536-549 (2017).
21. Jun Zhao and Junshan Zhang: "Preserving Privacy Enables 'Coexistence Equilibrium' of Competitive Diffusion in Social Networks." *IEEE Trans. Signal and Information Processing over Networks*. 3(2): 282-297 (2017)
22. X. Gong and L. Yang and X. Chen and J. Zhang, "Efficiency and Pareto Optimality," *Encyclopedia of Wireless Networks*, Springer, 2017.
23. Weina Wang and Lei Ying and Junshan Zhang, "On the Relation Between Identifiability, Differential Privacy, and Mutual-Information Privacy," *IEEE Trans. Information Theory* 62(9): 5018-5029 (2016)
24. Chuan Huang and Junshan Zhang and H. Vincent Poor and Shuguang Cui, "Delay-Energy Tradeoff in Multicast Scheduling for Green Cellular Systems," *IEEE Journal on Selected Areas in Communications* 34(5): 1235-1249 (2016).
25. Yang Cao and Tao Jiang and Xu Chen and Junshan Zhang, "Social-Aware Video Multicast Based on Device-to-Device Communications," *IEEE Trans. Mob. Comput.* 15(6): 1528-1539 (2016)
26. A Eslami and C. Huang and S. Cui and J. Zhang, "Cascading Failures in Load-Dependent Finite-Size Random Geometric Networks," *IEEE Transactions on Network Science and Engineering*, 3(4): 183-196 (2016).
27. X. Chen and X. Gong and L. Yang and J. Zhang, "Exploiting Social Tie Structure for Cooperative Wireless Networking: A Social Group Utility Maximization Framework," *IEEE/ACM Transactions on Networking*, 24(6): 3593-3606 (2016).

28. X. Gong and X. Chen and J. Zhang and H. V. Poor, "Exploiting social trust assisted reciprocity (STAR) towards utility-optimal socially-aware crowdsensing," *IEEE Transactions on Signal and Information Processing over Networks (TSIPN)*, vol. 1, no. 3, pp. 195-208, Sept. 2015.
29. D. Shin and S. He and J. Zhang, "Robust and Cost-Effective Design of Cyber-Physical Systems: An Optimal Middleware Deployment Approach," *IEEE/ACM Transactions on Networking*, 24(2): 1081-1094 (2016).
30. X. Chen and B. Proulx and X. Gong and J. Zhang, "Exploiting Social Ties for Cooperative D2D Communications: A Mobile Social Networking Case," *IEEE/ACM Transactions on Networking*, 23(5): 1471-1484 (2015).
31. X. Gong and J. Zhang and D. Cochran and K. Xing, "Optimal Placement for Barrier Coverage in Bistatic Radar Sensor Networks," *IEEE/ACM Transactions on Networking*, 24(1): 259-271 (2016).
32. H. Li and C. Huang and P. Zhang and S. Cui and J. Zhang, "Distributed Opportunistic Scheduling for Energy Harvesting Based Wireless Networks: A Two-Stage Probing Approach," *IEEE/ACM Transactions on Networking*, 24(3): 1618-1631 (2016).
33. O. Yagan and D. Qian and J. Zhang and D. Cochran, "Conjoining Speeds up Information Diffusion in Overlaying Social-Physical Networks," *JSAC special issue on network science*, 2013.
34. Y. Cao and T. Jiang and M. He and J. Zhang, "Device-to-Device Communications for Energy Management: A Smart Grid Case," *IEEE JSAC special issue on D2D Communications*, 34(1): 190-201 (2016).
35. X. Duan and C. Zhao and S. He and P. Cheng and J. Zhang: "Distributed Algorithms to Compute Walrasian Equilibrium in Mobile Crowdsensing." *IEEE Trans. Industrial Electronics*, 64(5): 4048-4057 (2017)
36. M. He and L. Yang and J. Zhang and V. Vittal, "A Spatio-temporal Analysis Approach for Short-term Wind Generation Forecast," *IEEE Transactions on Power Systems*, Volume (29), Issue(4), 2014, p. 1611 - 1622.
37. M. He and V. Vittal and J. Zhang, "Online Dynamic Security Assessment with Missing PMU Measurements: A Data Mining Approach," *IEEE Transactions on Power Systems*, Volume (28), Issue (2), 2013, P. 1969 - 1977.
38. M. He and J. Zhang and V. Vittal, "Robust On-line Dynamic Security Assessment using Adaptive Ensemble Decision-Tree Learning," *IEEE Transactions on Power Systems*, Volume (28), Issue (4), 2013, P. 4089 - 4098.

39. D. Ganger and J. zhang and V. Vittal, "Statistical Characterization of Wind Power Ramps via Extreme Value Analysis," *IEEE Transactions on Power Systems*. 29 (6), 3118-3119.
40. D. Ganger and J. zhang and V. Vittal, "Forecast-based Anticipatory Frequency Control in Power Systems," *IEEE Transactions on Power Systems*., May 2017.
41. M. Hedayati and K. Hedman and J. Zhang, "Reserve Policy Optimization for Scheduling Wind Energy and Reserve," *IEEE Transactions on Power Systems*, to appear.
42. M. Hedayati and J. Zhang and K. Hedman, "Optimal Wind Power Self-Reserve for Flexible Dispatch and Reserve Scheduling with Increased Wind Generation," *IEEE Transactions on sustainable Energy*, to appear.
43. L. Yang and M. He and J. Zhang and V. Vittal, "Stochastic Optimization based Economic Dispatch and Interruptible Load Management with Increased Wind Penetration," *IEEE Transactions on smart grid*, 7(2): 730-739 (2016).
44. L. Yang and M. He and J. Zhang and V. Vittal, "Support Vector Machine Enhanced Markov Model for Short-term Wind Power Forecast," *IEEE Transactions on sustainable Energy*, vol. 6, no. 3, pp. 791-799, 2015.
45. L. Yang and X. Chen and J. Zhang and V. Poor, "Cost-Effective and Privacy-Preserving Energy Management for Smart Meters," *IEEE Transactions on Smart Grid*, vol. 6, no. 1, pp. 486-495, 2015.
46. Shibo He and Dong-Hoon Shin and Junshan Zhang and Jiming Chen: "Near-Optimal Allocation Algorithms for Location-Dependent Tasks in Crowdsensing". *IEEE Trans. Vehicular Technology* 66(4): 3392-3405 (2017)
47. D. Shin and D. Qian and J. Zhang, "Cascading Effects in Interdependent Networks," *IEEE Network Magazine*, 28(4): 82-87 (2014).
48. Dong-Hoon Shin, Shibo He, and Junshan Zhang, "Robust, Secure and Cost-Effective Design for Cyber-Physical Systems, *IEEE Intelligent Systems Magazine*, 66-69 (2014).
49. L. Yang and J. Zhang and V. Poor, "Risk-aware Day-ahead Scheduling and Real-time Dispatch for Electric Vehicle Charging," *IEEE Transactions on Smart Grid*, 693-702 (2014).
50. M. He and S. Murugesan and J.Zhang, "Multiple Timescale Dispatch and Scheduling for Stochastic Reliability in Smart Grids with Wind Generation Integration," *IEEE Transactions on Smart Grid*, 2013.
51. M. He and J. Zhang, "A Dependency Graph Approach for Fault Detection and Localization Towards Secure Smart Grid," *IEEE Transactions on Smart Grid*, special issue on Cyber, Physical and System Security of Smart Grid, pp. 342-351, June 2011.

52. Yuntao Zhu and Junshan Zhang and Kautilya Partel, "Location-aided routing with uncertainty in mobile ad hoc networks: A stochastic semidefinite programming approach," *Mathematical and Computer Modelling* 53(11-12): 2192-2203 (2011)
53. M. Zhang and L. Yang and X. Gong and S. He and J. Zhang, "Wireless Service Pricing Competition under Network Effect, Congestion Effect, and Bounded Rationality", *IEEE Transactions on Vehicular technology*, submitted.
54. S. He and D. Shin and J. Zhang and J. Chen and Y. Sun, " Full-View Area Coverage in Camera Sensor Networks: Dimension Reduction and Near-optimal Solutions," *IEEE Transactions on Vehicular technology*, 65(9): 7448-7461 (2016).
55. Yi Shi and Yalin Evren Sagduyu and Junshan Zhang and Jason H. Li, "Adaptive Coding Optimization in Wireless Networks: Design and Implementation Aspects," *IEEE Trans. Wireless Communications* 14(10): 5672-5680 (2015).
56. W. Feng and Y. Wang and N. Ge and J. Lu and J. Zhang, "Virtual MIMO in Multi-Cell Distributed Antenna Systems: Coordinated Transmissions with Large-Scale CSIT," *JSAC special issue on Virtual MIMO*, 2013.
57. L. Yang and Y. Sadyudu and J. Zhang and J. Li, "Deadline-aware Scheduling with Adaptive Network Coding for Real-time Traffic," *IEEE/ACM Transactions on Networking*, 23(5): 1430-1443 (2015).
58. S. He and X. Gong and J. Zhang and J. Chen and Y. Sun, "Curve-based Deployment for Barrier Coverage in Wireless Sensor Networks," *IEEE Transactions on Wireless Communications*, 13(2): 724-735 (2014).
59. D. Qian and O. Yagan and L. Yang and J. Zhang and K. Xing, "Diffusion of Real-time Information over Social-Physical Networks: Network Coupling and Clique Structure," *Network Science*, vol. 3, no. 1-4, pp. 43-55, 2013.
60. Dejun Yang, Satyajayant Misra, Xi Fang, Guoliang Xue, Junshan Zhang: "Two-Tiered Constrained Relay Node Placement in Wireless Sensor Networks: Computational Complexity and Efficient Approximations." *IEEE Trans. Mob. Comput.* 11(8): 1399-1411 (2012)
61. O. Yagan and D. Qian and J. Zhang and D. Cochran, "On Allocating Interconnecting Links against Cascading Failures in Cyber-Physical Networks," *IEEE Transactions on Parallel and Distributed Systems*, Special Issue on Cyber-Physical Systems (CPS), 2012.
62. S. Wang and Y. Sagduyu and J. Zhang and J. Li, "Impact of Induced Spectrum Predictability via Wireless Network Coding," *IEEE Transactions on Vehicular Technology*, Feb. 2012.
63. S. Wang and J. Zhang, "Opportunistic Spectrum Scheduling by Jointly Exploiting Channel Correlation and PU Traffic Memory," *IEEE Journal on Selected Areas in Communications - Cognitive Radio Series*, 31(3): 394-405 (2013).

