Tan F. Wong

Mailing address:		**Tel.:**	+1-352-392-2665 (work)
Department of Electrical & Computer Engineering			+1-352-642-3118 (mobile)
University of Florida		**Fax:**	+1-352-392-0044
PO Box 116130		**E-mail:**	twong@ece.ufl.edu
Gainesville, FL 32611, U.S.A.		**WWW:**	http://wireless.ece.ufl.edu/~twong/

Personal Information

Date of Birth:	Jan. 27, 1969
Marital Status:	Married
Citizenship:	US citizen

Education

Ph.D.	Aug. 1995 – Dec. 1997	Electrical and Computer Engineering Purdue University, West Lafayette, Indiana, U.S.A. Thesis: Receiver Design in DS-CDMA Systems with Aperiodic Random Sequences Advisor: Prof. James S. Lehnert
M.S.E.E.	Aug. 1991 – Dec. 1992	Electrical and Computer Engineering Purdue University, West Lafayette, Indiana, U.S.A. Specialized Area: Communications and Signal Processing
B.Sc.	Aug. 1987 – July 1991	Electronic Engineering The Chinese University of Hong Kong Graduated with the First Class Honors

Work Experience

Aug. 2004 – present	**Associate Professor** Department of Electrical & Computer Engineering, University of Florida
Aug. 2006 – June 2007	**Visiting Associate Professor** Department of Information Engineering, The Chinese University of Hong Kong
Aug. 1998 – July 2004	**Assistant Professor** Department of Electrical & Computer Engineering, University of Florida
Nov. 1997 – July 1998	**Post-doctoral Research Associate** School of Electrical & Computer Engineering, Purdue University
Aug. 1995 – Oct. 1997	**Graduate Research Assistant** School of Electrical & Computer Engineering, Purdue University
July 1993 – June 1995	**Research Engineer** High-speed wireless LAN group (in conjunction with Australian Commonwealth Scientific and Industrial Research Organisation) Department of Electronics, Macquarie University, Sydney, Australia

Teaching Experience

Aug. 1998 – Present **Associate & Assistant Professor**
Department of Electrical & Computer Engineering, University of Florida
Graduate courses taught:

- EEL5544: Noise in Linear Systems (Prob. & rand. proc.)
  Offered off-campus through EDGE
  `http://wireless.ece.ufl.edu/~twong/eel5544`
- EEL5718: Computer Communications
  Offered off-campus through EDGE
  `http://wireless.ece.ufl.edu/~twong/eel5718`
- EEL6503: Spread Spectrum and CDMA
  Offered off-campus through EDGE
  `http://wireless.ece.ufl.edu/~twong/eel6503`
- EEL6524 : Statistical Decision Theory
  Offered off-campus through EDGE
  `http://wireless.ece.ufl.edu/~twong/eel6524`
- EEL6535: Digital Communications
  Offered off-campus through EDGE
  `http://wireless.ece.ufl.edu/~twong/eel6535`
- EEL6935: Information Theory
  `http://wireless.ece.ufl.edu/~twong/eel6935`

Undergraduate course taught:

- EEL4514: Communication Systems and Components
  `http://wireless.ece.ufl.edu/~twong/eel4514`

Aug. 2006 – May 2007 **Visiting Associate Professor**
Department of Information Engineering, Chinese University of Hong Kong
Undergraduate course taught:

- ERG2040: Probability Models and Applications
- IEG2051: Signals and Systems
- IEG4100: Wireless Communication Systems

Aug. 1997 – Dec. 1997 **Graduate Teaching Assistant**
School of Electrical & Computer Engineering, Purdue University
Graduate course:

- EE544 (NTU CC715M): Digital Communications
  Offered off-campus through NTU

Aug. 1994 – Dec. 1994 **Teaching Assistant**
Department of Electronics, Macquarie University
Undergraduate laboratory course

Honors and Awards

- IEEE Senior Member, 2003
- Oak Ridge Associated Universities 2000 Ralph E. Powe Junior Faculty Enhancement Award

Past Students

	Degree & date	Dissertation/Thesis title
Yoav Levinbook	PhD, 8/07	"State estimation: A decision-theoretic approach," (now with Nextwave)
Saravanan Vijayakumaran	PhD, 5/07	"Design and performance of ultra-wideband acquisition systems," (now with Microsoft)
Sandeep Aedudodla	PhD, 12/06	"Synchronization in impulse radio ultra-wideband communication systems" (now with Qualcom)
Xin Li	PhD, 5/06	"Collaborative decoding and its performance analysis," (now with 2Wire)
Yong Liu	PhD, 12/05	"Timing and channel estimation in multi-antenna communication systems"
	MS, 5/02	"Performance Analysis and Power Control Algorithms for Multiuser Receivers in CDMA Systems" (now with Conexant)
Byungseo Kim (co-chaired)	PhD, 12/04	"Link-adaptive medium access control protocols for high speed wireless networks" (now with Motorola)
Deniz Rende	PhD, 8/04	"Bit interleaved coded space-frequency modulation" (now with Conexant)
Beomjin Park	PhD, 5/04	"Channel Estimation in MIMO systems" (now with Samsung Telecom, Korea)
Li Gao	PhD, 5/02	"Adaptive DS-CDMA systems based on sequence optimization" (now with Silicon Laboratories)
Scott Kennedy	MS, 5/04	"Reconfigurable multi-node wireless communication testbed" (now with Schlumberger)
Hojin Kim	MS, 5/01	"Adaptive signaling system with combining techniques for time-varying channels" (now with ArrayComm)
Priyadevi Jayapal	MS, 5/01	"Web-based simulation system based on MATLAB and Java servlets" (now with Intel)
Sangita Subramanian	MS, 8/99	"Transmission scheduling in multi-code CDMA systems" (now with Analog Devices)

