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I. EARNED DEGREES

- Ph.D., Electrical Engineering, Auburn University, Auburn, Alabama, December 1994.
- M.Eng, Wireless Engineering, Nanjing Institute of Technology, Nanjing, China, March 1986.
- B.Sci, Wireless Engineering, Nanjing Institute of Technology, Nanjing, China, June 1983.

II. EMPLOYMENT HISTORY

- *Associate/Full Professor*, August 2000 – present,
School of Electrical and Computer Engineering, Georgia Tech, Atlanta, GA.
Research Area: *Machine learning and signal processing for communications*
- *Senior/Principal Technical Staff Member*, May 1996 – August 2000,
AT&T Labs - Research (part of former AT&T Bell Labs), Red Bank, NJ.
Research Area: *Wireless communications*
- *Post-Doctoral Research Associate*, September 1994 – May 1996,
Electrical Engineering Department, University of Maryland, College Park, MD.
Research Area: *Signal processing and wireless communications*
- *Research /Teaching Assistant*, September 1991 – August 1994,
Department of Electrical Engineering, Auburn University, Auburn, AL.
Research Area: *Statistical signal processing*
- *Lecturer/Teaching Assistant*, March 1986 – May 1991,
Department of Wireless Engineering, Southeast University, Nanjing, Jiangsu, China.
Research Area: *Wireless communications*

III. HONORS AND AWARDS

A. International or National Awards:

- **IEEE Fellow** (since 2006) for contribution in *Signal Processing for Wireless Communications*.
- **Thank a Teacher Certificate** for being a great teacher in *appreciation your teaching style and dedication to helping students learn in Digital Communications* by the Center for the Enhancement of Teaching and Learning (CETL) of Georgia Tech., March 2008.
- **Distinguished Lecturer** (2009-2010) of the *IEEE Communications Society*.
- **The 2010 Stephen O. Rice Prize Paper Award** from the *IEEE Communications Society* in the field of Communication Theory.
- **The 2013 James E. Avant Garde Award** from the *IEEE Vehicular Technology Society* for advancing the state-of-art in OFDM-aided wireless communications.
- **The 2013 IEEE Wireless Communications Recognition Award** from the in *IEEE Communications Society Wireless Communications Technical Committee* for outstanding technical contributions in the field and service to the scientific and engineering communities.
- **The 2014 Jack Neubauer Memorial Award** from the *IEEE Vehicular Technology Society*.
- **IEEE PIMRC'14 Best Paper Award**.
- **Certificate of Merit** for as a General Co-Chair of GlobalSIP 2014 “for dedication and leadership in organizing the Global Conference on Signal and information Processing (GlobalSIP)” from *IEEE Signal Processing Society*.
- **Distinguished Lecturer** (2016-2018) of the *IEEE Vehicular Technology Society*.

- **The 2017 Award for Advances in Communication** from the *IEEE Communications Society* for an outstanding paper that opened a new line in Green Communications and published in any *IEEE Communications Society* publication in the previous 15 years.
- **The 2017 IEEE TCGCC Distinguished Technical Achievement Recognition Award** from the *IEEE Communications Society Technical Committee on Green Communications and Computing* (TCGCC) for outstanding technical leadership and achievement in green wireless communications and networks.
- **The 2017 IEEE SPEC Technical Recognition Award** from *IEEE Communications Society Signal Processing and Communications Electronics* (SPCE) *Technical Committee* for outstanding contributions to the technological advancement of signal processing for communications.
- **The 2017 IEEE Donald G. Fink Overview Paper Award** from *IEEE Signal Processing Society* for a journal article that has had substantial impact over several years on a subject related to the Society's technical scope.
- **World's Most Influential Scientific Mind**, also known as **Highly Cited Researcher**, by Thomson Reuters (<http://highlycited.com/browse/>) in 2001 - 2014, 2016, and 2017.
- Over **30,000 citations** based on the Google Scholar.
- **Cheung Kong Scholar** (长江学者讲座教授, a visiting position) at the University of Electronic Science and Technology of China. (UESTC) in 2006.
- **1000 Talent Program Scholar** (千人计划教授) (part-time) at the UESTC in 2010.
- **111 Base Academic Master** (111基地学术大师, a visiting position) in Beijing University of Post and Telecommunications (BUPT) in 2017.

B. Institute or School Awards

- **The 2015 Distinguished Faculty Achievement Award** from the *School of Electrical and Computer Engineering, Georgia Institute of Technology*.

IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES

A. Published Books, Book Chapters, and Edited Volumes

A.1 Books

1. Z. Ding and Y. (G.) Li, *Blind Equalization and Identification*, Marcel Dekker, Inc., New York, December 2000. (418 pp.)
2. C.-L. I, G.-D. Yu, S.-F. Han, and G. Y. Li, *Green and Software-Defined Wireless Networks: From Theory to Practice*, Cambridge University Press, Cambridge, UK. (to be delivered June 30, 2017)

A.2 Book Chapters

1. U. Onunkwo and Y. (G.) Li, "Modulation and signal detection in UWB," in *Ultra-Wideband Wireless Communications and Networks*, edited by S. Shen, *et al*, Wiley, New York, April 2006.
2. G. Y. Li, X. Wang, H.-J. Hu, L. Qin, A. C. K. Soong, "Timing and iterative IBI and ICI cancellation," in *Orthogonal Frequency Division Multiplexing with Diversity for Future Wireless Systems*, edited by Khoa Le, Bentham e-books, Bentham Science Publishers Ltd., January 2011
3. X. Zhou, G. Y. Li, D. Li, D. Wang, and A. Soong, "Bandwidth-efficient cooperative spectrum sensing," in *Cognitive Radio for Wireless Cellular and Vehicular Networks*, edited by H. Venkataraman and G.-M. Muntean, Boston, MA: Springer, 2012.
4. C. Xiong and G. Y. Li, "Energy-Efficient Wireless OFDMA Networks", in *Towards 5G: Applications, Requirements and Candidate Technologies*, edited by R. Vannithamby and S. Talwar, Wiley, New York, February 2016.

A.3 Edited Volumes

1. Y. (G.) Li and G. Stüber, *OFDM for Wireless Communications* (edited), Springer, Inc., Boston, MA, January 2006. (306pp.)

B. Refereed Publications and Submitted Articles

B.1 Published and Accepted Articles

1. Z. Ding and Y. Li, "On channel identification based on second order cyclic spectra," *IEEE Transactions on Signal Processing*, vol. 42, pp. 1260-1264, May 1994.
2. Y. Li and Z. Ding, "A new nonparameter method for linear system phase recovery from bispectrum," *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing*, vol. 41, pp. 415-419, June 1994.
3. Y. Li and Z. Ding, "ARMA system identification based on second order cyclostationarity," *IEEE Transactions on Signal Processing*, vol. 42, pp. 3483-3494, December 1994.
4. Y. Li and Z. Ding, "A simplified approach to optimum diversity combining and equalization in digital data transmission," *IEEE Transactions on Communications*, vol. 43, pp. 2285-2288, August 1995.
5. Y. Li and Z. Ding, "Convergence analysis of finite length blind adaptive equalizers," *IEEE Transactions on Signal Processing*, vol. 43, pp. 2120-2129, September 1995.
6. Y. Li and Z. Ding, "Global convergence of fractionally spaced Godard adaptive equalizers," *IEEE Transactions on Signal Processing*, vol. 44, pp. 818-826, April 1996.
7. Y. Li, K. J. R. Liu, and Z. Ding, "Length and cost dependent local minima of blind channel equalizers," *IEEE Transactions on Signal Processing*, vol. 44, pp. 2726-2735, November 1996.
8. Y. Li and K. J. R. Liu, "Static and dynamic convergence of adaptive blind equalizers," *IEEE Transactions on Signal Processing*, vol. 44, pp. 2736-2745, November 1996.
9. Y. Li and K. J. R. Liu, "Blind adaptive spatial-temporal equalization algorithms for wireless communications using antenna arrays," *IEEE Communication Letters*, vol. 1, pp. 25-27, January 1997.
10. Y. Li, K. J. R. Liu, and J. Razavilar, "An improved parameter estimation scheme for damped sinusoidal signals based on low-rank Hankel approximation," *IEEE Transactions on Signal Processing*, vol. 45, pp. 481-487, February 1997.
11. Y. (G.) Li, J. Razavilar, and K. J. R. Liu, "A high-resolution technique for multi-dimensional NMR spectroscopy," *IEEE Transactions on Biomedical Engineering*, vol. 45, pp. 78-86, January 1998.
12. J. Razavilar, Y. Li, and K. J. R. Liu, "A structured low-rank matrix pencil for spectral estimation and system identification," *Signal Processing*, vol. 65/issue 3, pp. 363-372, March 1998.
13. Y. (G.) Li, L. J. Cimini, Jr., and N. R. Sollenberger, "Robust channel estimation for OFDM systems with rapid dispersive fading channels," *IEEE Transactions on Communications*, vol. 46, pp. 902-915, July 1998.
14. Y. (G.) Li and K. J. R. Liu, "Adaptive blind multi-channel equalization for multiple signal separation," *IEEE Transactions on Information Theory*, vol. 44, pp. 2864-2876, November 1998.
15. S. Ariyavisitakul and Y. (G.) Li, "Joint coding and decision feedback equalization for broadband wireless channels," *IEEE Journal on Selected Areas in Communications*, vol. 16, pp. 1670-1678, December 1998.
16. Y. (G.) Li and N. R. Sollenberger, "Adaptive antenna arrays for OFDM systems with co-channel interference," *IEEE Transactions on Communications*, vol. 47, pp. 217-229, February 1999.
17. Y. (G.) Li, N. Seshadri, and S. Ariyavisitakul, "Channel estimation for OFDM systems with transmitter diversity in mobile wireless channels," *IEEE Journal on Selected Areas in Communications*, vol. 17, pp. 461-471, March 1999.
18. Y. (G.) Li, J. H. Winters, and N. Sollenberger, "Spatial-temporal equalization for IS-136 TDMA systems with rapid dispersive fading and co-channel interference," *IEEE Transactions on Vehicular Technology*, vol. 48, pp. 1182-1194, July 1999.
19. Y. (G.) Li, J. Chuang, and N. R. Sollenberger, "Transmitter diversity for OFDM systems and its impact on high-rate data wireless networks," *IEEE Journal on Selected Areas in Communications*, vol. 17, pp. 1233-1243, July 1999.