64. L. Yang and H. Kim and J. Zhang and M. Chiang and C. Tan, "Pricing-based Decentralized Spectrum Access Control in Cognitive Radio Networks," *IEEE/ACM Transactions on Networking*, 21(2): 522-535 (2013).
65. L. Yang and Y. Sagduyu and J. Zhang and J. Li, "Distributed stochastic power control in ad hoc networks: a nonconvex optimization case," *EURASIP J. Wireless Comm. and Networking* 2012: 231 (2012)
66. S. Wang and J. Zhang and L. Tong, "Delay Analysis for Cognitive Radio Users with Random Access: A Fluid Queue View," *IEEE Transactions on Wireless Communications*. Feb. 2012.
67. J. Choi and C. Joo and J. Zhang and N.B. Shroff, "Distributed Link Scheduling under SINR Model in Multi-hop Wireless Networks," *IEEE/ACM Transactions on Networking*, 22(4): 1204-1217 (2014).
68. L. Tang and X. Gong and J. Wang and J. Zhang, "Target Detection in Bistatic Radar Networks: Node Placement and Repeated Security Game," *IEEE Transactions on Wireless Communications*, 12(3): 1279-1289 (2013).
69. D. Qian and D. Zheng and J. Zhang and N. Shroff and C. Joo, "CSMA-Based Distributed Scheduling in Multi-hop MIMO Networks under SINR Model," *IEEE/ACM Transactions on Networking*, 21(3): 746-759 (2013).
70. X. Gong and C. Thejaswi and J. Zhang and H. V. Poor, "Distributed Opportunistic Scheduling for Cooperative Networking: To Relay or Not To Relay," *JSAC special issue on cooperative networks*, Feb, 2012.
71. Chandrashekar Thejaswi and Amir Bennatan and Junshan Zhang and A. Robert Calderbank and Douglas Cochran: "Layered Coding for Interference Channels With Partial Transmitter Side Information." *IEEE Trans. Information Theory* 57(5): 2765-2780 (2011)
72. **C. Thejaswi P.S.** and J. Zhang and S. Pun and V. H. Poor and D. Zheng, "Distributed Opportunistic Scheduling with Two-Level Channel Probing," *IEEE/ACM Transactions on Networking*, p.1464-1477, Aug. 2010 (selected for fast-track for publications).
73. **D. Zheng** and **W. Ge** and J. Zhang, "Distributed Opportunistic Scheduling For Ad-Hoc Networks With Random Access: An Optimal Stopping Approach," *IEEE Transactions on Information Theory*, p. 205-222, Jan. 2009.
74. **W. Ge** and J. Zhang and J. Wieselthier and S. Shen, "PHY-Aware Distributed Scheduling for Ad Hoc Communications with Physical Interference Model," *IEEE Transactions on Wireless Communications*, p. 2682-2693, May 2009.

75. **D. Zheng** and S. Pun and **W. Ge** and J. Zhang and V. Poor, "Distributed Scheduling For Ad Hoc Communications With Imperfect Channel Information," *IEEE Transactions on Wireless Communications*, P. 5450–5460, Dec. 2008.
76. J. Zhang and **D. Zheng** and M. Chiang, "The Impact of Stochastic Noisy Feedback on Distributed Network Utility Maximization," *IEEE Transactions on Information Theory*, p. 645–665, Feb. 2008.
77. **Q. Gao** and J. Zhang and S. Hanly, "Cross-Layer Rate Control in Wireless Networks with Lossy Links: Leaky-Pipe Flow, Effective Network Utility Maximization and Hop-by-Hop Algorithms," *IEEE Transactions on Wireless Communications*, p. 3068–3076, June 2009.
78. **D. Zheng** and J. Zhang, "A Two-Phase Utility Maximization Framework for Wireless Medium Access Control," *IEEE Transactions on Wireless Communications*, P. 4299–4307, Dec. 2007.
79. L. Wang and Z. Niu and S. Shen and J. Zhang, "Stability Analysis of General AIMD/RED Systems with Multiple Bottlenecks," *Computer Networks*, p. 338–352, 2009.
80. **W. Ge** and J. Zhang and S. Shen, "A Cross-layer Design Approach to Multicast in Wireless Networks," *IEEE Transactions on Wireless Communications*, p. 1063–1071, March 2007.
81. **W. Ge** and J. Zhang and G. Xue, "Joint Stream Multiplexing and Link Scheduling with Physical Interference in Multi-Hop MIMO Networks," *IEEE Transactions on Vehicular Technology*, p. 3966–3978, Oct. 2010.
82. **M. Hu** and J. Zhang, "MIMO Ad Hoc Networks: Medium Access Control, Saturation Throughput and Optimal Hop Distance," *Special Issue on Mobile Ad Hoc networks, Journal of Communications and Networks*, Dec. 2004, p. 317–330 (acceptance ratio: 10/91).
83. Dejun Yang and Satyajayant Misra and Xi Fang and Guoliang Xue and Junshan Zhang, "Two-Tiered Constrained Relay Node Placement in Wireless Sensor Networks: Computational Complexity and Efficient Approximations," *IEEE Transactions on Mobile Computing*, June 2011.
84. **C. Thejaswi P.S.** and A. Bennatan and J. Zhang and A. R. Calderbank and D. Cochran, "Layered Coding for Interference Channels with Partial Transmitter Side Information," *IEEE Transactions on Information Theory*, pp 2765–2780, May 2011.
85. **B. Wang** and J. Zhang and L. Zheng, "Achievable Rates and Scaling Laws of Wideband Sensory Relay Networks," *IEEE Transactions on Information Theory*, p. 4084–4104, Sept. 2006.
86. A. Host-Madsen and J. Zhang, "Capacity Bounds and Power allocation in Wireless Relay Channel," *IEEE Transactions on Information Theory*, p. 2020–2040, Jun. 2005.

87. **B. Wang** and J. Zhang and A. Host-Madsen, “On the Capacity of MIMO Relay Channels,” *IEEE Transactions on Information Theory*, Jan. 2005, p. 29–43.
88. L. Huang and Y. Lai and K. Park and J. Zhang and **Z. Hu**, “Critical Behavior of Blind Spots in Sensor Networks,” *Chaos: An Interdisciplinary Journal of Nonlinear Science*, June 2007, Chaos 17, 023132 (8 pages).
89. L. Huang and Y. Lai and K. Park and J. Zhang, “Percolation and Blind Spots in Complex Networks,” *Physics Review E* 73, 066131 (2006), 5 pages.
90. F. Hou and Lin X. Cai and Pin-Han Ho and Sherman Shen and Junshan Zhang, “A Cooperative Multicast Scheduling Scheme for Multimedia Services in IEEE 802.16 Networks,” *IEEE Transactions on Wireless Communications*, p. 1508–1519, March 2009.
91. **Z. Hu** and J. Zhang and L. Tong, “Adaptive Sensor Activity control in Many-to-one Sensor Networks,” *JSAC special issue on Non-linear Optimization in Communication Systems*, p. 1525-1534, Aug. 2006 (acceptance ratio 17/95).
92. **Q. Gao** and J. Zhang and S. Shen, “A Cross-Layer Optimization Approach for Energy Efficient Wireless Sensor Networks: Coalition-Aided Data Aggregation, Cooperative Communication and Energy Balancing,” *Journal of Advances in Multimedia (AM), Special Issue on Cross-layer Optimized Wireless Multimedia Communications*. (invited), Volume 2007, Article ID 56592, 12 pages, Dec. 2007.
93. **K. Bai** and J. Zhang, “Opportunistic Multichannel Aloha: A Distributed Multi-Access Control Scheme for OFDMA Wireless Networks,” *IEEE Trans. on Vehicular Technology*, special issue on Cross-layer Design in Mobile ad hoc Networks and Wireless Sensor Networks, p. 848-855, May 2006.
94. **D. Zheng** and J. Zhang, “Protocol Design and Throughput Analysis of Frequency-Agile Multi-Channel Medium Access Control,” *IEEE Transactions on Wireless Communications*, p. 2887–2895, Oct. 2006.
95. W. Ha and Pin-Han Ho and X. Sherman Shen and Junshan Zhang, “Cross-Layer Organization of Application-Specific Wireless Sensor Networks with Sense-Sleep Trees via Network Flow Model,” *Elsevier Computer Communications Journal*, 2006.
96. J. Zhang and T. Konstantopoulos, “Multi-Access Interference Processes are Self-Similar in Multimedia CDMA Cellular Networks,” *IEEE Transactions on Information Theory*, p. 1024–1038, Mar. 2005.
97. J. Zhang and **M. Hu** and N. B. Shroff, “Bursty Data Over CDMA: Predictive MAI Temporal Structure, Rate Control and Admission Control” p. 779–795, *Computer Networks Journal*, Aug. 2003. (invited paper from INFOCOM’02).

98. D. Guo, X. Wang, and J. Zhang, "Fast Real-Time Hurst Parameter Estimation via Adaptive Wavelet Lifting," *IEEE Trans. on Vehicular Technology*, p. 1266–1273, vol. 53, July 2004.
99. M. Hu and J. Zhang and J. Sadowsky, "Traffic Aided Opportunistic Scheduling for Wireless Networks: Algorithms and Performance Bounds," *Computer Networks Journal*, Nov 2004, p. 505–518.
100. M. Hu and J. Zhang, "Opportunistic Multi-Access: Multiuser Diversity, Relay-Aided Opportunistic Scheduling, and Traffic-Aided Admission Control," *the Journal on Special Topics in Mobile Networking and Applications (MONET) on Integration of Heterogeneous Wireless Technologies*, p. 435–444, vol. 9, 2004.
101. B. Lu, X. Wang, and J. Zhang, "Throughput of CDMA Data Networks with Multiuser Detection, ARQ, and Packet Combining," *IEEE Trans. on Wireless Communications*, p. 1576–1589, Sept. 2004.
102. J. Zhang and X. Wang, "Large System Performance of Blind and Group-Blind Multiuser MMSE Receivers," *IEEE Transactions on Information Theory*, pp. 2507–2523, Sept. 2002.
103. J. Zhang and E. K. P. Chong, "Linear MMSE Multiuser Receivers: MAI Conditional Weak Convergence and Network Capacity," *IEEE Transactions on Information Theory*, pp. 2114–2122, July 2002.
104. J. Zhang, E. K. P. Chong, and I. Kontoyiannis, "Unified Spatial Diversity Combining and Power Allocation Schemes for CDMA Systems," *IEEE Journal on Selected Areas in Communications*, Wireless Communications Series, pp. 1276–1288, July 2001.
105. J. Zhang, E. K. P. Chong, and David N. C. Tse, "Output MAI Distributions of Linear MMSE Multiuser Receivers in DS-CDMA Systems," *IEEE Transactions on Information Theory*, vol. 47, no. 3, pp. 1128–1144, March 2001.
106. J. Zhang and E. K. P. Chong, "CDMA Systems in Fading Channels: Admissibility, Network Capacity, and Power-Control," *IEEE Transactions on Information Theory*, vol. 46, no. 3, pp. 962–981, May 2000.
107. I. Kontoyiannis and J. Zhang, "Arbitrary Source Models and Bayesian Codebooks in Rate-Distortion Theory," *IEEE Transactions on Information Theory*, pp. 2276–2290, August 2002.

Book Monographs and Book Chapters

1. 1. Xu Chen, Junshan Zhang, and Satyajayant Misra, Socially-aware Cooperative D2D and D4D Communications towards Fog Networking, in Edited book on **Fog for 5G and IoT**. John Wiley, 2017.

2. L. Yang and M. He and J. Zhang and V. Vittal, "Spatio-Temporal Data Analytics for Wind Energy Integration," Springer Briefs in Electrical and Computer Engineering, Springer, 2014. ISBN 978-3-319-12318-9.
3. X. Gong and X. Chen and L. Yang and J. Zhang, "Social Group Utility Maximization," SpringerBriefs in Electrical and Computer Engineering, Springer, 2014. ISBN 978-3-319-12321-9.
4. Weiyan Ge and Junshan Zhang, "Network Scheduling: Joint PHY and MAC Optimization for Wireless Scheduling," Verlag Dr. Muller Publisher, ISBN 978-3-639-13981-5, 2009 (204 pages).
5. Dong Zheng and Junshan Zhang, "Physical-layer Aware Control and Optimization in Wireless Networks," Verlag Dr. Muller Publisher, ISBN 978-3-639-13434-6, 2009 (223 pages).
6. Xiaowen Gong and Lei Yang and Xu Chen and Junshan Zhang, "Efficiency and Pareto Optimality," Encyclopedia of Wireless Networks, Springer, 2018.