Current Students

	Degree	Dissertation/Thesis title & current status
Debdeep Chatterjee	PhD	Passed written qualifying exam
Ryan Wong (co-chaired)	PhD	Passed written qualifying exam

Post-doctoral and Visiting Researchers

- Sule Yener (Ph.D. graduate at Cukurova University, Turkey), 8/02 – 12/05
- Prof. Dong Seog Han (Professor at Kyungpook National University, South Korea), 1/04 – 12/04
- Dr. Ashish Pandharipande, 1/03 – 12/03, (now with Philips Research, Netherlands)

University Services

- Department of Electrical & Computer Engineering
  - Budget committee member — Aug. 2007 – present
  - ABET committee member — May 2004 – present
  - Curriculum committee member — Aug. 2003 – present
  - Statistical requirement subcommittee chair — Feb. 2005 – May 2005
  - Faculty search committee member — Nov. 2003 – June 2004
  - Communications area coordinator — Aug. 1999 – July 2003
  - Graduate committee member — Aug. 1999 – July 2003
  - Communications faculty search committee — Oct. 1998 – May 1999, Jan. 2002 – May 2002
- College of Engineering
  - Sabbatical committee member (elected) — Nov. 2007 – present
- University
  - Faculty mentor for the University Scholars Program — 1999 & 2004
  - Faculty mentor for the University Minority Mentor Program — 1999 – 2002
  - Faculty advisor of the Hong Kong Student Association — 2002 – 2004

Professional Activities

- Senior member of the Institute of Electrical and Electronic Engineers (IEEE)
- Journal editorial services:
  - Editor for Wideband and Multiple Access Wireless Systems, *IEEE Transactions on Communications*, 2/02 – 12/06
  - Editor-in-Chief, *IEEE Transactions on Vehicular Technology*, 11/03 – 12/06
  - Associate Editor, *Journal of Wireless Communications and Mobile Computing*, Wiley, 2/05 – present
  - Editor, *ETRI Journal*, Electronics and Telecommunications Research Institute, Korea, 9/04 – 10/05
  - Associate Editor, *IEEE Transactions on Vehicular Technology*, 1/01 – 10/03
- Journal advisory services:
  - International Advisory Committee Member, *Advanced Electronic Communications: Research & Education*, Hellenic Aerospace Industry, Greece, 5/04 – present

- Conference organizing services:
  - Member of Technical Program Committee for the IEEE International Conference on Communications (ICC '09) Wireless Communication Symposium, Dresden Germany, June 2009.
  - Technical Co-chair for the 2009 IEEE Wireless and Radio Symposium, San Diego, Jan. 2009.
  - Technical program committee member for the IEEE Global Communications Conference (GlobeCom '08) Wireless Communications Symposium, New Orleans, LA, Dec. 2008.
  - Technical program committee member for the 2008 IWCMC Conference Communication and Information theory symposium, Greece, Aug. 2008.
  - Session organizer for the IEEE Military Communications Conference (MILCOM '07), Orlando, Oct. 2007.
  - Technical program committee member for the IEEE Vehicular Technology Conference (VTC Fall '07) Wireless Access Track, Baltimore, MD, Sep. 2007.
  - Member of Technical Program Committee for the IEEE International Conference on Communications (ICC '07) Wireless Communication Symposium, Glasgow, Scotland, June 2007.
  - Member of Technical Program Committee for the IEEE International Conference on Communications (ICC '07) Communication Theory Symposium, Glasgow, Scotland, June 2007.
  - Publication Co-chair for the First International Communications and Networking Conference in China, Beijing, China, Oct. 2006.
  - Member of Technical Program Committee for the International Wireless Communications and Mobile Computing Conference, Communication and Information Theory Symposium, Vancouver, Canada, July 2006.
  - Technical program committee member for Symposium on Information Theory, WirelessCom 2005.
  - Technical program committee member for the IEEE International Conference on Communications (ICC '05) Communication Theory Symposium.
  - Session organizer for the IEEE Military Communications Conference (MILCOM '04).
  - Technical program committee member for the IEEE Vehicular Technology Conference (VTC Fall '04) Wireless Access Track.
  - Technical program committee member for the IEEE Global Communications Conference (GlobeCom '03) Wireless Communications Symposium.
  - Technical program committee member for the Vehicular Technology Conference (VTC Fall '02).
  - Technical program committee member for the IEEE International Conference on Communications (ICC '02) Advanced Wireless Communications Systems Symposium.
  - Technical program committee member for the IEEE Wireless Communications and Networking Conference (WCNC '00).
  - Session chair for the IEEE International Conference on Communications (ICC '00).
  - Session organizer for the IEEE Global Communications Conference (GlobeCom '99).
  - Session chair/organizer for the IEEE Military Communications Conference (MILCOM '99).
- National Science Foundation Panel Review:
  - Information Technology Research Program