20. J. Chuang, L. J. Cimini, Jr., Y. (G.) Li, B. McNair, N. Sollenberger, H. Zhao, L. Lin, and M. Suzuki, "High-speed wireless data access based on combining EDGE with wideband OFDM," *IEEE Communications Magazine*, vol. 37, pp. 92-98, November 1999.
21. Y. (G.) Li, "Pilot-symbol-aided channel estimation for OFDM in wireless systems," *IEEE Transactions on Vehicular Technology*, vol. 49, pp. 1207-1215, July 2000.
22. Y. (G.) Li and L. J. Cimini, Jr., "Bounds on the interchannel interference of OFDM in time-varying channels," *IEEE Transactions on Communications*, vol. 49, pp. 401-404, March 2001.
23. B. Sampath, K. J. R. Liu, and Y. (G.) Li, "Error correcting least squares subspace algorithm for blind identification and equalization," *Signal Processing*, vol. 81, no. 10, pp. 2069-2087, September 2001.
24. R. S. Blum, Y. (G.) Li, J. H. Winters, and Q. Yan, "Improved space-time coding for MIMO-OFDM wireless communications," *IEEE Transactions on Communications*, vol. 49, pp. 1873-1878, November 2001.
25. Y. (G.) Li and N. R. Sollenberger, "Clustered OFDM with channel estimation for high rate wireless data," *IEEE Transactions on Communications*, vol. 49, pp. 2071-2076, December 2001.
26. H. Zeng, Y. (G.) Li, and J. H. Winters, "Improved spatial-temporal equalization for EDGE: a fast MMSE timing recovery algorithm and 2-Stage soft-output equalizer," *IEEE Transactions on Communications*, vol. 49, pp. 2124-2134, December 2001.
27. Y. (G.) Li, "Simplified channel estimation for OFDM systems with multiple transmit antennas," *IEEE Transactions on Wireless Communications*, vol. 1, pp. 67-75, January 2002.
28. B. Lu, X.-D. Wang, and Y. (G.) Li, "Iterative receivers for space-time block coded OFDM systems in dispersive fading channels," *IEEE Transactions on Wireless Communications*, vol. 1, pp. 213-225, April 2002.
29. B. Sampath, K. J. R. Liu, and Y. (G.) Li, "Deterministic blind subspace MIMO equalization," *EURASIP Journal on Applied Signal Processing*, pp. 538-551, May 2002.
30. Y. (G.) Li, J. H. Winters, and N. R. Sollenberger, "MIMO-OFDM for wireless communications: signal detection with enhanced channel estimation," *IEEE Transactions on Communications*, vol. 50, pp. 1471-1477, September 2002. (once among top 100 documents downloaded of all papers in 300 journals in *IEEE Xplore*)
31. H. Zhang and Y. (G.) Li, "Optimum frequency-domain partial response encoding in OFDM system," *IEEE Transactions on Communications*, vol. 51, pp. 1064-1068, July 2003.
32. G. L. Stuber, J. Barry, S. McLaughlin, Y. (G.) Li, M. A. Ingram, and T. Pratt, "Broadband MIMO-OFDM wireless communications," *The Proceedings of IEEE*, vol. 92, pp. 271-294, February 2004.
33. J.-X. Du and Y. (G.) Li, "D-BLAST OFDM with channel estimation," *EURASIP Journal on Applied Signal Processing*, pp. 605-611, May 2004.
34. Y. (G.) Li, "Spatial-temporal processing for wireless systems with ISI and CCI," *IEEE Transactions on Communications*, vol. 52, pp. 1514-1522, September 2004.
35. A. Vielmon, Y. (G.) Li, and J. R. Barry, "Performance of transmit diversity over time-varying Rayleigh-fading channels," *IEEE Transactions on Wireless Communications*, vol. 3, no. 5, pp. 1369-1373, September 2004.
36. H. Zhang and Y. (G.) Li, "Clustered OFDM with adaptive antenna array for interference suppression," *IEEE Transactions on Wireless Communications*, vol. 3, no. 6, pp. 2189-2197, November 2004.
37. Z. Jiang, Y. Ge, and Y. (G.) Li, "Max-utility wireless resource management for best effort traffic," *IEEE Transactions on Wireless Communications*, vol. 4, no. 1, pp. 100-111, January 2005.
38. J.-N. Yang and Y. (G.) Li, "Tentative chip decision-feedback equalizer for multicode wideband CDMA," *IEEE Transactions on Wireless Communications*, vol. 4, no. 1, pp. 131-148, January 2005.
39. G.-C. Song and Y. (G.) Li, "Cross-layer optimization for OFDM wireless networks – Part I: theoretical framework," *IEEE Transactions on Wireless Communications*, vol. 4, no. 2, pp. 614 – 624, March 2005.
40. G.-C. Song and Y. (G.) Li, "Cross-layer optimization for OFDM wireless networks – Part II: algorithm development," *IEEE Transactions on Wireless Communications*, vol. 4, no. 2, pp. 625 – 634, March 2005.
41. A. F. Molisch, Y. (G.) Li, Y.-P. Nakache, P. Orlik, M. Miyake, Y. Wu, S. Gezici, H. Sheng, S. Y. Kung, H. Kobayashi, H. V. Poor, A. Haimovich, and J. Zhang, "A low-cost time-hopping impulse

- radio for high data rate transmission,” *EURASIP Journal on Applied Signal Processing*, pp. 397-412, March 2005.
42. U. Onunkwo and Y. (G.) Li, “On the optimum pulse-position modulation index for ultra-wideband communications,” *International Journal of Dynamics of Continuous, Series B: Applications & Algorithms*, special issue on *Ultra-Wideband Wireless Communications*, vol. 12, no. 3, pp. 353-362, June 2005.
 43. J.-X. Du and Y. (G.) Li, “Optimization of antenna configuration for MIMO systems,” *IEEE Transactions on Communications*, vol.53, no. 9, pp. 1451-1454, September 2005.
 44. I. R. Capoglu, Y. (G.) Li, and A. Swami, “Effect of Doppler spread in OFDM based UWB systems,” *IEEE Transactions on Wireless Communications*, vol. 4, no. 2, pp. 2559 - 2567, September 2005.
 45. G.-C. Song and Y. (G.) Li, “Utility-based resource allocation and scheduling in OFDM-based wireless networks,” *IEEE Communications Magazine*, vol. 43, no. 12, pp. 127 - 135, December 2005.
 46. T. Hwang and Y. (G.) Li, “Novel iterative equalization based on energy spreading transform,” *IEEE Transactions on Signal Processing*, vol. 54, no. 1, pp. 190-203, January 2006.
 47. U. Onunkwo, Y. (G.) Li, and A. Swami, “Effect of timing jitter on OFDM based UWB systems,” *IEEE Journal on Selected Areas in Communications*, vol. 24, no. 4, pp. 787-793, April 2006.
 48. T. Hwang, Y. (G.) Li, and H. Sari “Energy spreading transform based iterative signal detection for MIMO fading channels,” *IEEE Transactions on Wireless Communications*, vol. 5, no. 7, pp. 1746-1756, July 2006.
 49. Y. (G.) Li, A. Molisch, J. Zhang, “Practical approaches to channel estimation and interference suppression for OFDM based UWB communications,” *IEEE Transactions on Wireless Communications*, vol. 5, no. 9, pp. 2317-2320, September 2006.
 50. H. Zhang, Y. (G.) Li, J. Terry, and A. Reid, “Optimal training symbol design for MIMO OFDM in correlated fading channels,” *IEEE Transactions on Wireless Communications*, vol. 5, no. 9, pp. 2343-2347, September 2006.
 51. G.-C. Song and Y. (G.) Li, “Asymptotic throughput analysis for channel-aware scheduling,” *IEEE Transactions on Communications*, vol. 54, no. 10, pp. 1827-1834, October 2006.
 52. J.-X. Du and Y. (G.) Li, “Parallel detection of space-time codes by predictive soft interference cancellation,” *IEEE Transactions on Communications*, vol. 54, no. 12, pp. 2150-2154, December 2006.
 53. H. Zhang, Y. (G.) Li, V. Stolpamn, and N. van Waes, “A reduced CSI feedback approach for precoded MIMO-OFDM systems,” *IEEE Transactions on Wireless Communications*, vol. 6, no. 1, pp. 55-59, January 2007.
 54. J. B. Kim, G. L. Stuber, and Y. (G.) Li, “Low-complexity iterative channel estimation for serially concatenated systems over flat fading channels,” *IEEE Transactions on Wireless Communications*, vol. 6, no. 2, pp. 438-442, February 2007.
 55. T. Hwang and Y. (G.) Li, “Optimum filtering for energy spreading transform based equalization,” *IEEE Transactions on Signal Processing*, vol. 55, no. 3, pp. 1182-1187, March 2007.
 56. J. Du, Y. (G.) Li, D. Gu, A. Molisch, and J. Zhang, “Statistical rate allocation for layered space-time system,” *IEEE Transactions on Communications*, vol. 55, no. 3, pp. 489-496, March 2007.
 57. W. Jiang, Y. (G.) Li, and X.-X. Yu, “Truncation for low complexity MIMO signal detection,” *IEEE Transactions on Information Theory*, vol. 53, no. 4, pp. 1564-1571, April 2007.
 58. J. S. Kwak, H. Kang, Y. (G.) Li, G. L. Stuber, and H. Shin, “Effects of spatial correlation on a MIMO adaptive antenna system with optimum combining,” *IEEE Transactions on Wireless Communications*, vol. 6, no. 5, pp. 1722-1731, May 2007.
 59. G. Ganesan and Y. (G.) Li, “Cooperative spectrum sensing in cognitive radio: Part I: two user networks,” *IEEE Transactions on Wireless Communications*, vol. 6, pp. 2204-2213, June 2007. (in best readings at <http://www.comsoc.org/best-readings>)
 60. G. Ganesan and Y. (G.) Li, “Cooperative spectrum sensing in cognitive radio: Part II: multiuser networks,” *IEEE Transactions on Wireless Communications*, vol. 6, pp. 2214-2222, June 2007. (in best readings at <http://www.comsoc.org/best-readings>)
 61. G. Ganesan, Y. (G.) Li, and Frederick W. Vook, “Stability region of multicarrier channel aware Aloha,” *IEEE Transactions on Information Theory*, vol. 53, no. 9, pp. 3212-3218, September 2007.