Conference Proceedings Refereed Papers

Sigmetrics, Mobihoc, INFOCOM, WiOPT, ICDCS:

1. Xuanyu Cao and Junshan Zhang and H. Vincent Poor, "An Optimal Auction Mechanism for Mobile Edge Caching," presented at ICDCS 2018.
2. Lei yang and Mengyuan Zhang and Shibo He and Ming Li and Junshan Zhang, "Crowd-Empowered Privacy-Preserving Data Aggregation for Mobile Crowdsensing," presented at MobiHoc 2018.
3. Sen Lin and Junshan Zhang and Lei Ying, "Waze-Inspired Spectrum Discovery via Smartphone Sensing Data Fusion," presented at WiOPT 2018.
4. Weina Wang and Lei Ying and Junshan Zhang, "The Value of Privacy: Strategic Data Subjects, Incentive Mechanisms and Fundamental Limits," ACM SIGMETRICS 2016: 249-260.
5. Weina Wang and Lei Ying and Junshan Zhang, "Buying Data from Privacy-Aware Individuals: The Effect of Negative Payments," the 12th Conference on Web and Internet Economics (WINE 2016), Montreal, Canada, December 11-14, 2016.
6. D. Shin and S. He and J. Zhang, "Joint Sensing Task and Subband Allocation for Large-scale Spectrum Profiling," INFOCOM 2015.
7. X. Gong and X. Chen and K. Xing and M. Zhang and J. Zhang, "Personalized Location Privacy in Mobile Networks: A Social Group Utility Approach," INFOCOM 2015.
8. X. Chen and L. Yang and X. Gong and J. Zhang, "A Social Group Utility Maximization Framework with Applications in Database Assisted Spectrum Access," presented at INFOCOM 2014.

9. B. Proulx and J. Zhang, "Modeling Social Network Relationships via t-Cherry Junction Trees," presented at INFOCOM 2014.
10. D. Shin and S. He and J. Zhang, "Robust and Cost-Effective Architecture Design for Smart Grid Communications: A Multi-stage Middleware Deployment Approach," presented at INFOCOM 2014.
11. Y. Wang and L. Huang and T. Gu and H. Wei and K. Xing and J. Zhang, "Data-driven Traffic Flow Analysis for Vehicular Communications," presented at INFOCOM 2014.
12. L. Yang and X. Chen and J. Zhang and H. V. Poor, "Optimal Privacy-Preserving Energy Management for Smart Meters," presented at INFOCOM 2014.
13. S. He and D. Shin and J. Zhang and J. Chen, "Toward Optimal Allocation of Location Dependent Tasks in Crowdsensing," presented at INFOCOM 2014.
14. H. Li and C. Huang and S. Cui and J. Zhang, "Distributed Opportunistic Scheduling for Wireless Networks Powered by Renewable Energy Sources," presented at INFOCOM 2014.
15. J. Sun and X. Chen and J. Zhang and Y. Zhang and J. Zhang, "SYNERGY: A Game-Theoretical Approach for Cooperative Key Generation in Wireless Networks," presented at INFOCOM 2014.
16. Y. Cao and X. Chen and J. Zhang and T. Jiang, "SoCast: Social Ties Based Cooperative Video Multicast," presented at INFOCOM 2014.
17. X. Chen and B. Proulx and X. Gong and J. Zhang, "Social Trust and Social Reciprocity Based Cooperative D2D Communications," presented at Mobihoc 2013.
18. X. Gong and J. Zhang and D. Cochran and K. Xing, "Barrier Coverage in Bistatic Radar Sensor Networks: Cassini Oval Sensing and Optimal Placement," presented at Mobihoc 2013.
19. X. Gong and J. Zhang and D. Cochran, "When Target Motion Matters: Doppler Coverage In Radar Sensor Networks," presented at INFOCOM 2013.
20. S. He and X. Gong and J. Zhang and J. Chen and Y. Sun, "Barrier Coverage in Wireless Sensor Networks: From Lined-based to Curve-based Deployment," to be presented at IEEE INFOCOM'2013 (mini-symposium).
21. L. Yang and Y. Sadyudu and J. Li, "Adaptive Network Coding for Scheduling Real-time Traffic with Hard Deadlines," in Proceedings of Mobihoc 2012.
22. C. Thejaswi and T. Tuan and J. Zhang, "When Compressive Sampling Meets Multicast: Outage Analysis and Subblock Network Coding," presented at INFOCOM 2011.

23. L. Yang and H. Kim and J. Zhang and M. Chiang and C. Tan, "Pricing-based Spectrum Access Control in Cognitive Radio Networks with Random Access," presented at INFOCOM 2011.
24. S. Wang and Y. Sagduyu and J. Zhang and J. Li, "Shaping via Network Coding in Cognitive Radio Networks," INFOCOM 2011 (mini-symposium).
25. M. He and S. Murugesan, and J. Zhang, "Multiple Timescale Dispatch and Scheduling for Stochastic Reliability in Smart Grids with Wind Generation Integration," INFOCOM 2011 (mini-symposium).
26. O. Yagan, D. Qian, J. Zhang, and D. Cochran, "On Allocating Interconnecting Links against Cascading Failures in Cyber-Physical Networks," the Third International Workshop on Network Science for Communication Networks (collocated with INFOCOM 2011), Shanghai, China, April 2011.
27. D. Qian and D. Zheng and J. Zhang and N. Shroff, "CSMA-Based Distributed Scheduling in Multi-hop MIMO Networks under SINR Model," presented at INFOCOM 2010 (acceptance rate 17.5%).
28. S. Wang and J. Zhang and L. Tong, "Delay Analysis for Cognitive Radio Networks with Random Access: A Fluid Queue View," presented at INFOCOM 2010 (acceptance rate 17.5%).
29. P. Hande and M. Chiang and R. Calderbank and J. Zhang, "Pricing under Constraints in Access Networks: Revenue Maximization and Congestion Management," presented at INFOCOM 2010 (acceptance rate 17.5%).
30. S. Tan and D. Zheng and J. Zhang and J. Zeidler, "Distributed Opportunistic Scheduling for Ad-Hoc Communications Under Delay Constraints," presented at INFOCOM 2010 (acceptance rate 17.5%).
31. Y. Yi and J. Zhang and M. Chiang, "Delay and Effective Throughput of Wireless Scheduling in Heavy Traffic Regimes: Vacation Model for Complexity," presented at Mobihoc 2009 (acceptance rate 17.7%), 10 pages.
32. C. Thejaswi and J. Zhang and S. Pun and V. H. Poor, "Distributed Opportunistic Scheduling with Two-Level Channel Probing," presented at INFOCOM 2009, Rio, Brazil, April 2009 (acceptance rate 18%), p. 1683–1691.
33. D. Zheng, W. Ge and J. Zhang, "Distributed Opportunistic Scheduling for Ad-Hoc Communications: An Optimal Stopping Approach," presented at ACM Mobihoc 2007 (acceptance rate 14%), 10 pages.
34. D. Zheng, M. Cao, J. Zhang and P. R. Kumar, "Channel Aware Distributed Scheduling For Exploiting Multiuser Diversity and Multi-Receiver Diversity in Ad-Hoc Networks: A Unified

- PHY/MAC Approach,” presented in INFOCOM 2008, Phoenix, AZ (acceptance rate 18%), p. 1454–1462.
35. Q. Gao, J. Zhang and S. Hanly, “Cross-Layer Rate Control in Wireless Networks with Lossy Links: Leaky-Pipe Flow, Effective Network Utility Maximization and Hop-by-Hop Algorithms,” presented in INFOCOM 2008, Phoenix, AZ (acceptance rate 18%), p. 493–501.
 36. J. Zhang and D. Zheng and M. Chiang, “The Impact of Stochastic Noisy Feedback on Distributed Network Utility Maximization,” presented at INFOCOM 2007 (acceptance rate 18%), p. 222–230.
 37. D. Zheng and J. Zhang, “Joint Optimal Channel Probing and Transmission in Collocated Wireless Networks,” presented at INFOCOM 2007 (Mini-Symposium), p. 2266–2270.
 38. B. Wang and J. Zhang, “Throughput Scaling of Wideband Sensory Relay Networks: Cooperative Relaying, Power Allocation and Achievable Rates,” presented at INFOCOM 2006 (acceptance rate 20%), 9 pages.
 39. M. Hu and J. Zhang and J. Sadowsky, “Traffic Aided Opportunistic Scheduling for Downlink Transmissions: Algorithms and Performance Bounds,” presented at INFOCOM 2004 (acceptance rate 20%), p. 1562–1661.
 40. Junshan Zhang, Ming Hu, and Ness B. Shroff, “Bursty Data Over CDMA: MAI Self Similarity, Rate Control and Admission Control,” presented at INFOCOM’02 (acceptance rate 20%), 2002, pp. 391–399.
 41. J. Zhang and E. K. P. Chong, “CDMA Systems with Random Spreading in Fading Channels: Network Capacity and Power Control,” in *Proceedings of the 1999 IEEE INFOCOM*, pp. 940–947, New York, New York, March 21–25, 1999 (acceptance rate 20%).

ISIT:

42. W. Song and K. Cai and R. Feng and J. Zhang, “Network Coding for Two-Unicast with Rate (1,2),” to be presented at ISIT 2012.
43. Z. Hu and J. Zhang and L. Tong, “Stochastic Control for Sensor Activity Management in Many-to-one Sensor Networks,” presented at ISIT 2006, Seattle, WA, July 2006, 5 pages.
44. B. Wang and J. Zhang, “A Note on the Scaling Laws of UWB Wireless Networks,” presented at the recent result session at ISIT’2004, June 27 – July 2, 2004.
45. J. Zhang and X. Wang, “Large-System Analysis of Blind and Group-Blind Multiuser Receivers,” presented at ISIT’02, 2002, pp. 190.
46. I. Kontoyiannis and J. Zhang, “Arbitrary Source Models and Bayesian Codebooks in Rate-Distortion Theory,” presented at ISIT’02, 2002, pp. 349.

47. J. Zhang and T. Konstantopoulos, "Self-Similarity of Multi-Access Interference Processes in Bursty Data CDMA Networks," presented at ISIT'02, 2002, pp. 47.
48. J. Zhang and E. K. P. Chong, "A Unified Study on the MAI Gaussianity in Large CDMA Systems with MMSE Receivers," presented at ISIT'01, Washington D.C., June 2001.
49. J. Zhang, E. K. P. Chong, and David N. C. Tse, "Distributions of the Output MAI of Linear MMSE Multiuser Receivers in DS-CDMA Systems," in *Proceedings of the 2000 IEEE International Symposium on Information Theory*, pp. 385, Sorrento, Italy, June 25–30, 2000.