  - Small Business Innovative Research Program
  - Faculty Early Career Development (CAREER) Program
  - Major Research Instrumentation Program
  - Sensors and Sensor Networks Program
- Proposal reviewer for the United States-Israel Binational Science Foundation
- External examiner for graduate these from the Chinese University of Hong Kong
- External examiner for a Ph.D. dissertation from the University of Waterloo, Canada
- Reviewer for IEEE and other international journals and conferences

Consulting Activities

- Intellon Corporation, Ocala, FL, Oct. 1999 – Jul. 2002
- Globespan, Inc., Red Bank, NJ, May 2000 – Feb. 2001

Research Grants and Contracts

1. Principal Investigator, "Utilizing Specrum Efficiently (USE)," Air Force Office of Scientific Research, subcontracted from Purdue University, UF portion $130,000, 6/1/07–11/30/09, with J. Shea, Project No. 00059038.
2. Principal Investigator, "NeTs: Simulcast-enhanced wireless networks," National Science Foundation, $419,998, 8/16/06–8/15/09, with J. Shea, Project No. 00060805.
3. Principal Investigator, "Research on Synchronization Techniques for ATSC Terrestrial DTV Systems," Electronics and Telecommunications Research Institute, Korea, $40,000, 7/1/05–11/30/05,
4. Co-Principal Investigator, "HANET: Heterogeneous Ad Hoc Network Testbed," Defense University Research Instrumentation Program (DURIP), Army Research Office, $109,604, 5/1/04–9/30/05, with J. Shea (PI) and Y. Fang, Account No. 455505812.
5. Co-Principal Investigator, "Cross-layer optimization: Network diversity through relaying in ad hoc networks," Harris Corp., $72,145, 10/29/03–8/31/04, with J. Shea (PI) and Y. Fang, Account No. 455505012.
6. Principal Investigator, "Space-frequency coding schemes for high-rate wireless LANs," Globespan-Virata, Inc., $44,620, 5/23/03–8/31/04, Account No. 450586712.
7. Principal Investigator, "REU supplement for ITR: Cooperative communication schemes for wireless networks," National Science Foundation, $15,000, 9/15/02–8/31/06, with J. Shea and Y. Fang, Account No. 455503512.
8. Co-Principal Investigator, "Proof of concept for using airborne traffic surveillance systems for Florida ITS applications," Florida Department of Transportation, $249,918, 11/19/02–7/31/04, with H. Latchman (PI) and K. Courage. Account No. 455501112.
9. Principal Investigator, "ITR: Cooperative communication schemes for wireless networks," National Science Foundation, $449,998 + $13,080 of cost sharing by University of Florida, 9/15/02–8/31/06, with J. Shea and Y. Fang, Account No. 455500412.

10. Principal Investigator, "Reconfigurable Multi-node Wireless Communication Testbed," National Science Foundation, $67,200 + $35,000 of cost sharing by University of Florida, 9/1/02–8/31/05, with J. Shea and Y. Fang, Account No. 450596612.

11. Principal Investigator, "Comparative Study of Spread Spectrum and Time Modulation Ultra-Wideband Communications," Air Force Research Laboratory, $298,216 ($153,862 of which are subcontracted to Applied Research Associates, Inc.), 8/15/02–8/14/03, with J. Shea and Y. Fang, Account No. 450596512.

12. Principal Investigator, "Bit Interleaved Coded Space Time Modulation for Wireless LAN," Intersil, Inc., $40,627, 5/23/02–5/22/03, Account No. 450586712.

13. Principal Investigator, "Collaborative transmission and reception," Office of Naval Research, $275,199, 5/1/02–12/31/04, with J. Shea and Y. Fang, Account No. 450594712.

14. Co-Principal Investigator, "Intel Small Equipment Grant," Intel Corp., $15,000, 2002, with J. Shea (PI) and Y. Fang.

15. Co-Principal Investigator, "OFDM Technologies and QoS MAC Protocols for Fixed Wireless Networks," Samsung Electro-Mechanics, $114,541, 7/1/01–8/31/02 (original: $74,942 + extension: $39,599), with Y. Fang (PI) and J. Shea, Account No. 450587612.

16. Principal Investigator, "Antenna diversity and advanced coding schemes for 100Mbps wireless LAN," Intersil, Inc., $38,357, 5/23/01–5/22/02, Account No. 450586712.

17. Principal Investigator, "Efficient data-link protocols for wireless optimal-sequence CDMA systems," SCEEE, $22,500, 7/1/00–12/30/01, Account No. 450582312.

18. Principal Investigator, "Research in Residential Powerline Communication Systems," Intellon, Inc., $10,068, 6/30/00–12/29/01, with J. Shea, Account No. 450582612.