62. J. B. Kim, G. L. Stuber, and Y. (G.) Li, "Iterative channel estimators in V-BLAST OFDM systems," *IEEE Transactions on Wireless Communications*, vol. 7, pp. 65 – 71, January 2008.
63. G. Ganesan, Y. (G.) Li, B. Bing, and S.-Q. Li, "Spatial-temporal sensing in cognitive radio networks," *IEEE Journal on Selected Areas in Communications*, vol. 26, pp. 5 – 12, January 2008.
64. T. Hwang, Y. (G.) Li, and Y. Yuan-Wu, "Energy spreading transform for down-link MC-CDMA," *IEEE Transactions on Wireless Communications*, vol. 7, no. 5, pp. 1522-1526, May 2008.
65. Y. Yuan-Wu and Y. (G.) Li, "Iterative and diversity techniques for uplink MC-CDMA mobile systems," *IEEE Transactions on Vehicular Technology*, vol. 57, no. 2, pp. 1040-1048, March 2008.
66. V. K. Y. Wu, Y. (G.) Li, M. Green, A. Reid, and P. Wang, "Power allocation for OFDM-based cooperative relay systems," *Journal of Communications and Networks*, vol. 10, no. 2, pp. 156 – 162, June 2008.
67. H. Zhang, Y. (G.) Li, and Y. Yuan-Wu, "Practical considerations on channel estimation for up-link MC-CDMA system," *IEEE Transactions on Wireless Communications*, vol. 7, no. 11, pp. 4384 – 4392, November 2008.
68. J. Ma, G.-D. Zhao, and Y. (G.) Li, "Soft combination and detection for cooperative spectrum sensing in cognitive radio networks," *IEEE Transactions on Wireless Communications*, vol. 7, no. 11, pp. 4502 – 4507, November 2008.
69. G.-W. Miao, N. Himayat, G. Y. Li, and A. Swami, "Cross-layer optimization for energy-efficient wireless communications: A survey," (**invited paper**) *Wiley Journal Wireless Communications and Mobile Computing*, vol.9, no.4, pp. 529-542, April 2009.
70. T. Hwang, C.-Y. Yang, G. Wu, S.-Q. Li, and G. Y. Li, "OFDM and its wireless applications: a survey," (**invited paper**) *IEEE Transactions on Vehicular Technology*, vol. 58, no. 4, pp. 1673 – 1694, May 2009.
71. J. Ma, G. Y. Li, and B.-H. Juang, "Signal processing in cognitive radio," *The Proceedings of IEEE*, vol. 97, no. 5, pp. 805 – 823, May 2009.
72. G. Song, Y. (G.) Li, and L. J. Cimini, Jr., "Joint channel- and queue-aware scheduling for multiuser diversity in wireless multicarrier networks," *IEEE Transactions on Communications*, vol. 57, no. 7, pp. 2109 – 2121, July 2009. (won **2010 Stephen O. Rice Prize Paper Award**)
73. J. Lee, T. Hwang, and G. Y. Li, "Signal detection for EST-based modulation and signal in doubly-selective channels," *IEEE Transactions on Signal Processing*, vol. 57, no. 8, pp. 3287 – 3291, August 2009.
74. G.-D. Zhao, G. Y. Li, and C.-Y. Yang, "Proactive detection of spatial spectrum opportunities in primary systems with power control," *IEEE Transactions on Wireless Communications*, vol. 8, no. 9, pp. 4815 – 4823, September 2009.
75. X.-W. Zhou, J. Ma, Y. (G.) Li, Y. H. Kwon, and A. C. K. Soong, "Probability-based optimization of inter-sensing duration and power control in cognitive radio," *IEEE Transactions on Wireless Communications*, vol. 8, no. 10, pp. 4922 – 4927, October 2009.
76. G.-D. Zhao, J. Ma, G. Y. Li, T. Wu, Y. H. Kwon, A. Soong, and C.-Y. Yang, "Spatial spectrum holes for cognitive radio with relay-assisted directional transmission," *IEEE Transactions on Wireless Communications*, vol. 8, no. 10, pp. 5270 – 5279, October 2009.
77. G.-W. Miao, G. Y. Li, and A. Swami, "Decentralized optimization for multichannel random access," *IEEE Transactions on Communications*, vol. 57, no. 10, pp. 3012 – 3023, October 2009.
78. G.-W. Miao, G. Y. Li, N. Himayat, and S. Talwa, "Cochannel interference avoidance MAC in wireless cellular networks," *IEEE Transactions on Communications*, vol. 57, no. 11, pp. 3892 – 3405, November 2009.
79. W. Jiang, Y. Li, and X.-X. Yu, "Maximum IPP codes of length 3," *Annals of Combinatorics*, pp. 491-510, vol. 13, January 2010.
80. X.-W. Zhou, J. Ma, G. Y. Li, Y. H. Kwon, and A. C. K. Soong, "Probability-based combination for cooperative spectrum sensing," *IEEE Transactions on Communications*, vol. 58, no. 4 pp. 463 – 466, February 2010.
81. G.-W. Miao, N. Himayat, and G. Y. Li, "Energy-efficient link adaptation in frequency-selective channels," *IEEE Transactions on Communications*, vol. 58, no. 4 pp. 545 – 554, February 2010.

82. X. Wang, G. Y. Li, H.-J. Hu, L. Qin, and A. C. K. Soong, "Pre-processing optimization for IBI mitigation in an OFDM system over channels with extra-large delay spreads," *Elsevier Journal on PHYCOM: Physical Communications*, vol. 3, pp. 198-204, March 2010.
83. J. Ma, X.-W. Zhou, and Y. (G.) Li, "A probability-based periodic spectrum sensing during secondary communication," *IEEE Transactions on Communications*, vol. 58, no. 2, pp. 1291 – 1301, April 2010.
84. X.-W. Zhou, G. Y. Li, D.-D. Li, D.-D. Wang, and A. C. K. Soong, "Probabilistic resource allocation for opportunistic spectrum access," *IEEE Transactions on Wireless Communications*, vol. 9, no. 9, pp. 2870 – 2879, September 2010.
85. S. A. Hassan, G. Y. Li, P. S. S. Wang, and M. Green, "A full rate dual relay cooperative approach for wireless systems," *IEEE Journal on Communications and Networks*, vol. 12, no. 5, pp. 442 – 448, October 2010.
86. L.-Y. Li, X.-W. Zhou, H.-B. Xu, and G. Y. Li, D.-D. Wang, and A. C. K. Soong, "Simplified relay selection and power allocation in cooperative cognitive radio system," *IEEE Transactions on Wireless Communications*, vol. 10, no. 1, pp. 33 – 36, January 2011.
87. G.-D. Zhao, C.-Y. Yang, G. Y. Li, D.-D. Li, and A. C. K. Soong "Power and channel allocation for cooperative relay in cognitive radio networks," *IEEE Journal on Selected Topics in Signal Processing*, vol. 5, pp. 151 – 159, February 2011.
88. M. S. A. Bashar, Z. Ding, and G. Y. Li, "On secrecy capacity of codebook-based transmission beamforming under receiver limited feedback," *IEEE Transactions on Wireless Communications*, vol. 10, no. 4, pp. 121 – 1223, April 2011.
89. G.-W. Miao, N. Himayat, G. Y. Li, S. Talwar, "Distributed interference-aware energy-efficient power optimization," *IEEE Transactions on Wireless Communications*, vol. 10, no. 4, pp. 1323 – 1333, April 2011.
90. Y. Chen, S.-Q. Zhang, S.-G. Xu, and G. Y. Li, "Fundamental tradeoffs on green wireless networks," *IEEE Communications Magazine*, vol. 49, no. 6, pp. 30 – 37, June 2011. (in best readings at <http://www.comsoc.org/best-readings>, once among top 100 documents downloaded of all papers in 300 journals in *IEEE Xplore*, won **2017 Award for Advances in Communication**)
91. J. Ma, P. Orlik, J. Zhang, and G. Y. Li, "Pilot matrix design for estimating cascaded channels in two-hop MIMO AF relay systems," *IEEE Transactions on Wireless Communications*, vol. 10, no. 6, pp. 1956 – 1965, June 2011.
92. L.-Y. Li, G. Wu, H.-B. Xu, G. Y. Li, and X. Feng, "A practical allocation approach for interference management in LTE uplink transmission," Special Issue of *Journal of Communications*, vol. 6, no. 7, pp. 301 – 305, July 2011.
93. Y.-C. Liang, K.-C. Chen, G. Y. Li, and P. Mähönen, "Cognitive radio networking and communications: an overview," *IEEE Transactions on Vehicular Technology*, vol. 60, no. 7, pp. 3386 – 3407, September 2011. (once among top 100 documents downloaded of all papers in 300 journals in *IEEE Xplore*, won **2014 Jack Neubauer Memorial Award**)
94. L.-Y. Li, X.-W. Zhou, H.-B. Xu, G. Y. Li, D.-D. Wang, and A. C. K. Soong, "Energy-efficient transmission in cognitive radio networks," *IEEE Transactions on Broadcasting*, vol. 57, no. 3, pp. 718 – 720, September 2011.
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5. S. Haykin, J. H. Reed, G. Y. Li, and M. Shafi, "Scanning the issue," *Proc. of IEEE: Special Issues on Cognitive Radio*, vol. 97, no. 4, pp. 608 - 611, April 2009.
6. S. Haykin, J. H. Reed, G. Y. Li, and M. Shafi, "Scanning the issue," *Proc. of IEEE: Special Issues on Cognitive Radio*, vol. 97, no. 5, pp. 784 - 786, May 2009.
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8. Y.-C. Liang, K.-C. Chen, G. Y. Li, P. Mähönen, and D. Niyato, "Guest Editorial: Advances in Cognitive Radio Networking and Communications (I)," *IEEE Journal on Selected Areas in Communications*, vol. 29, no. 2, pp. 273 - 275, February 2011.
9. E. K. Au, D. Cavalcanti, G. Y. Li, W. Caldwell, and K. B. Lataief, "Advances in standard and testbeds for cognitive radio networks: Part II," *IEEE Communications Magazine*, vol. 49, issue 3, pp. 62 - 63, March 2011.
10. Y.-C. Liang, K.-C. Chen, G. Y. Li, P. Mähönen, and D. Niyato, "Guest Editorial: Advances in Cognitive Radio Networking and Communications (II)," *IEEE Journal on Selected Areas in Communications*, vol. 29, no. 4, pp. 673 - 675, April 2011.
11. S. Gaur, G. Y. Li; L.-C. Wang; N. B. Mehta, "Editorial - Special Issue on Practical Physical Layer Techniques for 4G Systems & Beyond," *Special Issue of Journal of Communications*, vol. 6, no. 2, pp. 271 - 273, July 2011.
12. G. Y. Li, S.-G. Xu, A. Swami, N. Himayat, and G. Fettweis, "Guest Editorial: Energy-Efficient Wireless Communications," *IEEE Journal on Selected Areas in Communications*, vol. 29, no. 8, pp. 1505 - 1507, September 2011.
13. H.-G. Zhang and G. Y. Li, "Feature topic: cognitive radio networks," *IEEE/CIC China Communications*, pp. vii - viii, vol. 10, no. 8, August 2013.