Allerton, CISS, Asilomar, ITA and other workshops:

50. Mengyuan Zhang and Lei Yang and Xiaowen Gong and Junshan Zhang, "Impact of network effect and congestion effect on price competition among wireless service providers," CISS 2016: 523-528, Princeton, NJ (invited).
51. Weina Wang and Lei Ying and Junshan Zhang, "A game-theoretic approach to quality control for collecting privacy-preserving data," Allerton 2015: 474-479
52. Weina Wang and Lei Ying and Junshan Zhang, "On the relation between identifiability, differential privacy, and mutual-information privacy," Allerton 2014: 1086-1092
53. Ali Eslami and Chuan Huang and Junshan Zhang and Shuguang Cui, "An analytical approach to study cascading failures in finite-size random geometric networks," Allerton 2014: 1118-1125.
54. Lei Yang and Miao He and Vijay Vittal and Junshan Zhang, "Stochastic optimization based economic dispatch and interruptible load management with distributional forecast of wind farm generation," CDC 2014: 199-204
55. Xiaowen Gong and Xu Chen and Junshan Zhang, "Social group utility maximization in mobile networks: From altruistic to malicious behavior," CISS 2014.
56. Xiaowen Gong and Xu Chen and Junshan Zhang and H. Vincent Poor, "From social trust assisted reciprocity (STAR) to utility-optimal mobile crowdsensing," GlobalSIP 2014: 742-745
57. O. Yagan and D. Qian and J. Zhang and D. Cochran, "Information Diffusion in Overlaying Social-Physical Networks," presented at CISS 2012, Princeton, NJ (invited).
58. Kai Cai and J. Zhang, "On Critical Thresholds for Influence Spreading," proceedings of CISS 2012, Princeton, NJ.
59. L. Tang and X. Gong and J. Wang and J. Zhang, "Target detection in bistatic radar networks: Node placement and dynamic frequency selection," proceedings of CISS 2012, Princeton, NJ.

60. D. Qian and J. Zhang and C. Thejaswi P.S., “Towards Understanding the Dynamics of Complex Networks: An Entropic and Markovian View,” Allerton 2010 (invited).
61. C. Thejaswi PS, D. Cochran and J. Zhang, “A Sufficient Condition for Optimality of Digital versus Analog Relaying in a Sensor Network,” In Proc. of the 43rd Conference on Information Sciences and Systems (CISS’09), p. 202–206, Mar. 2009.
62. C. Thejaswi PS and A. Bennatan and J. Zhang and R. Calderbank and D. Cochran, “Rate-Achievability Strategies for Two-Hop Interference Flows,” presented at Allerton Conference (invited), IL, Sept. 2008, p. 1432–1439.
63. J. Zhang, “Threshold Structure of Channel Aware Distributed Scheduling in Ad-Hoc Networks: An Optimal Stopping View,” presented at CISS 2008, Princeton, NJ, March 2008, p. 486–491 (invited).
64. T. Duman and J. Zhang, “A Note on Convergence rate of Constrained Capacity Estimation Algorithms over ISI Channels,” presented at ITA 2008, San Diego, CA, Jan. 2008. p. 66-69.
65. W. Ge, J. Zhang and J. Wieselthier, “Channel Aware Distributed Scheduling for Ad-Hoc Communications with Capture,” presented at the 41st Asilomar Conference, Monterey, CA, Nov. 2007, p. 260–264.
66. J. Zhang, “Cross-Layer Rate Control in Multi-hop Networks: Fairness, Noisy Feedback and Stochastic Stability,” presented at IEEE Communication Theory Workshop, May 2006.
67. J. Zhang, “Throughput Scaling in Wideband Sensory Relay Networks: Cooperative Relaying, Power Allocation and Scaling Laws,” presented at MSRI Workshop on “Mathematics of Relaying and Cooperation in Communication Networks,” Mathematical Science Research Center, Berkeley, April 10–12, 2006.
68. J. Zhang and D. Zheng, “A Stochastic Primal-Dual Algorithm for joint Flow Control and MAC Design in Multi-hop Wireless Networks,” presented at CISS 2006, Princeton, NJ, 2006, 6 pages.
69. Q. Gao and J. Zhang and B. Larish and S. Shen, “Coalition-aided data transport in sensor networks: Data compression, cooperative transmission and Optimal Coalition Size,” presented at IEEE RWS workshop, Jan. 2006 (invited), 5 pages.
70. B. Wang and J. Zhang, “Achievable Rates and Scaling Laws of Wireless Relay Networks in the low SNR regime,” presented at the 43rd Annual Allerton Conference, Sept. 2005, 8 pages.
71. B. Wang and J. Zhang and A. Host-Madsen, “On Ergodic Capacity of MIMO Relay Channel,” Presented at 38th CISS (invited), March 2004, p. 603–608.
72. B. Wang and J. Zhang, “MIMO Relay Channel and Its Application for Cooperative Communication in Ad Hoc Networks,” presented at Allerton’03, 8 pages.

73. J. Zhang and D. Zheng, "Ad Hoc Networking over Fading Channels: Multi-Channel Diversity, MIMO Signaling, and Opportunistic Medium Access Control," presented at Allerton' 03, 8 pages.
74. Raja Tuppely and J. Zhang and E. Chong, "Opportunistic Scheduling for Streaming Video in Wireless Networks," presented at 37th CISS, March 2003, 6 pages.
75. J. Zhang, "Bursty Traffic Meets Fading: A Cross-Layer Design Perspective," Presented in the 40th Annual Allerton Conference on Communications, Control and Computing, 2002 (invited), 8 pages.
76. M. Hu and J. Zhang, "Rate Adaptation for Bursty Data Transmission in DS-CDMA Networks," presented at 35th Asilomar conference, 2001, 5 pages.
77. J. Zhang and E. K. P. Chong, "MAI Conditional Weak Convergence and Network Capacity in Wireless Networks with MMSE Receivers," in *Proceedings of the 38th Annual Allerton Conference on Communication, Control and Computing*, Monticello, Illinois, Oct. 4–6, 2000 (invited), 8 pages.
78. J. Zhang and X. Wang, "Blind and Group-blind Multiuser Receivers in Large CDMA Systems—A Random Signature View," presented at CISS'01, John Hopkins University, March 2001, 6 pages.
79. J. Zhang and E. K. P. Chong, "Admissibility and Network Capacity of Power-Controlled CDMA Systems in Fading Channels," in *Proceedings of the 36th Annual Allerton Conference on Communication, Control and Computing*, pp. 282–291, Monticello, Illinois, September 23–25, 1998.
80. M. Hu and J. Zhang, "Two novel Schemes for Oppoportunistic Multiuser Communications," special session on wireless networks in IEEE Multimedia Signal Processing Workshop, Dec 2002 (invited), 5 pages.

ICC, Globecom, ICDCS, WCNC and Milcom:

81. Xuanyu Cao and Junshan Zhang and H. Vincent Poor: "A Novel Online Convex Optimization Algorithm Based on Virtual Queues." ICC 2018.
82. Xuanyu Cao and Junshan Zhang and H. Vincent Poor: "Optimal Renewable Penetration in Energy Procurement and Demand Response." ICC 2018.
83. Xu Chen and Junshan Zhang: "When D2D meets cloud: Hybrid mobile task offloadings in fog computing". ICC 2017: 1-6
84. Ai-Chun Pang and Wei-Ho Chung and Te-Chuan Chiu and Junshan Zhang: "Latency-Driven Cooperative Task Computing in Multi-user Fog-Radio Access Networks." ICDCS 2017: 615-624

85. Mengyuan Zhang and Lei Yang and Xiaowen Gong and Junshan Zhang: "Privacy-Preserving Crowdsensing: Privacy Valuation, Network Effect, and Profit Maximization". GLOBECOM 2016: 1-6
86. Dong-Hoon Shin and Junshan Zhang, "Early Anomaly Detection in an Interconnected Power Grid and Communication Network: Exploiting Interdependent Structure of Failures," GLOBECOM 2015.
87. Mengyuan Zhang and Lei Yang and Dong-Hoon Shin and Xiaowen Gong and Junshan Zhang, "Privacy-Preserving Database Assisted Spectrum Access: A Socially-Aware Distributed Learning Approach," GLOBECOM 2015.
88. Shaobo Zhang and Nikita G. Singhal and Kory W. Hedman and Vijay Vittal and Junshan Zhang, "An Evaluation of Algorithms to Solve for Do-Not-Exceed Limits for Renewable Resources," HICSS 2015: 2567-2576
89. Qingsong Cai and Limin Sun and Jianwei Niu and Yan Liu and Junshan Zhang, "Disseminating real-time messages in opportunistic mobile social networks: A ranking perspective," ICC 2015: 3228-3233
90. M. Zhang and Xu Chen and Junshan Zhang, "Social-aware relay selection for cooperative networking: An optimal stopping approach," ICC 2014: 2257-2262
91. S. Wang and J. Zhang, "Exploiting Channel Correlation and PU Traffic Memory for Opportunistic Spectrum Scheduling," Globecom 2012, Anaheim, CA, Dec. 2012.
92. D. Qian and L. Yang and J. Zhang, "Diffusion of Real-Time Information in Social-Physical Networks," Globecom 2012, Anaheim, CA, Dec. 2012.
93. L. Yang and D. Qian and J. Zhang, "Risk-aware Day-ahead Scheduling and Real-time Dispatch for Plug-in Electric Vehicles," Globecom 2012, Anaheim, CA, Dec. 2012.
94. S. Wang and Y. Sagduyu and J. Zhang and J. Li, "Traffic Shaping Impact of Network Coding on Spectrum Predictability and Jamming Attacks," Milcom 2011.
95. X. Gong and C. Thejaswi and J. Zhang and H. V. Poor, "Distributed Opportunistic Scheduling for Cooperative Networking," Globecom 2011, Houston, TX, Dec. 2011.
96. L. Yang and S. Murugesan and J. Zhang, "Real-Time Scheduling Over Markovian Channels: When Partial Observability Meets Hard Deadlines," Globecom 2011, Houston, TX, Dec. 2011.
97. Z. Wang and Y. Sagduyu and J. Li and J. Zhang, "Capacity and Delay Scaling Laws for Cognitive Radio Networks with Routing and Network Coding," to be presented at MILCOM 2010.

98. J. Lou and C. Thejaswi and J. Zhang and G. Yue and T Luo, "Achievable Rates for a Relay-Aided Interference Channel," presented at IEEE ICC 2010.
99. D. Zheng and S. Pun and W. Ge and J. Zhang and H.V. Poor, "Distributed Opportunistic Scheduling For Ad-Hoc Communications Under Noisy Channel Estimation," presented at IEEE ICC 2008, Beijing, China, May 2008, p. 3715–3719.
100. W. Ge and J. Zhang and G. Xue, "Joint Clustering and Optimal Cooperative Routing in Wireless Sensor Networks," presented at IEEE ICC 2008, Beijing, China, May 2008, p. 2216–2220.
101. S. Pun and W. Ge and D. Zheng and J. Zhang and H.V. Poor, "Distributed Opportunistic Scheduling for MIMO Ad-Hoc Networks," presented at IEEE ICC 2008, Beijing, China, May 2008, p. 3689–3693.
102. F. Hou and L. Cai and J. She and P. Ho and S. Shen and J. Zhang, "Cooperative Multicast Scheduling Scheme for IPTV over IEEE 802.16 Networks," presented at IEEE ICC 2008, Beijing, China, May 2008, p. 2566–2570.
103. Y. Cao, B. Chen and J. Zhang, "A New Achievable Rate Region for Interference Channels with Common Information," presented at WCNC 2007, Hong Kong, p. 2069–2073.
104. W. Ge and J. Zhang and G. Xue, "Cooperative Geographic Routing in Wireless Sensor Networks," presented at Milcom 2006, Washington D.C., Oct. 2006, p. 1–7.
105. Q. Gao and J. Zhang and B. Larish, "Energy Balancing in Coalition-based Multi-hop Wireless Sensor Networks," presented at Milcom 2006, Washington D.C., Oct. 2006, 7 pages.
106. Q. Gao and J. Zhang and B. Larish and S. Shen, "Coalition-aided data Transmissions in Wireless sensor networks," presented at IEEE ICC, Jun. 2006, 5 pages.
107. Z. Hu and J. Zhang and L. Tong, "Dynamic Activity management in Many-to-one Sensor Networks," presented at Milcom 2005, Nov. 2005, P. 3104–3110.
108. D. Zheng and J. Zhang, "A Particle Filtering Approach to the Estimation of Competing Stations in IEEE 802.11 WLANs," presented at Globecom 2005, 5 pages.
109. W. Ge and J. Zhang and S. Shen, "Rate Optimization for MAC Layer Multicast in Wireless Networks," presented at Globecom 2005, p. 2986–2990.
110. A. Host-Madsen and J. Zhang, "Ergodic Capacity and Power Allocation in Wireless Relay Channels," presented at GLOBECOM'04, Nov. 2004, 5 pages.
111. M. Hu and J. Zhang and J. Sadowsky, "A Size-Aided Opportunistic Scheduling Scheme in Wireless Networks," presented at GLOBECOM 2003, 5 pages.