19. Principal Investigator, "Adaptive transmitter design for wireless communication systems," Oak Ridge Associated Universities, $5,000, 5/22/00–5/21/01, Account No. 450581412.

List of Publications

Book Chapters

1. Avudainayagam, J. M. Shea, T. F. Wong, and Y. Fang, "Cooperative diversity techniques in wireless communications," *Ad Hoc and Sensor Networks*, Y. Xiao and Y. Pan, eds., Nova Science Publishers, 2005.

2. J. M. Shea and T. F. Wong, "Multidimensional Codes," *Encyclopedia of Telecommunications*, J. G. Proakis, ed. Wiley, 2002.

Serial Journal Articles

1. Y. Levinbook and T. F. Wong, "State estimation with initial state uncertainty," *IEEE Transactions on Information Theory*, vol. 54, no. 1, pp. 235–254, Jan. 2008.

2. X. Li, T. F. Wong, and J. M. Shea, "Performance Analysis for Collaborative Decoding with Least-Reliable-Bit Exchange on AWGN Channels," *IEEE Transactions on Communications*, vol. 56, no. 1, pp. 58–69, Jan. 2008.

3. Y. Liu, T. F. Wong, and W. W. Hager, "Training signal design for estimation of correlated MIMO channels with colored interference," *IEEE Transactions on Signal Processing*, vol. 55, no. 4, pp. 1486–1497, Apr. 2007.

4. A. Avudainayagam, J. M. Shea, and T. F. Wong, "Collaborative decoding of a broadcast message in bandwidth-constrained environments," *IEEE Journal on Selected Areas in Communications*, vol. 25, no. 2, pp. 434–446, Feb. 2007.

5. X. Li and T. F. Wong, "Turbo equalization with nonlinear Kalman filtering for time-varying frequency-selective fading channels," *IEEE Transactions on Wireless Communications*, vol. 6, no. 2, pp. 691–700, Feb. 2007.

6. S. Vijayakumaran, Y. Levinbook and T. F. Wong, "Maximum likelihood localization of a diffusive point source using binary observations," *IEEE Transactions on Signal Processing*, vol. 55, no. 2, pp. 665–676, Feb. 2007.

7. Y. Li, B. Vucetic, T. F. Wong, and M. Dohler, "Distributed Turbo Coding With Soft Information Relaying in Multi-Hop Relay Networks," *IEEE Journal on Selected Areas in Communications*, vol. 24, no. 11, pp. 2040–2050, Nov. 2006.

8. J.-W. Moon, T. F. Wong, and J. M. Shea, "Pilot-Assisted and Blind Joint Data Detection and Channel Estimation In Partial-Time Jamming," *IEEE Transactions on Communications*, vol. 54, no. 11, pp. 2092–2102, Nov. 2006.

9. S. Aedudodla, S. Vijayakumaran, and T. F. Wong, "Ultra-wideband signal acquisition with hybrid DS-TH spreading," *IEEE Transactions on Wireless Communications*, vol. 5, no. 9, pp. 2504–2515, Sep. 2006.

10. J. M. Shea, T. F. Wong, and W.-H. Wong, "Cooperative Diversity Slotted ALOHA," *ACM Wireless Networks*, July 2006. Invited paper.

11. W. W. Hager, Y. Liu, and T. F. Wong, "Optimization of generalized mean square error in signal processing and communication," *Linear Algebra and Its Applications*, vol. 416, no. 2–3, pp. 815–834, July 2006.

12. J.-W. Moon, J. M. Shea, and T. F. Wong, "Collaborative mitigation of partial-time jamming on non-fading channels," *IEEE Transactions on Wireless Communications*, vol. 5, no. 6, pp. 1371–1381, June 2006.

13. S. Aedudodla, S. Vijayakumaran, and T. F. Wong, "Acquisition of Direct-Sequence Transmitted Reference Ultra-Wideband Signals," *IEEE Journal on Selected Areas in Communications*, vol. 24, no. 4, pp. 759–765, Apr. 2006.

14. S. Vijayakumaran and T. F. Wong, "On Equal Gain Combining for Acquisition of Time-Hopping Ultra-Wideband Signals," *IEEE Transactions on Communications*, vol. 54, no. 3, pp. 479-490, Mar. 2006.

15. S. Vijayakumaran and T. F. Wong, "A Search Strategy for Ultra-Wideband Signal Acquisition," *IEEE Transactions on Communications*, vol. 53, no. 12, pp. 2015–2019, Dec. 2005.

16. S. Vijayakumaran, T. F. Wong, and S. Aedudodla, "On the Asymptotic Performance of Threshold-based Acquisition Systems in Multipath Fading Channels," *IEEE Transactions on Information Theory*, vol. 51, no. 11, pp. 3973–3986, Nov. 2005.

17. D. Rende and T. F. Wong, "Bit-Interleaved Space-Frequency Coded Modulation for OFDM Systems," *IEEE Transactions on Wireless Communications*, vol. 4, no. 5, pp. 2256–2266, Nov. 2005.