14. G. Y. Li, A. L. Swindlehurst, A. Ashikhmin, D. Gesbert, and R. Zhang, "Introduction to the issue on signal processing for large-scale MIMO," *IEEE Journal of Selective Topics in Signal Processing*, vol. 8, no. 5, pp. 739 – 741, October 2014.
15. G. Y. Li, M. Bennis, and G.-D. Yu, "Full duplex communications," *IEEE Communications Magazine*, vol. 43, issue 5, pp. 90, May 2015.
16. C. J.-Z. Zhang, J.-L. Ma, G. Y. Li, W. Yu, N. Jindal, Y. Kishiyama, and S. Parkvall, "New waveforms for 5G networks," *IEEE Communications Magazine*, vol. 43, issue 5, pp. 64-65, November 2016.
17. G.-D. Yu, G. Y. Li, L.-C. Wang, A. Maaref, J. Lee, D. Lopez-Perez, "LTE in unlicensed spectrum," *IEEE Wireless Communications*, pp. 6 – 7, December 2016.
18. G. Y. Li, A. Maaref, S.-M. Zhang, C.-L. I, P. Nikolich, and J. Irvine, "Message from the founding editorial board," *IEEE 5G Tech Focus*, vol. 1, no. 1, March 2017 (<http://5g.ieee.org/tech-focus>).

C. Patents

1. "Adaptive antenna arrays for orthogonal frequency division multiplexing systems," granted, October 1999, US Patent No.: 5,973,642 (T).
2. "System and method for joint coding and decision feedback equalization," granted, December 1999, US Patent No.: 6,012,161 (T).
3. "Methods and systems for symbol estimation in a receiver," granted, October 2001, US Patent No.: 6,301,315 (T).
4. "Method and apparatus for channel estimation for multicarrier systems," granted, December 2001, US Patent No.: 6,327,314 (T).
5. "Channel estimation for OFDM with transmitter diversity," granted, October 2002, US Patent No.: 6,473,393 (T).
6. "System for near optimal joint channel estimation and data detection for COFDM systems," granted, November 2002, US Patent No.: 6,477,210 (T).
7. "Pilot-symbol-aided channel estimation for OFDM in wireless systems," granted, November 2003, US Patent No.: 6,654,429 (T).
8. "Clustered OFDM with channel estimation," granted, September 2004, US Patent No.: 6,795,392 (T)
9. "Methods and systems for symbol timing recovery," granted November 2005, US Patent No.: 6,970,524 (T).
10. "Channel estimation for wireless systems with multiple transmit antennas," granted March 2006, US Patent No.: 7,012,966 (T)
11. "Method for coding multiple data systems in multiple-input, multiple-output communication systems," International Patent No.: WO2005/117319.
12. "Method for coding multiple data systems in multiple-input, multiple-output communication systems," granted March 2006, Europe Patent No.: EP1639741.
13. "Method for coding multiple data systems in multiple-input, multiple-output communication systems," granted June 2006, China Patent No.: 200580000222.
14. "MIMO OFDM system," granted June 2006, US Patent No.: 7,068,628(T).
15. "Method for near optimal joint channel estimation and data detection for COFDM systems," granted August 2006, US Patent No.: 7,099,413 (T)
16. "Optimum training sequences for wireless systems," granted September 2006, US Patent No.: 7,103,115(T).
17. "Channel estimation for wireless systems with multiple transmit antennas," granted October 2006, US Patent No.: 7,127,001 (T)
18. "Pilot-aided channel estimation for OFDM in wireless systems," granted November 2007, US Patent No.: 7,292,651(T).
19. "Optimum training sequences for wireless systems," granted December 2007, US Patent No.: 7,305,051(T).
20. "Estimation channel impulse response and equalizer coefficients in UWB communication systems," granted April 2008, US Patent No.: 7,356,100 (MERL).

21. "Minimizing feedback rate for channel state information in MIMO systems," granted April 2008, US Patent No.: 7,359,470 (MERL).
22. "Clustered OFDM with channel estimation," granted, May 2008, US Patent No.: 7,369,487 (T)
23. "Channel estimation for wireless systems with multiple transmit antennas," granted October 2008, US Patent No.: 7,443,919(T).
24. "Method for near optimal joint channel estimation and data detection for COFDM systems," granted December 2008, US Patent No.: 7,460,620(T).
25. "Channel estimation for wireless systems without matrix inversion," granted Sept. 2009, US Patent No.: 7,583,761(T).
26. "MIMO OFDM system," granted January 2010, US Patent No.: 7,643,404 (T).
27. "Channel estimation for wireless systems with multiple transmit antennas," granted July 2010, US Patent No.: 7,756,212(T).
28. "Near optimal joint channel estimation and data detection for COFDM systems," granted May 2011, US Patent No.: 7,940,852 (T).
29. "Power allocation in a MIMO system without channel state information feedback," granted July 2011, US Patent No.: 7,983,352 (H).
30. "Cross-talk cancellation in cooperative wireless relay networks," granted September 2011, US Patent No.: 8,014,263 (MERL).
31. "Beamforming with imperfect CSI," granted Feb. 2012, US Patent No.: 8,112,038 (H).
32. "Simulcasting MIMO communication systems," granted February 2012, US Patent No.: 8,116,260 (T).
33. "MIMO OFDM system," granted February 2012, US Patent No.: 8,121,022 (T).
34. "Clustered OFDM with channel estimation," granted, November 2012, US Patent No.: 8,320,500 (T)
35. "Hot-spot wireless access exploiting shadowing diversity of distributed antennas," granted April 2013, US Patent No.: 8,428,653 (MERL).
36. "Channel estimation for wireless systems without matrix inversion," granted June 2013, US Patent No.: 8,724,553 (T).
37. "Simulcasting MIMO communication systems," granted April 2014, US Patent No.: 8,705,452 (T).
38. "Channel estimation for wireless systems without matrix inversion," granted May 2014, US Patent No.: 8,724,725 (T).
39. "MIMO OFDM system," granted August 2016, US Patent No.: 9,426,009 (T).
40. "Simulcasting MIMO communication systems," granted January 2017, US Patent No.: 9,543,992 (T).
41. "Channel estimation for wireless systems without matrix inversion," granted May 2017, US Patent No.: 9,654,309 (T).

D. Presentations

D.1 Keynote Addresses and Plenary Lectures

- *Multi-Carrier and Multi-User Diversity*, Keynote Talk at *2005 International Conference on Communications, Circuits, and Systems (ICCCAS'05)*, Hong Kong, May 2005.
- *Cross-Layer Optimization for Spectrum- and Energy-Efficient Wireless Networks*
 - Keynote Talk at *Wireless Communications Workshop* at National Chiao Tung University, Taiwan, December 2008.
 - Keynote Talk at *International Conference on Wireless Communications and Signal Processing*, Suzhou, China, October 2010.
- *Device-to-Device Communications: Resource Allocation and Mode Selection*
 - Keynote talk at *IEEE WCNC'15*, New Orleans, LA, USA, March 2015.
 - Plenary talk at *IEEE ICNC'16*, Kauai, Hawaii, USA, February 2016.
 - IEEE VTS Distinguished Lecture at Peking University, Beijing, China, March 2017.
 - IEEE VTS Distinguished Lecture at Aalborg University, Aalborg, Denmark, June 2017.
- *LTE in Unlicensed Spectrum*
 - IEEE VTS Distinguished Lecture at University of Waterloo, Waterloo, Canada June 2016.
 - Keynote talk at *IEEE/CIC ICC 2016* at Chengdu, China, July 2016.

- IEEE VTS Distinguished Lecture at National Cheng Kung University, Tainan, Taiwan, January 2017.
- Keynote talk at *National Symposium on Telecommunications* at Sun Moon Lake, Taiwan, January 2017.
- IEEE VTS Distinguished Lecture at University of Manitoba, Winnipeg, Canada, February 2017.
- IEEE VTS Distinguished Lecture at Seoul National University, Seoul, South Korea, March 2017.
- Keynote speech at the *2nd Wireless Silk Road* at Beijing, China, July 2017.
- Keynote talk at *Workshop on 5G Networks Using Unlicensed Spectrum* at *IEEE Globecom'17*, Singapore, December 2017.
- *Signal Transmission and Processing for mmWave and Teraherze Communications*
 - Keynote Speech at *IEEE INFOCOM 2017 Workshop on 5G New Radio (NR) Technologies*, May 2017.
- *Spatial-wideband effect in massive MIMO (with B.-L. Wang, F.-F. Gao, S. Jin, and H. Lin)*
 - Plenary Talk at the *23rd Asian-Pacific Conference on Communications*, December 2017, Perth, Australia.

D.2 Invited Conference and Workshop Presentations

- *From Physical to Cross Layer Optimization*, Invited talk at Future Mobile Communication Forum, Dunhuang, China, July 2007.
- *OFDM, SC-FDE, and EST-based Modulation*, invited talk at OFDM Workshop at Santa Clara University, Santa Clara, CA, October 2008.
- *Signal Processing for Cognitive Radio*, Invited talk at Huawei Dynamic Spectrum Sharing Symposium, Chengdu, China, April 2010.
- *Device-to-Device Communications: Resource Allocation and Mode Selection*, Invited talk at IEEE ChinaSIP, Chengdu, China, July 2015.
- *LTE in Unlicensed Spectrum*
 - Distinguished invited talk at IEEE WCNC'16, Doha, Qatar, April 2016.
 - Invited talk at Sino-Finland Wireless Workshop in Nanjing, China, May 2016.
 - Invited talk at Intel Semi-Annual Meeting at Hefei, China, July 2016.

D.3 Invited Seminar Presentations

- *OFDM for wireless communications*, Invited seminar at
 - University of Maryland, College Park, MD, April 1998.
 - Southeast University, Nanjing, Jiangsu, China, June 1999.
 - Yangzhou University, Yangzhou, Jiangsu, China, June 1999.
 - Hughes Networks, Germantown, MD, February 2001.
 - Philips Research, Briarcliff Manor, NY, February 2001.
 - L. G. Electronics, Inc., San Diego, CA, April 2002.
 - Agere Systems, Murray Hill, NJ, May 2002.
- *OFDM for wireless communications: Techniques for capacity improvement*, Invited seminar at
 - New Jersey Institute of Technology, Newark, NJ, December 1998.
 - Bell Labs of Lucent Technologies, Holmdel, NJ, May 2000.
 - Nortel Networks at Ottawa, Canada, October 2000.
 - Conexant Systems, Inc. at Orange County, CA, November 2000.
 - Chinese Academy of Sciences (CAS), Shanghai, China, July 2003.
- *Spatial-temporal receivers for wireless communications with ISI and CCI*, Invited seminar at Conexant Systems, Inc. at Orange County, CA, November 2000.
- *Blind channel identification and equalization*, Invited seminar at Intel Corp., Morganville, NJ, February 2001.
- *MIMO-OFDM*, Invited seminar at
 - University of Maryland, College Park, MD, February 2002.
 - Mitsubishi Electric Research Lab., Murray Hill, NJ, September 2002.