112. D. Zheng and J. Zhang and J. Sadowsky, “A Hierarchical Multiuser Diversity (HMD) Transmission Scheme,” presented at GLOBECOM 2003, 5 pages.
113. E. D. Lentz and J. Zhang, “Joint Scheduling and Interference Cancellation in Ad Hoc Networks,” presented at MILCOM 2003 (invited), 7 pages.
114. J. Zhang, E. K. P. Chong, and I. Kontoyiannis, “Unified Spatial Diversity Combining and Power Allocation Schemes for CDMA Systems,” in *Proceedings of the IEEE GLOBECOM 2000*, pp. 114–118, San Francisco, CA, Nov. 27–Dec. 1, 2000.

Misc:

115. M. He and J. Zhang, “Deadline-aware Concentration of Synchrophasor Data: An Optimal Stopping Approach,” 2014 IEEE International Conference on Smart Grid Communications, Venice, Italy, Nov 2014.
116. S. Lakshminarayana and L. Yang and H. Vincent Poor and Tony Q. S. Quek and Junshan Zhang, “Risk-Aware Energy Procurement with Renewable Energy and Storage,” 2014 IEEE International Conference on Smart Grid Communications, Venice, Italy, Nov 2014.
117. M. Hedayati and J. Zhang and K. Hedman, “Joint Transmission Expansion Planning and Energy Storage Placement in Smart Grid Towards Efficient Integration of Renewable Energy,” presented at the IEEE PES Transmission & Distribution Conference Exposition 2014.
118. D. Shin and J. Koo and L. Yang and X. Lin and S. Bagchi and J. Zhang, “Low-Complexity Secure Protocols to Defend Cyber-Physical Systems Against Network Isolation Attacks,” submitted to CNS 2013.
119. M. He and L. Yang and J. Zhang and V. Vittal, “Spatio-temporal Analysis for Smart Grids with Wind Generation Integration,” ICNC 2013 (invited), San Diego, CA, Jan 2013.
120. M. He and J. Zhang and V. Vittal, “A Data Mining Framework for Online Dynamic Security Assessment: Decision Trees, Boosting, and Complexity Analysis,” ISGT 2012, Washington D.C., Jan. 2012.
121. S. Murugesan and J. Zhang and V. Vittal, “Finite State Markov Chain Model for Wind Generation Forecast - A Data driven Spatiotemporal Approach,” ISGT 2012, Washington D.C., Jan. 2012.
122. M. He and S. Murugesan, and J. Zhang, “A Markov Decision Process Approach to Multi-timescale Scheduling and Pricing in Smart Grids with Integrated Wind Generation,” CAMSAP workshop (invited), Dec. 2011.
123. L. Yang and S. Murugesan and J. Zhang, “Sequential Scheduling of Projects with Strict Deadlines in a Partially Observable Environment,” 2011 INFORMS Midwest Regional Conference in Columbus, Ohio (invited).

124. M. He and J. Zhang, "Detection and Localization in Smart Grid: A Probabilistic Dependence Graph Approach," presented at 1st IEEE International Conference on Smart Grid Communications, Gaithersburg, Maryland, USA, October 4–6, 2010.
125. D. Yang and S. Misra and X. Fang and G. Xue and J. Zhang, "Two-Tiered Constrained Relay Node Placement in Wireless Sensor Networks: Efficient Approximations," presented at IEEE SECON 2010.
126. D. Zheng and J. Zhang, "Design for Resilience Via Utility Maximization: A Minimax Game Perspective," presented at GOMACTECH 2010, Reno, NV, March 2010.
127. K. Bai and J. Zhang, "Opportunistic Multichannel Aloha for Clustered OFDM Wireless Networks," The Second International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine), Orlando, FL, Aug. 2005, p. 1–4.
128. D. Zheng and J. Zhang, "Channel-Aware Weighted Proportional Fair Medium Access Control in Wireless LANs with MIMO links," The Second International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine), Orlando, FL, Aug. 2005, p. 21–24.
129. M. Hu and J. Zhang, "MIMO Medium Access Control and Routing in Ad Hoc Networks: A Holistic Perspective," presented at HPSR 2005.
130. M. Hu and J. Zhang, "MIMO Ad Hoc Networks with Spatial Diversity: Medium Access Control and Saturation Throughput," presented at CDC 2004 (invited), Dec. 2004, p. 3301–3306.
131. A. Host-Madsen and J. Zhang, "Information Theoretic Study of Time-Division Wireless Relay Channels," presented at VTC'04, Sept. 2004.
132. D. Zheng and J. Zhang, "A Note On Channel-Aware Fair Medium Access Control in Ad Hoc Networks with MIMO links," presented at the poster session of MobiCom 2004, Oct. 2004.
133. D. Zheng and J. Zhang, "Protocol Design and Throughput Analysis of Opportunistic Multi-Channel Medium Access Control," 2nd IASTED International Conference on Communications, Internet, & Information Technology (CIIT 03), Scottsdale, AZ, 2003.
134. X. Wang, J. Zhang and A. Host-Madsen, "Blind and Group-blind Multiuser Detection: Effect of Estimation Error and Large System Performance," Invited talk at the 2001 IEEE Communication Theory Workshop, Borrego Springs, CA, April 2001.
135. J. Zhang and X. Wang, "Large System Analysis of Blind Multiuser Detection in CDMA Networks," invited talk at ITCOM'2001, Denver, CO, August 2001.

136. J. Zhang and E. K. P. Chong, "Power Control for Spread Spectrum Networks in Fading Channels," in *Proceedings of the 6th IEEE International Symposium on Spread-Spectrum Techniques and Applications*, pp. 790–794, Newark, NJ, September 6–8, 2000.

Research Grants

Sponsored Research Grants (my personal share is around \$11M; co-PI in more than \$35M)

1. Principal Investigator (co-PIs: V. Vittal and A. Scaglione at ASU; Jessica Harrison at MISO, J.P. Watson at Sandia Lab, N. Vempati at Nexant), “Plus-up for Stochastic Optimal Power Flow for Real-Time Management of Distributed Renewable Generation and Demand Response,” ARPA-E NODES program, Dept. of Energy (DOE), 3/2019–3/2021. (\$1.2M)
2. Principal Investigator (co-PI: L. Ying at ASU, R. Srikant at UIUC and Steven Low at Caltech), “CPS: Medium: Collaborative Research: Demand Response & Workload Management for Data Centers with Increased Renewable Penetration,” National Science Foundation (NSF), 9/2017–8/2020. (\$1.0M)
3. Co-Principal Investigator (PI: Lei Ying), “TWC SBE: Small: Towards an Economic Foundation of Privacy-Preserving Data Analytics: Incentive Mechanisms and Fundamental Limits,” National Science Foundation (NSF), 8/2016–7/2019. (\$500K)
4. Principal Investigator (co-PIs: V. Vittal, K. Hedman, A. Scaglione at ASU; J.P. Watson at Sandia Lab, N. Vempati at Nexant), “Stochastic Optimal Power Flow for Real-Time Management of Distributed Renewable Generation and Demand Response,” ARPA-E NODES program, Dept. of Energy (DOE), 3/2016–9/2018. (\$3.75M)
5. Principal Investigator (co-PI: Vincent H. Poor at Princeton Univ.), “Integrated Cognitive Mobile and Social Networking,” DoD ARO, 8/2016–7/2019. (\$458K)
6. Co-Principal Investigator (PI: V. Vittal at ASU; co-PIs: Virginia Kwan and Larry Mays), “CRISP Type 2: Resilient Cyber-Enabled Electric Energy and Water Infrastructures: Modeling and Control under Extreme Mega Drought Scenarios,” National Science Foundation (NSF), 8/2015–7/2018. (\$1.48M)
7. Principal Investigator (co-PIs: L. Ying and J. Kitchen at ASU), “EARS: Joint Optimization of RF Design and Smartphone Sensing: From Adaptive Sniffing to WAZE-Inspired Spectrum Sharing,” National Science Foundation (NSF), 9/2015–9/2018. (\$650K)
8. Principal Investigator, “Social Tie Aware Spectrum Sharing: Physical-Social Game and Cloud-based Cooperative Sensing,” National Science Foundation (NSF), 8/2014–7/2018. (\$443,468)
9. Co-Principal Investigator (PI: Lei Yang), “WiFiUS: Exploiting Social Structure for Cooperative Mobile Networking,” National Science Foundation (NSF), 1/2015–12/2016. (\$270K)
10. Co-Principal Investigator (PI: K. Hedman, and co-PI: S. Oren at UC Berkeley), “Reliability Metrics for Renewable Resources and Self-Reserves,” PSERC, 7/2015–6/2017. (\$210K)

11. Principal Investigator, “An Exchange Market Approach for Mobile Crowdsensing,” National Science Foundation (NSF), 8/2014–7/2018. (\$350,000)
12. Principal Investigator (co-PI: S. Cui at TAMU), “Foundations for Network Resilience Against Cascading Failures: Modeling, Fundamental Limits and Robust Network Architecture,” DoD DTRA, 1/2013–1/2019. (\$1.25M)
13. Principal Investigator, “NeTS: Small: Meeting Hard Deadlines of Real-Time Traffic: From Wireless Scheduling to Smart Charging,” National Science Foundation (NSF), 9/2012–8/2015. (\$430,000)
14. Principal Investigator (co-PI: Y. Zhang at ASU), “Inducing and Exploiting Spectrum Predictability via Traffic Shaping and Mobility for Cognitive Communication in White Space,” National Science Foundation (NSF), 8/2011–7/2015. (\$429,864)
15. Co-Principal Investigator (PI: V. Vittal, and 20+ PIs), “DOE PSERC Initiative: Investigate the Information Hierarchy for the Future Grid,” Dept. of Energy (DOE), 6/2011–5/2013. (\$5.8M)
16. Principal Investigator (co-PI: Vittal at ASU, P.R. Kumar and S. Vasudevan at UIUC), “CPS: Medium: Collaborative Research: Architecture and Distributed Management for Reliable Mega-scale Smart Grids,” National Science Foundation (NSF), 9/2010–9/2014. (\$1.0M)
17. Co-Principal Investigator (PI: V. Vittal, and co-PI: M. Kezunovic at TAMU), “Data mining to characterize signatures of impending system events or performance from PMU measurements in smart grid,” PSERC, 6/2011–8/2013. (\$210K)
18. Co-Principal Investigator (PI: Robert Calderbank at Princeton and 10 co-PIs), “Information Dynamics as Foundation for Network Management,” DoD MURI, 09/1/2009–8/31/2014. (\$7.1M, JZ’s share is \$600K)
19. Co-Principal Investigator (PI: A. Sen at ASU, and co-PI: Ramchandran at UC Berkeley and C. Qiao at SUNY Buffano), “A Robust and Resilient Network Design Paradigm for Region-based Faults inflicted by WMD Attack,” DoD DTRA, 04/8/2009–3/31/2014. (\$1.5M)
20. Principal Investigator, “Networked Information Gathering in Stochastic Sensor Networks: Compressive Sensing, Adaptive Network coding and Robustness,” AFOSR, 9/2010–9/2013. (\$270,149)
21. Principal Investigator, “Situational Awareness through Multi-layer Spectrum Sensing and Network Design,” DoD: STTR Phase II, 11/2010–11/2012. (\$250K)
22. Principal Investigator, “NeTS: Small: The Impact of Message Passing Complexity on QoS Provisioning in Stochastic Wireless Networks,” National Science Foundation (NSF), 9/15/2009–8/31/2013. (\$339,574)