18. S. Aedudodla, S. Vijayakumaran, and T. F. Wong, "Timing Acquisition in Ultra-wideband Communication Systems," *IEEE Transactions on Vehicular Technology*, vol. 54, no. 5, pp. 1570–1583, Sep. 2005. Invited paper.

19. B.-S. Kim, Y. Fang, T. F. Wong, and Y. Kwon, "Throughput Enhancement through Dynamic Fragmentation in Wireless LANs," *IEEE Transactions on Vehicular Technology*, vol. 54, no. 4, pp. 1415–1425, July 2005.

20. B.-S. Kim, S. Kim, Y. Fang, and T. F. Wong,"Two-Step MultiPolling MAC Protocol for Wireless LANs," *IEEE Journal on Selected Areas in Communications*, vol. 23, no. 6. pp. 1276–1286, June 2005.

21. Y. Liu, T. F. Wong, and A. Pandharipande, "Timing Estimation in Multiple-Antenna Systems over Rayleigh Flat-Fading Channels," *IEEE Transactions on Signal Processing*, vol. 53, no. 6, pp. 2074–2088, June 2005.

22. T. F. Wong and B. Park, "Training sequence optimization in MIMO systems with colored interference," *IEEE Transactions on Communications*, vol. 52, no. 11, pp. 1939–1947, Nov. 2004.

23. Y. N. Rao, J. C. Principe, and T. F. Wong, "Fast RLS-like algorithm for generalized eigendecomposition and its applications," *Journal of VLSI Signal Processing*, vol. 37, no. 2, pp. 333–344, June 2004.

24. L. Gao and T. F. Wong, "Power Control and Spreading Sequence Allocation in a CDMA Forward Link," *IEEE Transactions on Information Theory*, vol. 50, no. 1, pp. 105–124, Jan. 2004.

25. A. F. Almutairi, H. A. Latchman, T. F. Wong, M. Lee, and S. L. Miller, "Performance of MMSE receiver based CDMA system with higher order modulation formats in a fading channel," *Wireless Personal Communications*, vol. 25, no. 2, pp. 117–136, May 2003.

26. T. C. M. Lee and T. F. Wong, "Nonparametric log-spectra estimation using disconnected regression splines and genetic algorithms," *Signal Processing*, vol. 83, no. 1, pp. 79–90, Jan. 2003.

27. T. F. Wong, X. Li, and J. M. Shea, "Distributed decoding of rectangular parity-check code," *Electronics Letters*, vol. 38, no. 22, pp. 1364–1365, Oct. 2002.

28. T. F. Wong, "Numerical Calculation of Symmetric Capacity of Rayleigh Fading Channel with BPSK/QPSK," *IEEE Communications Letters*, vol. 5, no. 8, pp. 328–330, Aug. 2001.

29. S. Tsai, T. F. Wong, and J. S. Lehnert, "DS-CDMA System with Joint Channel Estimation and MAP Detection in Time-Selective Fading Channels," *IEEE Journal on Selected Areas in Communications*, vol. 19. no. 1, pp. 121–131, Jan. 2001.

30. T. F. Wong and T. M. Lok, "Transmitter adaptation in multicode DS-CDMA systems," *IEEE Journal on Selected Areas in Communications*, vol. 19, no. 1, pp. 69–82, Jan. 2001.

31. A. F. Almutairi, S. L. Miller, H. A. Latchman, and T. F. Wong, "MMSE-Based Fully Distributed Power Control Algorithm," *IEEE Communications Letters*, vol. 4, no. 11, pp. 346–348, Nov. 2000.

32. J. Namgoong, T. F. Wong, and J. S. Lehnert, "Subspace Multiuser Detection for Multicarrier CDMA," *IEEE Transactions on Communications*, vol. 48, no. 11, pp. 1897–1908, Nov. 2000.

33. T. F. Wong and T. M. Lok, "Doubly spread DS-CDMA for efficient blind interference cancellation," *IEE Proceedings - Communications*, vol. 147, no. 5, pp. 299–304, Oct. 2000.

34. T. M. Lok and T. F. Wong, "Transmitter and Receiver Optimization in Multicarrier CDMA Systems," *IEEE Transactions on Communications*, vol. 48, no. 7, pp. 1197–1207, July 2000.

35. T. F. Wong, Q. Zhang, and J. S. Lehnert, "Decision-Feedback MAP Receiver for Time-Selective Fading CDMA Channels," *IEEE Transactions on Communications*, vol. 48, no. 5, pp. 829–840, May 2000.

36. T. M. Lok, T. F. Wong, and J. S. Lehnert, "Blind Adaptive Signal Reception for MC-CDMA Systems in Rayleigh Fading Channels," *IEEE Transactions on Communications*, vol. 47, no. 3, pp. 464–471, Mar. 1999.

37. Q. Zhang, T. F. Wong, and J. S. Lehnert, "Performance of a Type-II Hybrid ARQ Protocol in Slotted DS-SSMA Packet Radio Systems," *IEEE Transactions on Communications*, vol. 47, no. 2, pp. 281–290, Feb. 1999.