- Bell Labs of Lucent Technologies, Holmdel, NJ, September 2002.
- Dept. of Communication Eng., National Chiao Tung University, Taiwan, November 2002.
- *OFDM for wireless communications: MIMO techniques and joint physical-MAC layer optimization*, Invited seminar at
 - Motorola Labs, Schaumburg, IL, December 2002.
 - Nokia Research Center, Irving, TX, February 2003.
 - Texas Instruments, Dallas, TX, February 2003.
 - Samsung, Seoul, Korea, April 2003.
 - L. G. Electronics, Korea, April 2003.
 - Southeast University, Nanjing, Jiangsu, China, July 2003.
 - Chinese Academy of Sciences (CAS), Shanghai, China, July 2003.
 - Tsinghua University, Beijing, China, September 2003.
- *Advanced OFDM access technology*, Invited seminar at Nortel Networks at Ottawa, Canada, March 2002.
- *Overview of UWB System*, Invited seminar at
 - National Taiwan University, Taiwan, November 2002,
 - University of Electronic Science and Technology of China, Chengdu, Sichuan, China, July 2003.
- *Advanced MIMO-OFDM technology*, Invited seminar at Nortel Networks at Ottawa, Canada, November 2003.
- *Cross-layer Optimization for OFDM based Wireless Networks*, Invited seminar at
 - Nortel Networks at Ottawa, Canada, May 2004.
 - University of Waterloo, Waterloo, Canada, May 2004.
 - Vienna University of Technology, Vienna, Austria, June 2004.
 - University of Electronic Science and Technology of China, Chengdu, China, June 2006.
- *MIMO-OFDM for wireless communications*, Invited seminar at
 - L. G. Electronics, San Diego, CA, November 2004.
 - University of Victoria, Melbourne, Australia, May 2006.
- *Limit-Approaching Signal Detection and Equalization based on Energy Spreading Transform*, Invited seminar at
 - National Sun Yat-Sen University, Taiwan, May 2005.
 - National Taiwan University, Taiwan, May 2005.
 - Electronics and Telecommunication Research Center, Korea, May 2005.
 - City University of Hong Kong, Hong Kong, China, December 2005.
 - University of Electronic Science and Technology of China, Chengdu, China, December 2005.
 - Beihang University, Beijing, China, May 2005.
 - The National ICT Australia Wireless Winter School, Melbourne, Australia, May 2006.
 - Hong Kong University of Science and Technology, Hong Kong, China, June 2007.
 - Xidian University, Xian, China, June 2007.
 - Southeast University, Nanjing, China, June 2007.
- *Multi-Carrier and Multi-User Diversity*, Invited seminar at
 - Electronics and Telecommunication Research Center, Korea, May 2005.
 - Beihang University, Beijing, China, May 2005.
 - Nanyang Technical University, Singapore, June 2005.
 - Tsinghua University, Beijing, China, June 2005.
 - Intel Corp., Santa Clara, CA, July 2005.
 - Communication Research Labs, Motorola, Inc., Chicago, IL, October 2005.
 - University of Delaware, Newark, DE, November 2005.
 - Nokia Research Center, Dallas, TX, December 2005.
 - University of Electronic Science and Technology of China, Chengdu, China, June 2006.
- *Cognitive Radio with Cooperative Diversity*, Invited seminar at
 - National Sun Yat-Sen University, Taiwan, May 2005.

- National Taiwan University, Taiwan, May. 2005.
- Beihang University, Beijing, China, May 2005.
- University of Electronic Science and Technology of China, Chengdu, China, June 2006.
- *Recent Results in MIMO OFDM for Wireless Communications*, Invited seminar at
 - Electronics and Telecommunication Research Center, Korea, May 2005.
 - Yonsei University, Korea, May 2005.
 - Beihang University, Beijing, China, May 2005.
 - Beijing University of Posts and Telecommunications, Beijing, China, May 2005.
 - Shanghai Jaotong University, Shanghai, China, May 2005.
 - Institute for Inforcomm Research, Singapore, May 2005.
 - Intel China Research Center Ltd., Beijing, China, June 2005.
 - Global Telecom Solutions Sector, Motorola, Inc., Chicago, IL, October 2005.
 - Personal Communication Sector, Motorola, Inc., Chicago, IL, October 2005.
 - Future Wei Technologies, Plano, Texas, December 2005.
 - Applied Science and Technology Institute, Hong Kong, China, December 2005.
 - Huawei Technologies Co., Ltd., Shenzhen, China, December 2005.
 - University of Electronic Science and Technology of China, Chengdu, China, June 2006.
- *Some Issues in Wireless Communications*, Invited seminar at
 - University of Electronic Science and Technology of China, Chengdu, China, September 2004.
 - Southeast University, Nanjing, China, December 2005.
 - Huawei Technologies Co., Ltd., Shanghai, China, May 2008.
- *MIMO and Cross-Layer Optimization for Wireless Communications*, Invited seminar at
 - Nortel Networks at Ottawa, Canada, November 2006.
 - Texas Instruments, Dallas, TX, January 2007.
- *MIMO Techniques for Wireless Communications*, Invited seminar at
 - Huawei Technologies Co., Ltd., Shenzhen, China, June 2006.
- *MIMO OFDM for Wireless Communications*, Invited seminar at
 - Beihang University, Beijing, China, June 2007.
 - Xidian University, Xian, China, June 2007.
 - University of Electronic Science and Technology of China, Chengdu, China, June 2007.
- *Channel-Aware Random Access in Wireless Multicarrier Networks*, Invited seminar at
 - Beihang University, Beijing, China, June 2007.
 - University of Electronic Science and Technology of China, Chengdu, China, June 2007.
 - Carleton University, Ottawa, Canada, August 2007.
 - Motorola Labs, Schaumburg, IL, October 2007.
- *Channel-Aware Access in Wireless Networks*, Invited seminar at Intel Corporation, Santa Clara, CA, October 2007.
- *Signal Processing for Cognitive Radio*, Invited seminar at
 - Fururewei Technologies, Dallas, TX, December 2007.
 - Beihang University, Beijing, China, May 2008.
 - National Chiao Tung University, Taiwan, December 2008.
 - National Dong Hwa University, Hualien, Taiwan, December 2008.
 - National Tsing Hua University, Hsinchu, Taiwan, December 2008.
 - Fujitsu Laboratories Ltd., Kanagawa, Japan, October 2009.
- *US Universities: Students, Faculty, and Research*, Invited seminar at University of Electronic Science and Technology of China, Chengdu, China, September 2008.
- *Cross-Layer Optimization for Spectrum- and Energy-Efficient Wireless Networks*, Invited seminar at
 - Fururewei Technologies, Dallas, TX, October 2008.
 - Beihang University, Beijing, China, March 2009.
 - Intel Corporation, Santa Clara, CA, July 2009.
 - Tohoku University, Sendai, Japan, October 2009.
 - Institute for Inforcomm Research, Singapore, March 2010.
 - University of Electronic Science and Technology of China, Chengdu, China, March 2010.

- Huawei University Day, Chicago, IL, July 2010.
- Xi'an Jiaotong University, Xi'an, China, October 2010.
- University of British Columbia, Vancouver, CA, November 2010.
- *OFDM, SC-FDE, and EST-based Modulation, invited seminar at*
 - Intel Corporation, Santa Clara, CA, October 2008.
 - Huawei University Day, Shanghai, China, December 2008.
 - Industrial Technology Research Institute, Hsinchu, Taiwan, December 2008.
 - University of Electronic Science and Technology of China, Chengdu, China, December 2008.
 - Oak Ridge National Lab., Oak Ridge, TN, February 2009.
 - Beijing Jiaotong University, Beijing, China, March 2009.
 - Panasonic, San Jose, CA, July 2009.
 - Osaka Prefecture University, Osaka, Japan, October 2009.
- *Physical Layer and Cooperation Techniques for Broadband Wireless Transmission, invited seminar at*
 - University of McGill, Montreal, Canada, September 2009.
 - University of Electronic Science and Technology of China, Chengdu, China, October 2009.
 - Institute for Inforcomm Research, Singapore, March 2010.
 - Southeast University, Nanjing, China, October 2010.
 - Peking University, Beijing, China, March 2011.
 - Zhejiang University, Hanzhou, China, March 2011.
 - Huawei Technologies Co., Ltd., Chengdu, China, March 2011.
 - IBM China Research Lab., Beijing, China, March 2011.
 - Yonsei University, Seoul, South Korea, August 2012.
- *Cross-Layer Optimization for Energy-Efficiency Communications, invited seminar at*
 - Huawei Green Radio Workshop, Shanghai, China, May 2011.
 - Southwestern Jiaotong University, Chengdu, China, June 2011.
- *Energy- and Spectral-Efficiency Trade-off in Wireless Communications, invited seminar at*
 - Huawei University Day, Chicago, IL, November 2011.
 - China Mobile, Beijing, China, August 2013.
- *Potential Techniques for Future Wireless Networks, invited seminar at*
 - Huawei University Days, Ottawa, Canada, August 2012.
- *Spatial-Frequency Signal Alignment for Opportunistic Transmission, invited seminar at*
 - Huawei North America 5G Workshop, November 2013.
- *Device-to-Device Communications: Resource Allocation and Mode Selection*
 - The University of Southampton, Southampton, UK, June 2015.
 - Oxford University, Oxford, UK, June 2015.
 - The University of Reading, Reading, UK, June 2015.
 - Southeast University, Nanjing, China, July 2015.
 - Zhejiang University, Hangzhou, China, July 2015.
 - National University of Singapore, Singapore, January 2016.
 - Nanyang Technological University, Singapore, January 2016.
 - University of New South Wales, Sydney, Australia, January 2016.
 - Nanjing University of Post and Telecommunications, Nanjing, China, May 2016.
 - Intel Lab, Portland, Oregon, June 2016.
 - Yonsei University, Seoul, South Korea, March 2017.
 - Beijing University of Post and Telecommunications, July 2017.
 - Shanghai University, July 2017
- *LTE in Unlicensed Spectrum, Invited talk at*
 - Southeast University, Nanjing, China, May 2016.
 - King Abdullah University of Science and Technology (KAUST), Thuwal, Kingdom of Saudi Arabia, June 2016.
 - University of Agder, Grimstad, Norway, June 2017.

- ❑ University of Electronic Science and Technology of China (UESTC), Chengdu, China, July 2017.
- ❑ Beijing University of Post and Telecommunications, Beijing, China, July 2017.
- ❑ Queen Mary University of London, UK, November 2017.
- ❑ Institute for Infocomm Research, Singapore, December 2017.
- *Intelligent Processing for Future Communication Systems*, Invited talk at
 - ❑ University of Lancaster, Lancaster, UK, November 2017.
 - ❑ Cambridge University, Cambridge, UK, November 2017.
 - ❑ University of Electronic Science and Technology of China, December 2017.