23. Principal Investigator, “Information Geometric Network Architecture for Heterogeneous Network Management,” AFOSR, 12/2009–12/2011. (\$250K)
24. Principal Investigator (co-PI: Xue at ASU and P.R. Kumar at UIUC), “NeTS: Medium: Collaborative Research: MIMO-Pipe Modeling, Scheduling and Delay Analysis in Multi-hop MIMO Networks,” National Science Foundation (NSF), 08/1/2009–6/31/2013. (\$620K)
25. Co-Principal Investigator (PI: Xue at ASU), “IHCS: Improving Coverage and Connectivity in Heterogeneous Wireless Sensor Networks through Relay, Cooperation, and Mobility,” National Science Foundation (NSF), 08/1/2009–6/31/2012. (\$ 331K)
26. Principal Investigator, “Situational Awareness through Multilayer Spectrum Sensing and Network Design,” AFOSR (through IA. Inc), 5/15/2009–3/15/2010. (\$33K)
27. Principal Investigator, “Information Geometric Network Architecture for Heterogeneous Network Management,” AFOSR (through IA. Inc), 10/15/2008–7/15/2009. (\$33K)
28. Principal Investigator (co-PI: P.R. Kumar at UIUC), “NeTS-WN: Collaborative Research: Channel-Aware Distributed Scheduling for Optimal Throughput and Latency: A Unified PHY & MAC Approach,” National Science Foundation (NSF), 09/01/2007–08/31/2011. (\$400K)
29. Principal Investigator, “A NSF Proposal to Support Young Scientists and Graduate Students in 2007 IEEE Communication Theory Workshop in Sedona, Arizona,” National Science Foundation (NSF), 1/2007–6/2007. \$12K
30. Principal Investigator, “Optimal Design for Multi-Channel MAC with Directional Antenna,” John Hopkins Applied Physics Lab, 1/2007–12/2007. (\$33.5K)
31. Principal Investigator, “Energy-Efficient Cross Layer Algorithms for Ad-Hoc & Sensor Networks,” SPAWAR (ONR), 1/2006–12/2006. (\$49K)
32. Principal Investigator, “Energy Efficient Cross-Layer Design for Disadvantaged Wireless Networks: Dynamic Sensor Management, Channel-Aware Data Transport and Survivability,” Office of Naval Research YIP, 6/2005–6/2008.(\$308,898)
33. Co-Principal Investigator (PI: Spanias at ASU), “Collaborative Research: CCLI-EMD; Development of On-line Laboratories for Networks, Probability Theory, Signals and Systems, and Multimedia Computing,” National Science Foundation (NSF), 4/2005–4/2008. (\$311,120; JZ’s share is \$50K)
34. Principal Investigator, “CAREER: Efficient Resource Management and Multi-Access Protocols For Bursty Traffic Over Wireless Networks: A Cross-Layer Design Approach,” National Science Foundation (NSF), 8/2003–7/2009. (\$428,525)
35. Co-Principal Investigator (PI: Duman at ASU), “A complete wireless communication system for the next generation information technology,” State of Arizona, 6/2002–5/2003. (\$240,000)

36. Principal Investigator, “Cellular Cross-Layer Design: Analysis and Simulation,” Intel Research Council, 6/2002–6/2005. (\$250,000)
37. Principal Investigator, “CDMA/HMD (Hierarchical Multiuser Diversity) Access Schemes for Multimedia Wireless Networks,” National Science Foundation (NSF), 6/2002–6/2006. (\$279,926)

Student Thesis and Dissertations Supervised

Ph.D. Dissertation

1. Ming Hu, Ph.D. (graduated in July 2004; currently senior manager at Apple Inc; was with Nokia Research and Beceem Inc. San Jose), “*A Cross-layer design framework for Resource Allocation in Multimedia Wireless Networks*”, 01/2001-07/2004.
2. Bo Wang, Ph.D. (graduated in Aug. 2006; currently with Qualcomm Inc, San Diego), “*Capacity Bounds and Scaling Laws of Wireless Relay Networks*,” 08/2002–08/2006.
3. Dong Zheng, Ph.D. (graduated in Aug. 2007; currently with Facebook Inc; was with Broadcom Inc), “*Physical-Layer Aware Control and Optimization in Stochastic Wireless Networks*,” 08/2002–08/2007.
4. Weiyan Ge, Ph.D. (graduated in Sept. 2008; currently with Xiaomi Inc; was with Qualcomm Inc, San Diego), “*Joint PHY/MAC Optimization For Wireless Scheduling*,” 01/2004–08/2008.
5. Qinghai Gao, Ph.D. (graduated in Nov. 2008; currently with Amazon Inc; was with Qualcomm (Atheros) Inc, San Jose), “*Cross-Layer Optimization and Cooperative Communications in Wireless Networks*,” 06/2004–11/2008.
6. Chandra Thejaswi P.S., Ph.D. (graduated in Jan. 2011; currently with Samsung Inc, India), “*Opportunistic Scheduling, Cooperative Relaying and Multicast in Wireless Networks*,” 08/2006–01/2011.
7. Shanshan Wang, Ph.D. (08/2007-07/2012) (graduated in July 2012; currently with Qualcomm Inc, San Diego) “*Cognitive Communications in White Space: Opportunistic Scheduling, Spectrum Shaping and Delay Analysis*,”
8. Dajun Qian, Ph.D. (08/2008-11/2012) (graduated in Nov. 2012; currently with Groupon Inc, San Jose)
9. Lei Yang, Ph.D. (08/2008-11/2012) (graduated in Nov. 2012; currently Assistant professor in Computer Science at Univ of Nevada, Reno; was a postdoc under Vincent Poor at Princeton) “*Network Interdependence and Information Dynamics in Cyber-Physical Systems*”
10. Miao He, Ph.D. (08/2008-07/2013), (graduated in July 2013, currently Assistant Professor in ECE at Texas Tech Univ.) “*A Data Analytics Framework for Smart Grids: Spatio-temporal Wind Power Analysis and Synchronophasor Data Mining*”
11. Brian Proulx, Ph.D. student (08/2010-05/2015), (currently with MIT Lincoln Laboratory) “*IMPACT OF SOCIAL STRUCTURE ON WIRELESS NETWORKING: MODELING AND UTILITY*”

12. Xiaowen Gong, Ph.D. student (08/2010-05/2015), currently Assistant Professor in ECE at Auburn Univ.; was post-doctoral scholar with nesh Shroff at Ohio State Univ.) *“Wireless Network Design and Optimization: From Social Awareness to Security”*
13. Weina Wang, Ph.D. student (08/2012-05/2016), currently Assistant Professor in Computer Science Dept. at Carnegie Mellon University; was a postdoc scholar With R. Srikant at UIUC; *“Fundamental Limits in Data Privacy: From Privacy Measures to Economic Foundations”*
14. David Ganger, Ph.D. student (08/2011-07/2016), currently with Schneider Electric as a Power Systems Consultant *“Enhanced Power System Operational Performance with Anticipatory Control under Increased Penetration of Wind Energy”*
15. Mojgan Hedayati, Ph.D. student (08/2011–12/2016), (currently with ABB), *“Flexible Reserve Margin Optimization for Increased Wind Generation Penetration”*

Current Graduate Students In Progress

1. Mehmet Dedeoglu, Ph.D. student (01/2015–)
2. Sen Lin, Ph.D. student (08/2015–)
3. Basar Akbay, Ph.D. student (01/2016–)
4. Umut Demirhan, Ph.D. student (08/2017–)
5. Zhaofeng Zhang, Ph.D. student (01/2018–)
6. Zuyuan Zhang, Ph.D. student (01/2018–)

Post-doctoral Scholars

1. Xuanyu Cao (08/2017–), Ph.D. (Univ. of Maryland), B.E.(Shanghai Jiao Tong University)
2. Trevor Werho (07/2016–), Ph.D.(Arizona State University), B.S.(Arizona State University)
3. Jun Zhao (06/2015–04/2017), Ph.D.(Carnegie Mellon University), B.E.(Shanghai Jiao Tong University), currently Assistant Professor in Computer Science Department of Nanyang Technical University, Singapore.
4. Lei Yang, (11/2012–07/2015), Ph.D.(Arizona State Univ.), M.S.& B.S.(Southeast Univ.), currently Assistant Professor in Computer Science Department of Univ. of Nevada at Reno.
5. Xu Chen (08/2012–03/2014), Ph.D.(Chinese Univ. of Hong Kong), B.S.(South China Univ. of Technology), Humboldt scholar on the faculty of Mathematics and Computer Science, University of Gottingen, Germany. Currently Professor at Sun Yat-Sen University, Guangzhou, China.

6. Donghoon Shin (08/2012–), Ph.D.(Purdue Univ.), M.S.(Korea Advanced Institute of Science and Technology), B.E.(Korea Univ.), currently with AT&T Labs.
7. Chuan Huang (08/2012–07/2014), Ph.D.(Texas A&M Univ.), M.S.&B.S.(Univ. of Electronic Science and Technology of China), currently Professor of UESTC, China.
8. Shibo He (05/2012–05/2014), Ph.D.(Zhejiang Univ.), currently Professor of Zhejiang Univ, China.
9. Sugumar Murugesan, 07/2010–2/2012, Ph.D. & M.S. (The Ohio State Univ.), B.E. (Anna Univ.), San Jose, CA.
10. Kai Cai (08/2011–07/2012), currently Research Scientist, Ph.D. & M.S.(Peking University).
11. Osman Yagan (08/2011-12/2011), Ph.D. (University of Maryland), B. E. (METU, Turkey), currently Associate research professor at CMU.
12. Chandra Theajaswi P.S., 02/2011–08/2011, currently with Samsung Inc, India.
13. Eric Kwong, 01/2011–03/2011, Ph.D. (Univ. of Pennsylvania), MPhil & B.E. (Hongkong Univ. of Sci. & Tech.)
14. Tuan Tran, 05/2010–12/2010, Ph.D. (Oregon State Univ.), M.S. (Politecnico di Torino, Italy), M.S.& B.S. (Hanoi Univ. of Technology, Vietnam)
15. Dong Zheng, 04/2009–12/2009, Ph.D. (Arizona State Univ.), M.S. (Mississippi State Univ.), B.S. (Shanghai Jiaotong Univ.), currently with Facebook.