38. T. F. Wong, T. M. Lok, and J. S. Lehnert, "Asynchronous Multiple Access Interference Suppression and Chip Waveform Selection with Aperiodic Random Sequences," *IEEE Transactions on Communications*, vol. 47, no. 1, pp. 103–114, Jan. 1999.

39. Q. Zhang, T. F. Wong, and J. S. Lehnert, "Buffered Type-II Hybrid ARQ Protocol for Slotted DS-SSMA Packet Radio Systems," *International Journal of Wireless Information Networks*, vol. 5, no. 3, pp. 203–217, July 1998.

40. T. F. Wong, T. M. Lok, J. S. Lehnert, and M. D. Zoltowski, "A Linear Receiver for Direct-Sequence Spread-Spectrum Multiple-Access Systems with Antenna Arrays and Blind Adaptation," *IEEE Transactions on Information Theory*, vol. 44, no. 2, pp. 659–676, Mar. 1998.

41. D. J. Skellern, L. H. C. Lee, T. McDermott, N. H. E. Weste, J. Dalton, J. Graham, T. F. Wong, A. F. Myles, T. M. P. Percival, and P. J. Ryan, "High-speed wireless LAN," *IEEE Micro*, vol. 17, no. 1, pp. 40–47, Jan.–Feb. 1997.

42. D. J. Skellern, L. H. C. Lee, and T. Wong, "Practical aspects of discrete Fourier transform-based frequency division multiplexing for data transmission," *Journal of Electrical & Electronics Engineering, Australia*, vol. 15, no. 2, pp. 169–175, June 1995.

Submitted:

43. D. Chatterjee, T. F. Wong, and T. M. Lok, "Cooperative transmission in a wireless cluster based on flow management," *IEEE Transactions on Communications*, Oct. 2007. Submitted for publication.

44. W. P. Tam, T. M. Lok, and T. F. Wong, "Flow optimization in parallel relay networks: A routing perspective," *IEEE Transactions on Wireless Communications*, Oct. 2007. Submitted for publication.

45. T. F. Wong, T. M. Lok, and J. M. Shea, "Flow-optimized cooperative transmission for the relay channel," *IEEE Transactions on Information Theory*, Dec. 2006. Submitted for publication. Revised Sep. 2007.

46. Y. Levinbook and T. F. Wong, "The Restricted Risk Bayes Approach and its Application to Linear State Estimation," *IEEE Transactions on Information Theory*, Aug. 2006. Submitted for publication.

47. B.-S. Kim, S. Kim, Y. Fang, and T. F. Wong, "Feedback-Assisted MAC Protocol for Real Time Traffics in High Rate Wireless Personal Area Networks," *ACM Wireless Networks*, Aug. 2004. Submitted for publication. Revised Jan. 2006.

Conference Articles

1. W. P. Tam, T. M. Lok, and T. F. Wong, "Flow-optimized Asynchronous Relay Selection Protocol for Parallel Relay Networks," in *Proceedings of the IEEE International Conference on Communications (ICC '08)*, Beijing, China, May 2008. To appear.

2. D. Chatterjee, T. F. Wong, and T. M. Lok, "Cooperative transmission in a wireless cluster based on flow management," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '08)*, Les Vegas, NV, Mar. 2008. To appear.

3. S. Colak, T. F. Wong, A. H. Serbest, "UWB dipole array with equally spaced elements of different lengths," in *Proceedings of the 2007 International Conference on Ultra Wideband*, Singapore, Sep. 2007.

4. D. Chatterjee, S. Boppana, T. F. Wong, and J. M. Shea "Performance comparison of optimal and suboptimal forward-link channel-sharing Schemes," in *Proceedings of the IEEE International Conference on Communications (ICC '07)*, pp. 791–796, Glasgrow, Scotland, June 2007.

5. T. F. Wong, T. M. Lok, and J. M. Shea, "Half-duplex Cooperative Transmission for the Relay Channel with Flow Optimization," in *Proceedings of the 41st Annual Conference on Information Sciences and Systems (CISS '07)*, Baltimore, MD, Mar. 2007.

6. Y. Levinbook and T. F. Wong, "Linear recursive tracking of fast Rayleigh-faded MIMO channels," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '07)*, pp. 2468–2472, Hong Kong, Mar. 2007.

7. T. F. Wong and T. C. M. Lee, "Multipath model selection for UWB channels," in *Proceedings of the 2006 International Conference on Ultra Wideband*, pp. 85–89, Boston, MA, Sep. 2006. Invited paper.

8. S. Aedudodla and T. F. Wong, "Time-of-Arrival Estimation in Dense Ultra-wideband Channels," in *Proceedings of the International Conference on Communications, Circuits and Systems*, Guilin, China, vol. 2, pp. 1315–1320, June 2006. Invited.

9. X. Li and T. F. Wong, "Joint Turbo Equalization and Channel Estimation with Fixed-Lag Extended Kalman Filtering," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '06)*, Las Vegas, NV, Apr. 2006.

10. S. Aedudodla, S. Vijayakumaran, and T. F. Wong, "Timing Acquisition for Transmitted Reference UWB Signals with Direct-Sequence Spreading," in *Proceedings of the IEEE Military Communications Conference (MILCOM '05)*, Oct. 2005.