D4. Others – Tutorials and Panel Presentations

- *OFDM for wireless communications*, **(tutorial)** (with Prof. L. Cimini, Jr. of U. of Delaware and Prof. Gordon Stuber)
 - ❑ *IEEE 1998 Global Telecommunications Conference*, Sydney, Australia, November 1998.
 - ❑ *IEEE 1999 (Spring) Vehicular Technology Conference*, Houston, TX, May 1999.
 - ❑ *IEEE 1999 International Conference on Communications*, Vancouver, Canada, June 1999.
 - ❑ *IEEE 1999 Global Telecommunications Conference*, Rio de Janeiro, Brazil, December 1999.
 - ❑ *IEEE 2000 (Spring) Vehicular Technology Conference*, Tokyo, Japan, May 2000.
 - ❑ *IEEE 2000 (Fall) Vehicular Technology Conference*, Boston, MA, September 2000.
 - ❑ *IEEE 2000 Global Telecommunications Conference*, San Francisco, CA, November 2000.
 - ❑ *IEEE 2001 International Conference on Communications*, Helsinki, Finland, June 2001.
 - ❑ *IEEE 2001 (Fall) Vehicular Technology Conference*, Atlantic City, NJ, September 2001.
 - ❑ *IEEE 2001 Global Telecommunications Conference*, San Antonio, TX, November 2001.
 - ❑ *IEEE 2002 International Conference on Communications*, New York, NY, May 2002.
 - ❑ *IEEE 2002 (Spring) Vehicular Technology Conference*, Birmingham, AL, May 2002.
 - ❑ *IEEE 2002 Global Telecommunications Conference*, Taipei, Taiwan, November 2002.
 - ❑ *IEEE 2003 International Conference on Communications*, Anchorage, Alaska, May 2003.
 - ❑ *IEEE 2003 (Spring) Vehicular Technology Conference*, Jeju, Korea, April 2003.
 - ❑ *IEEE 2003 Global Telecommunications Conference*, San Francisco, CA, December 2003.
 - ❑ *IEEE 2004 Wireless Communications and Networking Conference*, Atlanta, Georgia, March 2004.
 - ❑ *IEEE 2004 International Conference on Communications*, Paris, France, June 2004.
 - ❑ *IEEE 2004 Global Telecommunications Conference*, Dallas, TX, December 2004.
- *Cross-Layer Optimization for Spectrum- and Energy-Efficient Wireless Networks*, **(tutorial)** (with Dr. G.-W. Miao of KTH, Royal Institute of Technology, Sweden)
 - ❑ *2011 IEEE Global Telecommunications Conference*, Houston, TX, December 2011.
 - ❑ *23rd IEEE International Symposium on Personal, Indoor and Mobile Radio Communications*, Sydney, Australia, September 2012.
 - ❑ *2012 IEEE Global Telecommunications Conference*, Anaheim, CA, December 2012.
 - ❑ *2018 IEEE International Conference on Communications*, Kansas City, MO, June 2018.
- *Technology/Business Application Panel: Practical MIMO* **(penal member)**
 - ❑ *IEEE WCNC'07* in Hong Kong, March 2007.
 - ❑ *ASTRI Forum*, in Hong Kong, March 2007.
- *Big Data Signal Processing for Communication Networks* (with H. Zhu and Z.-J. Zheng, tutorial)
 - ❑ *IEEE 2017 Global Telecommunications Conference*, Singapore, December 2017.

E. Grants and Contracts

1. **Title of Project:** Special-Temporal Processing for EDGE System
Agency/Company: Mobilink Telecomm.
Total Dollar Amount: \$25,000
Role: PI
Collaborators: No.

- Period of Contractor:** unrestricted gift since September 2000
Candidate's Share: \$25,000
2. **Title of Project:** Spatial-Temporal Processing for Wideband CDMA Systems
Agency/Company: Bell Labs of Lucent Tech.
Total Dollar Amount: \$36,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since January 2001
Candidate's Share: \$36,000
 3. **Title of Project:** MIMO-OFDM Techniques
Agency/Company: Hughes Network Systems
Total Dollar Amount: \$36,884
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since June 2001
Candidate's Share: \$36,884
 4. **Title of Project:** MIMO OFDM for Wireless Communications
Agency/Company: Yamacraw
Total Dollar Amount: \$20,463
Role: PI
Collaborators: No.
Period of Contractor: July 2001 – June 2002
Candidate's Share: \$20,463
 5. **Title of Project:** Broadband MIMO OFDM Wireless Access
Agency/Company: National Science Foundation
Total Dollar Amount: \$1,969,569
Role: co-PI
Collaborators: Gordon Stuber, John Barry, Mary Ingram, and Steven McLaughlin.
Period of Contractor: October 2001 – September 2005
Candidate's Share: \$350,756
 6. **Title of Project:** Cross-Layer Optimization for Better Resource Allocation in Future Wireless Home Networks
Agency/Company: Georgia Tech Broadband Institute
Total Dollar Amount: \$30,000
Role: PI
Collaborators: Jun Xu and Benny Bing
Period of Contractor: July 2002 – June 2003
Candidate's Share: \$30,000
 7. **Title of Project:** MIMO OFDM for Wireless Communications
Agency/Company: Yamacraw
Total Dollar Amount: \$22,800
Role: PI
Collaborators: No.
Period of Contractor: July 2002 – June 2003
Candidate's Share: \$22,800
 8. **Title of Project:** Advanced OFDM Access Technology

Agency/Company: Nortel Network Systems
Total Dollar Amount: \$132,260
Role: PI
Collaborators: No.
Period of Contractor: August 2002 – July 2004
Candidate's Share: \$132,260

9. **Title of Project:** Delay Profile based Location Estimation with New Wireless Application
Agency/Company: Georgia Tech Broadband Institute
Total Dollar Amount: \$20,000
Role: PI
Collaborators: Fred Juang
Period of Contractor: July 2003 – June 2004
Candidate's Share: \$20,000
10. **Title of Project:** Cross-Layer Optimization for Better Resource Allocation in Future Wireless Home Networks
Agency/Company: Georgia Tech Broadband Institute
Total Dollar Amount: \$20,000
Role: PI
Collaborators: Jun Xu and Benny Bing
Period of Contractor: July 2002 – June 2003
Candidate's Share: \$20,000
11. **Title of Project:** MIMO-OFDM for Wireless LAN
Agency/Company: Nokia Research Center
Total Dollar Amount: \$40,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since March 2004
Candidate's Share: \$40,000
12. **Title of Project:** Standard Activities in IEEE 802.11n
Agency/Company: Mitsubishi Electric Research Laboratories
Total Dollar Amount: \$15,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since November 2004
Candidate's Share: \$15,000
13. **Title of Project:** MIMO-OFDM for Broadband Wireless Communications
Agency/Company: Nokia Research Center
Total Dollar Amount: \$30,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since May 2005
Candidate's Share: \$30,000
14. **Title of Project:** Exploiting Diversity in Wireless Communications
Agency/Company: Motorola SABA Program
Total Dollar Amount: \$94,000
Role: PI
Collaborators: No.

Period of Contractor: August 2005 – July 2008
Candidate's Share: \$94,000

15. **Title of Project:** Research Alliance in Communications
Agency/Company: Army Research Laboratory (ARL).
Total Dollar Amount: \$2,702,882
Role: co-PI
Collaborators: Gordon Stuber, G.-T. Zhou, etc. (over 10 people from different universities)
Period of Contractor: October 2002 – September 2009
Candidate's Share: \$467,000
16. **Title of Project:** MIMO-OFDM for Broadband Wireless Communications
Agency/Company: Nokia Research Center
Total Dollar Amount: \$30,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since 2006
Candidate's Share: \$30,000
17. **Title of Project:** Cognitive Radio (with Prof. B.-H. Juang and Dr. Benny Bing)
Agency/Company: Georgia Tech Broadband Institute
Total Dollar Amount: ~\$10,000
Role: PI
Collaborators: No.
Period of Contractor: July 2006 – June 2007
Candidate's Share: equivalent to GRA support of 1 Ph.D. student for 1 semester.
18. **Title of Project:** Cross-Layer Optimization in Wireless Networks
Agency/Company: Intel Co.
Total Dollar Amount: \$150,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since December 2006
Candidate's Share: \$150,000
19. **Title of Project:** Cooperative Diversity in Wireless Communications
Agency/Company: Nokia Research Center
Total Dollar Amount: \$20,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since 2007
Candidate's Share: \$20,000
20. **Title of Project:** COGNET: Cognitive Radio Networks based on OFDM
Agency/Company: National Science Foundation
Total Dollar Amount: \$600,000
Role: co-PI
Collaborators: Ian Akyildiz
Period of Contractor: August 2007 – August 2011
Candidate's Share: \$210,000
21. **Title of Project:** Basic Issues in Cognitive Radio
Agency/Company: Huawei Inc.

- Total Dollar Amount:** \$90,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since September 2007
Candidate's Share: \$90,000
22. **Title of Project:** Cooperative Relay for Wireless Networks
Agency/Company: Nokia Siemens Networks
Total Dollar Amount: \$21,600
Role: PI
Collaborators: No.
Period of Contractor: January 2008 – July 2008
Candidate's Share: \$21,600
23. **Title of Project:** Multi-user MIMO for IEEE 802.16m
Agency/Company: Mitsubishi Electric Research Laboratories
Total Dollar Amount: \$45,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since April 2009
Candidate's Share: \$45,000
24. **Title of Project:** Modulation and Signal Detection for Wireless Communications for High-Speed Train
Agency/Company: Mitsubishi Electric Research Laboratories
Total Dollar Amount: \$20,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since April 2010
Candidate's Share: \$20,000
25. **Title of Project:** Cross-Layer Optimization
Agency/Company: Huawei Inc.
Total Dollar Amount: \$40,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since July 2010
Candidate's Share: \$40,000
26. **Title of Project:** Application of Cognitive Radio for Multi-Radio Femtocell Networks
Agency/Company: Intel Co.
Total Dollar Amount: \$50,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since Sept. 2010
Candidate's Share: \$50,000
27. **Title of Project:** Distributed PHY/MAC Optimization for Energy and Spectral Efficient Wireless Networks
Agency/Company: National Science Foundation
Total Dollar Amount: \$470,000
Role: PI
Collaborators: Len Cimini, Jr.
Period of Contractor: August 2010 – August 2013

Candidate's Share: \$250,000

28. **Title of Project:** Cognitive Radio Techniques and Its Applications
Agency/Company: Sandia National Labs/ Sandia Corp.
Total Dollar Amount: \$45,000
Role: PI
Collaborators: No.
Period of Contractor: January 25 2011 – September 2011
Candidate's Share: \$45,000
29. **Title of Project:** Cross-Layer Optimization
Agency/Company: Huawei Inc.
Total Dollar Amount: \$30,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since February 2011
Candidate's Share: \$30,000
30. **Title of Project:** Cross-Layer Optimization
Agency/Company: Huawei Inc.
Total Dollar Amount: \$30,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since September 2011
Candidate's Share: \$30,000
31. **Title of Project:** Efficient Management and Opportunistic Usage of Radio Spectrum based Graph Theory
Agency/Company: National Science Foundation
Total Dollar Amount: \$396,000
Role: PI
Collaborators: X.-X. Yu
Period of Contractor: September 2012 – August 2015
Candidate's Share: \$226,949
32. **Title of Project:** MIMO-VFDM for 5G Networks
Agency/Company: Huawei Inc.
Total Dollar Amount: \$30,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since January 2013
Candidate's Share: \$30,000
33. **Title of Project:** Ultra-broadband communication networks in the TeraHertz
Agency/Company: National Science Foundation
Total Dollar Amount: \$300,000
Role: co-PI
Collaborators: Ian Akyildiz and Mary Ann Weitnauer
Period of Contractor: September 2013 – August 2015
Candidate's Share: \$86,228
34. **Title of Project:** MIMO-VFDM for 5G Networks
Organization: Huawei Inc.