Masters Thesis

1. Beibei Liu, (01/2016–05/2018), currently with Ciena Corporation.
2. Zhengyu Zhang (co-advised with Lei Ying), (08/2012–11/2105),currently with Smartiply.
3. Ashwin Kowdle, 05/2007–11/2008, currently with QualComm.
4. Daniel Aguiar, 01/2005–07/2006, currently Ph.D. student at Purdue Univ.
5. Kai Bai, 08/2003–01/2005, currently with QualComm..
6. Zhifeng Hu, 08/2003–08/2005, on medical leave.
7. Raju Reddy, 08/2001– 12/2003; currently with Motorola.
8. Shabana Jabeen, 08/2001–12/2002.
9. Eric D. Lentz, 08/2001–08/2003; currently a Ph.D. student at Cornell Univ..

Visiting Scholars and Students Hosted

1. Jim Dai, Visiting Professor (on sabbatical), Cornell University, Ithaca, NY. (08/2015–06/2016).
2. Te-Chuan Chiu, visiting Ph.D student, National Taiwan Univ, Taiwan (08/2016–06/2017).
3. Shi Yan, Visiting Student, currently Ph.D. student at Beijing Univ. of Posts and Telecom., B.S.(Beijing Univ. of Posts and Telecom.), 08/2015–08/2016.
4. Yang Cao, B.E.(Huazhong Univ. of Science and Technology),(08/2011–08/2013).
5. Visiting Ph.D student: Ling Tang, Southeast Univ, China (08/2010–08/2012).
6. Visiting student: Jia Lou, BUPT, China (09/2008–09/2009).
7. Visiting professor: Professor Huilan Zou, Central Univ. for Nationalities, China (03/2008–02/2009).
8. Visiting professor: Professor Chang Keon Lim, Pukyong National Univ., Korea (08/2005–07/2006).
9. Post-doc: Dr. Zhifeng Diao, Univ. of Hong Kong , Hong Kong (10/2006–08/2007)
10. Edwin Marengo (Post-doc), *Scaling Laws of Wireless Networks with Multiple Antennas*, 08/2003–12/2003
11. Nguyen Vuong Quoc Thinh (graduate school from Ecole Polytechnic, France), *Wireless Multicast with Directional Antennas*, 04/2004–07/2004.

Invited Presentations

1. “Privacy-Preserving Data Collection: What is New Norm?” Keynote, IEEE WiOPT 2018, Shanghai, May 2018.
2. “The Edge of DOK (Device-Of-Kin): From Mobile Social Networking to Fog Computing,” plenary talk, IEEE ICNC 2018, Maui, HI, March 7, 2018.
3. “A Forward-looking View of Energy Internet,” NICE, Mountain View, CA, Jan 19, 2018.
4. “Fog Computing in the Making: From Resource Management to Data Security,” keynote at 2017 Asia Fog Computing and Networking Summit, National Chiao Tung University, HsinChu City, Taiwan, Dec. 2017.
5. “Internet of DOK (Device-Of-Kin): From Mobile Social Networking to Fog Computing,” keynote at 2nd Symposium on Future Networking and Computing, Changsha, China, Oct 2017.
6. “Privacy-Preserving Data Analytics: Data Collection, Social Learning, and Fog Computing,” plenary talk at Beijing Jiaotong Univ, July 2017.
7. “Towards an Economic Foundation of Privacy-Preserving Data Analytics,” National Taiwan Univ, Taiwan, Oct. 2016.
8. “Internet of NOK (Next-of-Kin): When Mobile Networks meet Social Networks,” Asia-US Forum on Fog Networking for 5G and IoT, National Taiwan Univ, Taiwan Sept 2015.
9. “Social Group Utility Maximization Game: A New Paradigm for Mobile Social Networks,” Keynote Talk, WASA 2014.
10. “A New Paradigm for Mobile Social Networking: Social Tie, Group Utility Maximization and Privacy,” Keynote Talk, WCSP 2013.
11. “A Data Analytics Framework for Wind Energy Integration: From Graphical Learning to Stochastic Optimization,” RSRG Seminars, California Institute of Technology, March 25, 2013.
12. “A Data Analytics Framework for Wind Energy Integration: From Graphical Learning to Stochastic Optimization,” ECE Seminars, Texas A&M University, Feb. 1, 2013.
13. “Fundamentals of Opportunistic Wireless Communications,” IEEE CPMT Chapter, Tempe, AZ, May 16 2012.
14. “Tackling Dynamics in Grid Integration of Wind Energy: Modeling, Multi-scale Scheduling and Pricing,” Dept of ECE, Unix of Texas at Austin, Sept 2011.
15. “The Value of Situation Awareness in Smart Grid,” Department of Automation, Zhejiang Univ., Hangzhou, China, Apr. 2011.

16. “New Trends in Network Research,” Michigan College, Shanghai Jiaotong University, China, Apr. 2011.
17. “The Value of Network State Awareness in A Changing World,” Department of Computer Science, Univ. of Science and Technology, Suzhou, China, Apr. 2011.
18. “The Value of Network State Awareness in A Changing World: Tackling Dynamics in Wireless Networks and Smart Grids,” Department of EE, Univ. of Washington, Seattle, WA, Mar. 2011.
19. “The Value of Network State Awareness in A Changing World: Tackling Dynamics in Wireless Networks and Smart Grids,” Department of Computer Science, Temple Univ., Philadelphia, Jan. 2011.
20. “The Value of Network State Awareness in A Changing World: Tackling Dynamics in Wireless Networks and Smart Grids,” School of ECE, Cornell Univ., Ithaca, NY, Jan. 2011.
21. Plenary talk, “Fundamental Tradeoffs between Probing and Channel-aware Scheduling in Future Wireless Networks,” Joint workshop on New Trends in Communications, Control and Computing, by P. R. Kumar Chair Professor Group and Larry Ho Chair Professor Group, Tsinghua University, China, July 9–11, 2010.
22. “Fundamental Tradeoffs between Probing and Channel-aware Scheduling in Future Wireless Networks,” Shanghai Jiaotong University, China, July 2, 2010.
23. “Fundamental Tradeoffs between Probing and Channel-aware Scheduling in Future Wireless Networks,” Beijing Institute of Technology, China, June 28, 2010.
24. “Fundamental Tradeoffs between Probing and State-aware Scheduling in Future Wireless Networks,” Ericsson/CWC communications and Networking seminar series, University of California at San Diego, May 17, 2010.
25. “Fundamental Tradeoffs between Probing and State-aware Scheduling in Future Wireless Networks,” Division of Corporate Research and Development, Qualcomm Inc., May 18, 2010.
26. “Fundamental Tradeoffs between Probing and Scheduling in Stochastic Wireless Networks,” Ohio State University, March 5, 2010.
27. “Fundamental Tradeoffs between Probing and Channel-Aware Scheduling in Future Wireless Networks,” Boston University, Feb. 26, 2010.
28. “Multi-Scale Stochastic Dynamics in Wireless Networks: Scheduling, Throughput and Delay,” RSRG Seminars, California Institute of Technology, Nov 13, 2009.
29. “Distributed Network Utility Maximization in Multi-hop Wireless Networks: Noisy Feedback, Lossy Channel and Stability,” Dept. of ECE, Univ. of Waterloo, Canada, July. 4, 2008.

30. "Channel Aware Distributed Scheduling in Ad-Hoc Networks: An Optimal Stopping Perspective," Dept. of EE, HUST, China, June 2, 2008.
31. "Distributed Opportunistic Scheduling for Ad-Hoc Communications: An Optimal Stopping Approach," Dept. of ECE, Univ. of Waterloo, Sept. 14, 2007.
32. "Distributed Opportunistic Scheduling for Ad-Hoc Communications: An Optimal Stopping Approach," WINLAB, Rutgers University, June 18, 2007.
33. "Distributed Opportunistic Scheduling for Ad-Hoc Communications: An Optimal Stopping Approach," ISS Seminar, Department of Electrical Engineering, Princeton University, June 13, 2007.
34. "Distributed Opportunistic Scheduling for Ad-Hoc Communications: An Optimal Stopping Approach," Mathematics of Networks and Communications, Bell Labs, Lucent Technology, June 12, 2007.
35. "Fundamental Tradeoff between Channel Probing and Data Transmission in Wireless Ad-hoc/Sensor Networks," Coordinated Science Lab, Dept. of ECE, Univ. of Illinois at Urbana-Champaign, Feb. 26, 2007.
36. "Distributed Network Utility Maximization in Multi-hop Wireless Networks: Noisy Feedback, Lossy Channel and Stability," Dept. of EECS, Univ. of Michigan, Ann Arbor, MI, Feb. 9, 2007.
37. "Distributed Network Utility Maximization in Multi-hop Wireless Networks: Noisy Feedback, Lossy Channel and Stability," Coordinated Science Lab, Dept. of ECE, Univ. of Illinois at Urbana-Champaign, Jan. 30, 2007.
38. "Distributed Network Utility Maximization in Multi-hop Wireless Networks: Noisy Feedback, Lossy Channel and Stability," Dept. of ECE, Purdue Univ., West Lafayette, IN, Dec. 2006.
39. "Distributed Network Utility Maximization in Multi-hop Wireless Networks: Noisy Feedback, Lossy Channel and Stability," Dept. of ECE, Univ. of Maryland, College Park, Oct. 2006.
40. "Cross-Layer Rate Control in Multi-hop Networks: Noisy Feedback, Fairness and Stability," Dept. of ECE, Univ. of Utah, Salt Lake City, Sept. 2006.
41. "Cross-Layer Optimization and Design For Ad-Hoc/Sensor Networks," Naval Research Laboratory, Washington DC, July 2006.
42. "Cross-Layer Optimization and Design For Ad-Hoc/Sensor Networks," Air Force Research Laboratory, Rome, NY, June 2006.
43. "Energy Efficient Data Transport in Wireless Relay Networks: Cooperative Relaying, Scaling Laws, and Coalition-Aided Routing," Department of ECE, Syracuse University, June 2006.