11. W.-H. Wong, J. M. Shea, and T. F. Wong, "Cooperative Diversity Slotted ALOHA," in *Proceedings of the 2nd International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine)*, Orlando, FL, Aug. 2005.

12. X. Li, T. F. Wong, and J. M. Shea, "Performance Analysis for Collaborative Decoding with Least-Reliable-Bit Exchange on AWGN Channels," in *Proceedings of the IEEE International Conference on Communications (ICC '05)*, vol. 1, pp. 678–682, Soeul, Korea, May 2005.

13. J.-W. Moon, J. M. Shea, and T. F. Wong, "Mitigation of Collaborative Jamming Mitigation on Block-Fading Channels," in *Proceedings of the IEEE International Conference on Communications (ICC '05)*, vol. 1, pp. 483–487, Soeul, Korea, May 2005.

14. B.-S. Kim, S. W. Kim, Y. Fang, and T. F. Wong, "Link-Adaptable Polling-based MAC Protocol for Wireless LANs," in *Proceedings of the IEEE Global Telecommunications Conference (GLOBECOM '04)*, vol. 5, pp. 2997–3001, Dallas, TX, Nov. 2004.

15. B. Park and T. F. Wong, "Optimal Training Sequence in MIMO Systems with Multiple Interference Sources," in *Proceedings of the IEEE Global Telecommunications Conference (GLOBECOM '04)*, vol. 1, pp. 86–90, Dallas, TX, Nov. 2004.

16. Y. Levinbook and T. F. Wong, "Maximum Likelihood Diffusive Source Localization Based On Binary Observations," in *Proceedings of the 38th Asilomar Conference on Signals, Systems and Computers*, vol. 1, pp. 1008–1012, Nov. 2004.

17. S. Vijayakumaran, T. F. Wong, and S. Aedudodla, "On the Asymptotic Performance of Threshold-based Acquisition Systems in Multipath Fading Channels," in *Proceedings of the IEEE Information Theory Workshop*, pp. 170–175, San Antonio, TX, Oct. 2004.

18. J.-W. Moon, J. M. Shea, and T. F. Wong, "Jamming estimation on block-fading channels," in *Proceedings of the IEEE Military Communications Conference (MILCOM '04)*, Oct. 2004.

19. S. Srinivasan, H. Latchman, J. Shea, T. Wong, and J. McNair, "Airborne Traffic Surveillance Systems - Video Surveillance of Highway Traffic," in *Proceedings of the ACM 2nd International Workshop on Video Surveillance and Sensor Networks*, New York, NY, Oct. 2004.

20. A. Pandharipande and T. F. Wong, "Optimum wordlength for transform coded signal transmission over OFDM systems," in *Proceedings of the Joint IST Workshop on Mobile Future and Symposium on Trends in Communications (SympoTIC '04)*, pp. 47-50, Oct. 2004.

21. S. Vijayakumaran and T. F. Wong, "Best Permutation Search Strategy for Ultra-Wideband Acquisition," in *Proceedings of the IEEE Vehicular Technology Conference*, Sep. 2004.

22. S. Vijayakumaran, Y. Levinbook, and T. F. Wong, "On Diffusive Source Localization using Dumb Sensors," in *Proceedings of the IEEE International Symposium on Information Theory*, pp. 519, Chicago, IL, July 2004.

23. B. Kim, Y. Fang, and T. F. Wong, "Rate-Adaptive MAC Protocol in High-Rate Personal Area Networks," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '04)*, vol. 3, pp. 1394–1399, Atlanta, GA, Mar. 2004.

24. S. Aedudodla, S. Vijayakumaran, and T. F. Wong, "Rapid ultra-wideband signal acquisition," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '04)*, vol. 2, pp. 1148–1153, Atlanta, GA, Mar. 2004.

25. Y. Liu, T. F. Wong, and A. Pandharipande, "Timing Estimation in Multiple-Antenna Systems over Rayleigh Flat-Fading Channels," in *Proceedings of the 37th Asilomar Conference on Signals, Systems and Computers*, vol. 1, pp. 253–257, Nov. 2003.

26. A. Avudainayagam, J. M. Shea, and T. F. Wong, "Cooperative diversity through reliability filling," in *Proceedings of the 41st Annual Allerton Conference on Communications, Control, and Computing*, Allerton House, Monticello, IL, Oct. 2003.

27. S. Vijayakumaran and T. F. Wong, "Equal Gain Combining for Acquisition of UWB Signals," in *Proceedings of the IEEE Military Communications Conference (MILCOM '03)*, vol. 2, pp. 880–885, Boston, MA, Oct. 2003.

28. J.-W. Moon, J. M. Shea, and T. F. Wong, "Collaborative decoding using turbo codes," in *Proceedings of the IEEE Military Communications Conference (MILCOM '03)*, vol. 1, pp. 452–457, Boston, MA, Oct. 2003.