- Total Dollar Amount:** \$40,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since November 2013
Candidate's Share: \$40,000
35. **Title of Project:** MIMO-VFDM for 5G Networks
Agency/Company: Huawei Inc.
Total Dollar Amount: \$30,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since May 2014
Amount Funded: \$30,000
36. **Title of Project:** D2D Wireless Networks: An Interference Nightmare or Resource Allocation Auspice
Agency/Company: National Science Foundation
Total Dollar Amount: \$370,000
Role: co-PI
Collaborators: Han Zhu
Period of Contractor: August 2014 – August 2017
Candidate's Share: \$184,662
37. **Title of Project:** Integrated (Licensed-Unlicensed) Spectrum Access in 5G Networks
Agency/Company: Huawei Inc.
Total Dollar Amount: \$30,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since August 2014
Candidate's Share: \$30,000
38. **Title of Project:** Collaborative Research: Overcoming Technological Challenges for Spectrum Trading
Agency/Company: National Science Foundation
Total Dollar Amount: \$455,000
Role: PI
Collaborators: X.-X. Yu
Period of Contractor: October 2014 – September 2017
Candidate's Share: \$227,499
39. **Title of Project:** D2D Communications
Agency/Company: Intel Co.
Total Dollar Amount: \$75,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since May 2016
Candidate's Share: \$75,000
40. **Title of Project:** D2D-based Vehicular Network Design with Machine Learning
Agency/Company: Intel Co.
Total Dollar Amount: \$75,000
Role: PI
Collaborators: No.
Period of Contractor: unrestricted gift since April 2017
Candidate's Share: \$75,000

41. **Title of Project:** Collaborative Research: Energy-efficient heterogeneous network virtualization with spectrum-power trading
Agency/Company: National Science Foundation
Total Dollar Amount: \$300,000
Role: PI
Collaborators: No
Period of Contractor: August 2017 – July 2020
Candidate's Share: \$300,000

F. Other Professional Activities

- Consulting WiLAN Inc. in the area of *OFDM for wireless communications*, October 2000 – September 2001.
- Consulting Mitsubishi Electric Research Laboratories in the area of *channel estimation for UWB and MIMO OFDM*, February 2003 – March 2005.
- Consulting YGL Telecomm Lab, Inc., April 2005 – present.
- Teaching a four-week course at the University of Electronic Science and Technology of China, Chengdu, China, summer 2011.
- Visiting Professor of Southeast University, Nanjing, China (December 2015-), University of Electronic Science and Technology of China, Chengdu, China (October 2006 -), and Beijing University of Post and Telecommunications (July 2017 -)

V. TEACHING

A. Courses Taught

A.1. Graduate Courses

- Random Processes
- Spatial Temporal Processing
- Digital Communications
- Advanced Digital Communications
- Fundamental broadband Communications
- Coding Theory and Practice

A.2. Undergraduate Courses

- DSP First
- Random Signals
- Circuits Analysis
- Computer Communications

B. Individual Student Guidance

B.1. PhD. Students

B.1.a Graduated

1. Hua Zhang: Graduated in fall 2004. Research topic: *OFDM for wireless communications*. First place of employment: SkyWorks Solutions, Inc. 5231-1 California Ave., Irvine, CA 92617; Current place of employment: Professor, Department of Radio Engineering, Southeast University, Nanjing, China (from July 2006)

2. Guocong Song: Graduated in summer 2005. Research topic: *Utility based cross-layer optimization for wireless networks*. First place of employment: Motorola Labs, 600 North U.S. Highway 45, MD: AS-220, Libertyville, IL 60048.
3. Jianxuan Du: Graduated in summer 2005. Research topic: *Layered space-time structure for MIMO-OFDM systems*. First place of employment: Anritsu Company, Corporate Office, 490 Jarvis Dr., Morgan Hill, CA 95037-2809.
4. Taewon Hwang, Graduated in in fall 2005. Research topic: *Iterative techniques based on energy spreading transform for wireless communications*. First place of employment: Assistant Professor (Professor now), Department of Electrical and Electronic Engineering, Yonsei University, Korea
5. Uzoma A. Onunkwo, Graduated in spring 2006. Research topic: *Time jitter in ultra-wideband (UWB) systems*. Place of employment: Sandia National Laboratories, MS 0806, P. O. Box 5800, Albuquerque, NM 87185.
6. Joon Beom Kim, (Co-advised with Prof. Gordon Stüber), Graduated in fall 2006, Research topic: *Channel estimation for OFDM over wireless channels*. First place of employment: Nortel Network, Richardson, TX 75083, Current place of employment: Intel Lab, Portland, Organ.
7. Wen Jiang, (Co-advised with Prof. Xingxing Yu, Dept. of Math), Graduated in fall 2006, Research topic: *Space-time coding*.
8. Ghurumuruhan Ganesan, Ph.D. thesis defended in Fall 2007. Research topic: *Distributed MAC protocols for channel-aware systems and cognitive radio*.
9. Guowang Miao, Graduated in fall 2009. Research topic: *Cross-layer optimization for spectrum- and energy-efficient networks*. Current place of employment: Associate Professor, KTH, Royal Institute of Technology, Sweden, since November 2011.
10. Jun Ma, Graduated in fall 2010, Research topic: *Signal Processing in Wireless Communications*, Place of employment: MediaTek, CA.
11. Xiangwei Zhou, Graduated in fall 2011, Research topic: *Efficient spectrum sensing and utilization for cognitive radio*, Current place of employment: Assistant Professor, School of Electrical Engineering and Computer Science, Louisiana State University (LSU), Baton Rouge, LA
12. Cong Xiong, Graduated in summer 2014, Research topic: *Energy-efficient design in wireless communications networks*, Place of employment: MediaTek, LA, CA.
13. Lu Lu, Graduated in 2015, Research topic: *Spectral-efficient design in modern wireless communications networks*, Place of employment: Intel Lab, Portland, Oregon. (Received 2014 Excellent GRA Award from the School of ECE, Georgia Tech)
14. Deawon Lee, Graduated in 2016, Research topic: *Inter-Cell Interference Management for Cellular Networks*, Place of employment: Intel Lab, Portland, Oregon.
15. Cen Lin, Graduated in Spring 2017, Research topic: *Physical layer techniques for TeraHertz communications*, Place of employment: MediaTek, LA, CA.

B.1b. In Progress

1. Cen Lin, Fall 2013 – present, Prelim passed fall 2013, Proposal passed summer 2016, Research topic: *Physical layer techniques for TeraHertz communications*, expected to graduate in 2017.
2. Le Liang, Spring 2016 – present, Prelim passed Spring 2016, Research topic: *Vehicle communications*.
3. Hao Ye, Spring 2017 – present: Research Topic: *Machine learning for wireless communications*.

B.2 M.S. Students with M.S. Thesis

1. Jian Zhu, Fall 2001 – Summer 2003, Research topic: *Resource allocation for home networks*. Place of employment: Ph.D. candidate at Space-Time Propagation Laboratory of the School of ECE, Georgia Tech.
2. Antony Vielmon, (Co-advised with Prof. John Barry), Fall 2000 – Summer 2001, Research topic: *Transmit diversity in wireless communications*, Place of employment: Prosilog s. a., 8 rue Traversiere, Cergy Prefecture 95000, France.
3. Victor Wu, Fall 2005 – Fall 2006, Research Topic: *Cooperative diversity in wireless communications*. Place of employment: Ph.D. candidate at UIUC.