44. “Cross-Layer Rate Control in Multi-hop Networks: Fairness, Noisy Feedback and Stochastic Stability,” presented at IEEE Communication Theory Workshop, May 2006 (invited by Andrea Goldsmith).
45. “A Stochastic Primal-Dual Algorithm for Joint Flow Control and MAC Design in Multi-hop Wireless Networks,” in session on Optimization of Communication Networks, in the 40th Conference on Information Science and Systems (CISS), Princeton University, March 22-24, 2006, (invited by Mung Chiang and Steven Low).
46. “Throughput Scaling in Wideband Sensory Relay Networks: Cooperative Relaying, Power Allocation and Scaling Laws,” MSRI Workshop on Mathematics of Relaying and Cooperation in Communication Networks, Mathematical Science Research Center, Berkeley, to be given in April 10–12, 2006, (invited by Michael Gastpar, Gerhard Kramer, and Nick Laneman).
47. “A Holistic View of Ad-Hoc/Sensor Networks,” Thomson Electronics, Princeton, March 2006.
48. “Coalition-Aided Data Transport in Wireless Sensor Networks: Data Compression, Cooperative Transmission and Optimal Coalition Size,” IEEE Radio and Wireless Symposium, San Diego, CA, Jan. 2006.
49. “Throughput Scaling in Wideband Sensory Relay Networks: Cooperative Relaying, Power Allocation and Scaling Laws,” Department of Electrical and System Engineering, University of Pennsylvania, Philadelphia, PA 19107, Oct 3, 2005.
50. “Cross Layer Design in Ad-Hoc/Sensor Networks,” Department of Information Engineering, Chinese Univ. of Hong Kong, Hong Kong, May 9, 2005.
51. “The Utility of MIMO Techniques in Ad Hoc Networks,” Department of Electrical Engineering, State University of New York, Stony Brook, March 15, 2004.
52. “Protocol Design and Throughput Analysis of Opportunistic Multi-Channel Medium Access Control,” 2nd IASTED International Conference on Communications, Internet, & Information Technology (CIIT 03), (invited by Prof. Venu Veeravalli).
53. “On Ergodic Capacity of MIMO Relay Channel,” 38th CISS at Princeton, (invited by Prof. Mung Chiang), March 2004.
54. “MIMO Ad Hoc Networks with Spatial Diversity: Medium Access Control and Saturation Throughput,” IEEE CDC 2004, (invited by Prof. Mingyan Liu).
55. “Bursty Traffic Meets Fading: A Cross-Layer Design Perspective,” 40th Annual Allerton Conference on Communications, Control and Computing, 2002, (invited by Prof. Pramod Viswanath).

56. "Two novel Schemes for Opportunistic Multiuser Communications," IEEE Multimedia Signal Processing Workshop 2002, special session on wireless networks Dec 2002 (invited by Prof. Lang Tong).
57. WINLAB, Department of Electrical Engineering, Rutgers University, April 16, 2001 (Large System Analysis of CDMA networks with Linear MMSE Receivers).
58. Department of Electrical Engineering, Texas A&M University, Feb. 20, 2001 (Large System Analysis of CDMA networks with Linear MMSE Receivers).
59. IEEE Communications and Signal Processing Phoenix Chapter, Oct. 26, 2000 (CDMA Systems with Linear multiuser receivers).
60. 38th Annual Allerton Conference on Communication, Control and Computing, Oct. 4–6, 2000 (MAI Conditional Weak Convergence and Network Capacity in Wireless Networks with MMSE Receivers).
61. Department of Electrical and Computer Engineering, University of Texas at Austin, Austin, TX, Apr. 10–11, 2000 (CDMA Systems with Linear Receivers: Output MAI Distribution, Capacity, and Robustness).
62. School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA, Apr. 5, 2000 (CDMA Systems with Linear Receivers: Output MAI Distribution, Capacity, and Robustness).
63. Motorola, Arlington Height, IL, Mar. 20, 2000 (CDMA Systems with Linear Receivers: Output MAI Distribution, Capacity, and Robustness).
64. Department of Electrical Engineering, Ohio State University, Columbus, OH, Mar. 13, 2000 (CDMA Systems with Linear Receivers: Output MAI Distribution, Capacity, and Robustness).
65. Department of Electrical Engineering, Arizona State University, Tempe, AZ, Mar. 3, 2000 (CDMA Systems with Linear Receivers: Output MAI Distribution, Capacity, and Robustness).
66. Department of Electrical Engineering, University of Notre Dame, Feb. 1, 2000 (CDMA Systems with Linear Receivers: Output MAI Distribution, Capacity, and Robustness).
67. Motorola Labs, Schaumburg, IL, Oct. 20, 1999 (Design and Performance Analysis of Power-Controlled CDMA Networks with Linear Receivers and Antenna Arrays).

University Committee Services

1. Personnel committee of School of ECEE, ASU (2014–2017)
2. University Committee on Committees (2011–2014)
3. University faculty senate (2010–2014)
4. Faculty Search Committee, School of ECEE (2011, 2014)
5. Graduate Committee in the EE Department (2005 - 2006)
6. Co-chair of MSE Exam Comm/Signal Processing Area Committee (2007 - 2010)
7. 3rd year probationary review for Division of Mathematical & Natural Sciences, ASU (2008)
8. Member of Graduate admission Committee for Communication/Signal Processing in the EE Department (2001–2009)

Professional and Scientific Services

Local Professional Committees

Chair, IEEE Communications and Signal Processing Phoenix Chapter, 01/2001–12/2003
Faculty participant, Women in Applied Science and Engineering (WISE), 7/2002–present

Scientific and Professional Society Memberships

Fellow, Institute of Electrical and Electronics Engineers (IEEE)
IEEE Vehicular Technology Society
IEEE Communications Society
IEEE Information Theory Society
American Society of Engineering Education

Conference and Journal Services and Proposal Review Services

1. Editor-at-large, IEEE/ACM Transactions on Networking, since 2013–.
2. Senior editor in communications areas, River Publishers, since 2017.
3. Editor, IEEE Network Magazine, 2013–2018.
4. Area Editor, IEEE Transactions on Vehicular Technology, 2013–2018.
5. Editor, IEEE Wireless Communications, 2009-2012.

6. Editor, The Computer Networks Journal, 2008–2011.
7. Associate Editor, IEEE Transactions on Wireless Communications, 2004–2007.
8. Area chair of the technical program committee for INFOCOM 2010, 2011, 2013, 2014, 2016, 2017, 2018.
9. TPC co-chair of INFOCOM 2012.
10. Member of Best Paper Award committee, Globecom 2014, WCSP 2013.
11. TPC co-chair of ICC 2012.
12. Symposium co-chair, 2012 IEEE SmartGridComm Symposium on "The Whole Picture - Sense, Communicate, Compute, Control"
13. TPC Co-chair of Wicon 2008.
14. General chair of CTW 2007.
15. Panel chair for "New Trends in Communications, Control and Computing," Workshop by P. R. Kumar Chair Professor Group and Larry Ho Chair Professor Group, Tsinghua University, China, July 9–11, 2010.
16. Area chair of the technical program committee for INFOCOM 2010.
17. Student activities chair of the executive committee for INFOCOM 2010.
18. Member of the technical program committee for INFOCOM 2009.
19. Panel co-chair of INFOCOM 2008.
20. TPC vice chair for ICCCN 2006.
21. Member of MSE exam committee in the EE department, ASU
22. Member of the graduate committee in the EE department, ASU.
23. 3rd year probationary review for Division of Mathematical & Natural Sciences, ASU
24. Member of Graduate admission Committee for Communication/Signal Processing in the EE Department
25. Guest Editor, ACM Mobile Networks and Applications (MONET) Special Issue On Soft Radio-enabled Heterogeneous Wireless Networks, 2005.
26. Member of the editorial board of "IEEE Communications Survey and Tutorial," Jan. 2002 – Dec. 2006.

27. TPC co-chair of the 25th IEEE International Performance Computing and Communications Conference, Phoenix, AZ, April 2006.
28. member of the technical program committee for the Qshine 2008.
29. Proposal reviewer for DoD funding agencies, including AFOSR, DTRA, ARO.
30. Panelist on the NSF CAREER panel, NSF ANIR panel, NSF CCF panel, NSF ITR panel.
31. Tutorial co-chair for ICC 2008.
32. Proposal reviewer for State of Kentucky and State of South Carolina.
33. Proposal reviewer for Qatar National Research Fund
34. Member of the technical program committee for INFOCOM 2008.
35. Member of the technical program committee for ICC 2008.
36. Member of the technical program committee for ACM Mobihoc 2008, 2009.
37. Member of the International Advisory Committee of the Journal on “Advanced Electronic Communications: Research and Education”, since April 2004.
38. member of the technical program committee for the Third IEEE International Conference on Sensors and Ad Hoc Communications and Networks (SECON2005, SECON 2006, SECON2007).
39. member of the technical program committee for the IEEE WCNC 2007.
40. member of the technical program committee for the IEEE ICC 2007.
41. member of the technical program committee for the Chinanet 2006.
42. Member of the technical program committee for 2006 International Workshop on Wireless Ad-hoc and Sensor Networks.
43. Member of the technical program committee for INFOCOM 2003, 2004, 2005.
44. Web Chair for MobiHoc 2005.
45. Member of the technical program committee for GLOBECOM 2006.
46. TPC member for 7th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (IEEE WOWMOM 2006).
47. Reviewer for the State of Kentucky Science and Engineering Council, 2005.
48. Reviewer for the Norwegian Research Council, 2003.
49. TPC member of ACM International Workshop on Wireless Multimedia Networking and Performance Modeling (WMuNeP’05), October 2005.

50. member of the technical program committee for the Qshine 2005, 2006, 2007.
51. member of the technical program committee for the Second IEEE International Conference on Sensors and Ad Hoc Communications and Networks (SECON 2005).
52. member of the technical program committee for BROADNETS 2005.
53. Chair and organizer, panel on “Defining Cross-layer design in wireless networking,” ICC 2003.
54. member of the technical program committee for WirelessCom 2005.
55. Member of the technical program committee for ICC 2005.
56. Member of the technical program committee for GLOBECOM 2004.
57. Session Chair of the session on “Switch Architecture” and the session on “Wireless Fading Channels,” *38th annual CISS conf.*, Princeton, NJ, March 17–19, 2004.
58. Local Chair of IEEE High Performance Switching and Routing 2004, session chair on “wireless networking”.
59. Member of the technical program committee for International Conference on E-business and Telecommunication Networks (ICETE) 2004.
60. Member of the technical program committee for IEEE VTC Fall 2003.
61. Vice chair and registration chair of Min-workshop on Signal Processing in Multimedia and Communications, Tempe, AZ, Feb. 2002.
62. Tutorials on Communication theory, *ISCAS 2002*.
63. Member of the Program Committee, *SPIE’s ITCOM 2001, Modeling and Design of Wireless Networks*, Denver, CO, Aug. 20–24, 2001.
64. Member of the editorial board of “IEEE Communications Survey and Tutorial,” Since Jan. 2002.
65. Session Chair of the session on “Resource Allocation in Ad Hoc Networks,” *IEEE INFOCOM 2003*, San Francisco, CA, April. 1–4, 2003.
66. Session Chair of the session on “Physical Layer Design,” *SPIE’s ITCOM 2001, Modeling and Design of Wireless Networks*, Denver, CO, Aug. 20–24, 2001.
67. Session Chair of conference session on “Adaptive Power Control,” *the 6th IEEE International Symposium on Spread-Spectrum Techniques and Applications*, Newark, NJ, September 6–8, 2000.

Referee Services

1. Books: John Wiley & Sons. Inc; Prentice Hall Inc, Cambridge Univ. Press.

2. Journals:

IEEE Transactions on Information Theory, since 1999.

IEEE/ACM Transactions on Networking, since 2000.

IEEE Transactions on Automatic Control, since 1999.

IEEE Journal on Selected Areas in Communications, since 2000.

IEEE Transactions on Wireless Communications, since 2002.

IEEE Transactions on Communications, since 1999.

IEEE Transactions on Vehicular Technology, since 2001.

IEEE Communications Letters, since 2001.

IEEE Transactions on Mobile Computing, since 2004.

Computer Networks, since 2003.

3. Conferences:

IEEE INFOCOM, since 1999.

IEEE International Symposium on Information Theory, since 1999.

IEEE International Conference on Communications, since 1999.

IEEE International Symposium on Computers on Communications, since 1999.

IEEE GOLOBECOM, since 2000.

IEEE VTC, since 2003.

IEEE International Symposium on Circuits and Systems, since 2002.