4. Juho Lim, Spring 2015 – Summer 2016, Research topic: signal detection for faster-than-Nyquist rate modulation.

B.3. Membership of Postdoctoral Fellows or Visiting Scholars

1. Prof. Houjun Wang, September 2002 – March 2003, Visiting professor from UESTC, China.
2. Prof. Hongbin Xu, March 2004 – September 2004, Visiting professor from UESTC, China.
3. Dr. Jinsam Kwak, September 2004 – September 2005, Post-doctoral fellow from National Seoul University, Korea.
4. Mr. Gang Lin, March 2006 – July 2006, Visiting scholar from the Norwegian University of Science and Technology, Norway.
5. Dr. EunJeong Yim, August 2006 – August 2007, Post-doctoral fellow, Korea
6. Mr. Guodong Zhao, September 2007 – October. 2008, Visiting scholar from Beihang University, China
7. Mr. Jian Liu, September 2007 – September 2008, Visiting scholar from Shandong University, China
8. Mr. Haibo Wang, February 2008 – July 2008, Visiting scholar from Aalborg University, Denmark.
9. Dr. Jong Ho Lee, September 2008 – August 2010, Post-doctoral fellow, Korea.
10. Prof. Xia Wang, October 2008 – October 2009, Visiting professor from Xian Jiaotong University, China.
11. Ms. Ying Zhang, October 2008 – October 2009, Visiting scholar from Xian Jiaotong University, China.
12. Mr. Jiacun Fan, August 2009 – August 2011, Visiting scholar from Xian Jiaotong University, China.
13. Mr. Zhikun Xu, September 2009 – September 2010, Visiting scholar from Beihang University, China
14. Mr. Deli Jia, September 2009 – September 2011, Visiting scholar from UESTC, China.
15. Prof. Gang Wu, October 2009 – October 2010, Visiting professor from UESTC, China.
16. Ms. Fangfang Liu, September 2010 – March 2012, Visiting scholar from BUPT, China.
17. Mr. Hao He, November 2010 – November 2012, Visiting scholar from UESTC, China.
18. Mr. Daquan Feng, August 2011 – August 2013, Visiting scholar from UESTC, China.
19. Ms. Jinping Niu, September 2011 – August 2013, Visiting scholar from Xidian University, China.
20. Prof. Jianhua Shao, September 2011 – March 2012, Visiting professor from Nanjing Normal University, China.
21. Prof. Jiancun Zuo, April 2012 – April 2013, Visiting professor from Shanghai Second Polytechnic University, China.
22. Dr. Jianchun Li, April 2012 – April 2013, Visiting scholar from the State Radio Monitoring Center, China.
23. Mr. Chunlong He, September 2012 – September 2014, Visiting scholar from Southeast University, China.
24. Mr. Yinsheng Liu, November 2012 – June 2013, Visiting scholar from Beijing Jiaotong University, China.
25. Prof. Rugui Yao, January 2013 – December 2013, Visiting professor from Northwestern Polytechnical University, China.
26. Prof. Xingle Feng, January 2013 – December 2013, Visiting professor from Chang'an University, China.
27. Prof. Zhisong Bie, June 2013 – May 2014, Visiting professor from Beijing University of Post and Telecommunications, China.
28. Prof. Guanding Yu, July 2013 – June 2015, Visiting professor from Zhejiang University, China.
29. Prof. Dianwu Yue, September 2013 – February 2014, Visiting professor from Dalian Maritime University, China.
30. Mr. Jian Yu, September 2013 – September 2015, Visiting scholar from Beijing University of Post and Telecommunications, China.
31. Mr. Wei Guo, October 2013 – October 2015, Visiting scholar from Xian Jiaotong University, China.
32. Dr. Xu Bao, November 2013 – November 2014, Visiting professor from Jiangsu University, China.
33. Dr. Liang Chang, May 2014 – May 2015, Visiting scholar from the State Radio Monitoring Center, China.
34. Prof. Yin Rui, August 2014 – August 2016, Visiting professor from Zhejiang Gongshang University, China.

35. Mr. Yinjun Liu, Sept. 2014 – Aug. 2016, Visiting scholar from Beijing University of Post and Telecommunications, China.
36. Mr. Qingqing Wu, Aug. 2015 – Aug. 2016, Visiting scholar from Shanghai Jiaotong University, China.
37. Mr. Xiaoyu Sun, Sept. 2015 – Sept. 2017, Visiting scholar from Southeast University, China.
38. Prof. Hung-Ta Pai, March 2016 – August. 2016, Visiting professor from National Taipei University, Taiwan
39. Prof. Yinsheng Liu, March 2016 – March 2017, Visiting professor from Beijing Jiaotong University, China.
40. Prof. Deli Qiao, Aug. 2016, Visiting professor from East China Normal University, China.
41. Prof. Yunlong Cai, Aug. 2016 – Jan. 2017, Visiting professor from Zhejiang University, China.
42. Mr. Hua Shao, Aug. 2016 – Nov. 2016, Visiting scholar from Beijing University of Post and Telecommunications, China.
43. Prof. Youngtao Ma, December 2016 – December 2017, Visiting scholar from Tianjin University, China.
44. Mr. Ziyi Chen, September 2017 – September 2019, Visiting scholar from Jilin University, China.
45. Prof. Chongtao Guo, December 2017 – December 2018, Visiting scholar from Shenzhen University, China.

C. Other Teaching Activities

- Developed and taught a new graduate course entitled *Spatial-Temporal Processing for Wireless Communications* (ECE8823) in fall 2002: This course introduces current research results in spatial-temporal processing for wireless communication systems to improve performance and increase capacity. It includes receive antenna arrays for diversity and interference suppression, transmit diversity approaches (including linear filter based approaches, space-time block coding, and space-time trellis coding), and MIMO techniques.
- Developed and taught a new graduate course entitled *Fundamental Broadband Communications* (ECE8853) in spring 2011: This course examines the fundamental issues of broadband communications and it covers optimal sequence detection, time- and frequency-domain equalization, OFDM and DMT, MIMO techniques, multi-user systems.
- Reshaping existing undergraduate course *Circuits Analysis* (ECE2040): As Curriculum committee member of the course, worked with other members to revise the curriculum of ECE2040. Helped add experimental elements in the course.

VI. SERVICE

A. Professional Contributions

A.1. Editorial Board Membership

- Associate Editor for Wireless Communication Theory for *IEEE Transactions on Communications*, April 1998 – August 2006.
- Leading Guest Editor for *IEEE Journal on Selected Areas in Communications: Special Issues on Signal Processing for Wireless Communications I/II*, vol. 16, No. 8, October and No. 9, December 1998.
- Leading Guest Editor for *EURASIP Journal on Applied Signal Processing: Special Issue on Multi-carrier Communications and Signal Processing*, vol. 14, no. 10, August 2004.
- Editorial Board Member of *EURASIP Journal on Applied Signal Processing*, February 2001 –June 2004.
- Leading Guest Editor for Special Issues on *Cognitive Wireless Networks* for *Elsevier Journal of Computer Networks*, vol. 52, issue 4, March 2008.
- Guest Editor for Special Issues on *Cognitive Radio* for the *Proceedings of IEEE*, vol. 97, no. 4, April and no. 5, May 2009. (in best readings at <http://www.comsoc.org/best-readings>)

- Associate Editor for Signal Processing for Communications for *IEEE Transactions on Signal Processing*, April 2009 – April 2011.
- Guest Editor for special issues on *Cognitive Radio* for *IEEE Communications Magazine*, vol. 48, issue 9, September 2010 and vol. 49, issue 3, March 2011.
- Guest Editor for special issue on *Practical Physical Layer Techniques for 4G Systems & Beyond* for *Journal of Communications*, vol. 6, no. 2, July 2011.
- Area Editor of Transmission I for *IEEE Transactions on Wireless Communications*, December 2009 – September 2013.
- Guest Editor for *IEEE Journal on Selected Areas in Communications: Special Issues on Cognitive Radio Networks*, vol. 29, no. 2, February and no. 4, April 2011. (in best readings at <http://www.comsoc.org/best-readings>)
- Leading Guest Editor for *IEEE Journal on Selected Areas in Communications: Special Issues on Energy-Efficiency Wireless Communications*, vol. 29, no. 8, September 2011. (in best readings at <http://www.comsoc.org/best-readings>)
- Member of the Steering Committee of *IEEE ComSoc China Communications* (2012 – 2015).
- Leading Guest Editor for *IEEE Journal on Selected Topics in Signal Processing: Special Issues on Signal Processing for Large-Scale MIMO Communications*, October 2014. (in best readings at <http://www.comsoc.org/best-readings>)
- Guest Editor on feature topic: cognitive radio networks in *IEEE/CIC China Communications*, vol. 10, no. 8, August 2013.
- Steering Committee Member (Jan. 2014 – Dec. 2015) and Chair (Jan. 2016 – Dec. 2017) of *IEEE Transactions on Cognitive Communications and Networks*.
- Leading Guest Editor for special issues on *Full-duplex communications* for *IEEE Communications Magazine*, May 2015.
- Guest Editor on feature topic: 5G ultra-dense networks in *IEEE/CIC China Communications*, February 2016.
- Guest Editor for special issue on *New Waveforms and Multiple Access Methods for 5G Networks* for *IEEE Communications Magazine*, November 2016.
- Guest Editor for *IEEE Wireless Communications Featured Topic on LTE in Unlicensed Spectrum*, December 2016.
- Founding Editor-in-Chief of *IEEE 5G Tech Focus* (September 2016 -)
- Guest Editor for *IEEE Communications Magazine Featured Topic on Key Technologies for 5G New Radio*, to be published March 2018.

A.2. Society Officers, Activities, and Membership

- Member of the *Fellow (Evaluation) Committee* of *IEEE Vehicular Technology Society* (2006 - 2016).
- Member of the *Award Committee* of *IEEE Communications Society* (2014 – 2016).
- Member of the *Conference Board* of *IEEE Signal Processing Society* (2015 – 2016).
- *IEEE Fellow Committee Member* (January – December 2017)
- *TCCN Publication Award Committee Chair* of *IEEE Communications Society* (2017)

A.3. Organization and Chairperson of Technical Sessions, Workshops and Conferences

- Treasurer of *IEEE 2002 Communication Theory Workshop (CTW'02)* in Florida.
- Vice-Chair for tutorials of *The 5th International Symposium on Wireless Personal Multimedia Communications (WPMC'02)* at Honolulu, Hawaii.
- Vice-Chair of the TPC of *IEEE 2003 International Conference on Communications (ICC'03)* at Anchorage, Alaska.
- Co-Chair of the TPC of *2007 IEEE Radio and Wireless Conference*.
- Tutorial Chair of *IEEE 2007 Wireless Communications and Networking Conference*.
- Co-Chair of *Signal Processing Symposium at IEEE 2007 Global Telecommunications Conference*.
- Track Chair of *Wireless Communications at IEEE 2007 Military Communications Conference*.
- Technical Program Chair of *2008 International Conference on Communications, Circuits, and Systems (ICCCAS'08)*.

- Technical Program Chair of *2009 International Conference on Communications, Circuits, and Systems (ICCCAS'09)*.
- Tutorial Chair of *IEEE 2010 International Conference on Communications*.
- Technical Program Co-Chair of *2011 IEEE Workshop on Signal Processing Advances in Wireless Communications*. (SPAWC'11), San Francisco, CA.
- Panel Chair of *IEEE 2013 Global Telecommunications Conference (Globecom'13)*, Atlanta, GA.
- General Chair of *IEEE 2014 Global Conference on Signal and Information Processing (GlobalSIP'14)*, Atlanta, GA.
- Technical Program Co-Chair of *IEEE 2016 (Spring) Vehicular Technology Conference (VTC'16 Spring)*, Nanjing, China.
- Award Chair of *IEEE 2017 Global Telecommunications Conference (Globecom'17)*, Singapore.
- Plenary Sessions Chair of *IEEE 2019 International Conference on Acoustic, Speech, and Signal Processing (ICASSP'19)*, Brighton, UK.

B. Institute Contributions

- Research Committee of ECE (August 2000 – July 2001).
- Graduate Committee of ECE (August 2001 – July 2002).
- Seminar Committee of ECE (August 2002 – July 2003).
- Graduate Student Recruitment Committee (August 2003 – July 2004).
- Seminar Committee of ECE (**Chair**) (August 2004 – July 2005).
- Faculty Honors Committee (August 2005 – July 2006)
- Graduate Student Recruitment (August 2006 – July 2018)