29. D. Rende, X. Li, and T. F. Wong, "Bit Interleaved Space-Frequency Coded Modulation with Iterative Decoding for OFDM Systems," in *Proceedings of the IEEE Military Communications Conference (MILCOM '03)*, vol. 1, pp. 163–168, Boston, MA, Oct. 2003.

30. B. Park and T. F. Wong, "Training Sequence Optimization in MIMO Systems with Colored Noise," in *Proceedings of the IEEE Military Communications Conference (MILCOM '03)*, vol. 1, pp. 135–140, Boston, MA, Oct. 2003.

31. B. Kim, Y. Fang, T. F. Wong, and Y. Kwon, "Dynamic fragmentation scheme for rate-adaptive wireless LANs," in *Proceedings of the IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'03)*, vol. 3, pp. 2591–2595, Beijing, China, Sep. 2003.

32. D. Rende and T. F. Wong, "Bit Interleaved Space-Frequency Coded Modulation for OFDM Systems," in *Proceedings of the IEEE International Conference on Communications (ICC '03)*, vol. 4, pp. 2827–2831, Anchorage, AK, May 2003.

33. X. Li, T. F. Wong, and J. M. Shea, "Bit-interleaved rectangular parity-check coded modulation with iterative demodulation in a two-node distributed array," in *Proceedings of the IEEE International Conference on Communications (ICC '03)*, vol. 4, pp. 2812–2816, Anchorage, AK, May 2003.

34. A. Avudainayagam, J. M. Shea, T. F. Wong, and X. Li, "Reliability exchange schemes for iterative packet combing in distributed array," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '03)*, New Orleans, LA, vol. 2, pp. 832–837, Mar. 2003.

35. T. F. Wong, X. Li, and J. M. Shea, "Iterative decoding for a two-node distributed array," in *Proceedings of the IEEE Military Communications Conference (MILCOM '02)*, Anaheim, CA, vol. 2, pp. 1320–1324, Oct. 2002.

36. B. Hombs, J. S. Lehnert, and T. F. Wong, "CDMA for Air Traffic Control," in *Proceedings of the 21st Digital Avionics Systems Conference*, vol. 1, pp. 3C3-1 – 3C3-8, Irvine, CA, Oct. 2002.

37. June Namgoong, T. F. Wong, and J. S. Lehnert, "Multiple-access interference suppression for OFDM systems based on Doppler Shifts," in *Proceedings of the IEEE Military Communications Conference (MILCOM '02)*, vol. 1, pp. 567–571, Anaheim, CA, Oct. 2002.

38. L. Gao and T. F. Wong, "Iterative Construction of Spreading Sequences in CDMA Forward Link," in *Proceedings of the IEEE Vehicular Technology Conference (VTC Fall'02)*, Vancouver, Canada, vol. 1, pp. 515–519, Sep. 2002.

39. L. Gao and T. F. Wong, "Sequence Optimization in CDMA Point-to-point Transmission with Multipath," in *Proceedings of the IEEE Vehicular Technology Conference (VTC Fall'02)*, vol. 4, pp. 2303–2307, Vancouver, Canada, Sep. 2002.

40. Y. Liu and T. F. Wong, "Power control algorithms for MMSE receivers in CDMA systems," in *Proceedings of the IEEE Vehicular Technology Conference (VTC Fall'02)*, vol. 3, pp. 1749–1753, Vancouver, Canada, Sep. 2002.

41. Y. Liu and T. F. Wong, "Performance Analysis of an Adaptive Decision-Feedback Receiver in Asynchronous CDMA Systems," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '02)*, Orlando, FL, pp. 531–536, Mar. 2002.

42. L. Gao and T. F. Wong, "Joint transmitter-receiver adaptive forward-link DS-CDMA system," in *Proceedings of the IEEE Global Communications Conference (GLOBECOM '01)*, San Antonio, TX, pp. 1297–1301, Nov. 2001.

43. T. F. Wong, J. M. Shea, and Xin Li, "Using multi-dimensional parity-check codes to obtain diversity in Rayleigh fading channels," in *Proceedings of the IEEE Global Communications Conference (GLOBECOM '01)*, San Antonio, TX, pp. 1210–1214, Nov. 2001.

44. J. M. Shea and T. F. Wong, "Reduced-complexity decoding for concatenated codes based on rectangular parity-check codes and turbo codes," in *Proceedings of the IEEE Global Communications Conference (GLOBECOM '01)*, San Antonio, TX, pp. 1031–1035, Nov. 2001.

45. J. M. Shea and T. F. Wong, "Concatenated codes based on multidimensional parity check codes and turbo codes," in *Proceedings of the IEEE Military Communications Conference (MILCOM '01)*, pp. 1152–1156, Oct. 2001.

46. D. Erdogmus, D. Rende, J. C. Principe, and T. F. Wong, "Nonlinear Channel Equalization Using Multilayer Perceptrons with Information-Theoretic Criterion," in *Proceedings of the 2001 IEEE Signal Processing Society Workshop, Neural Networks for Signal Processing XI*, Falmouth, MA, pp. 443–451, Sep. 2001.

47. T. F. Wong and J. M. Shea, "Multi-Dimensional Parity Check Codes for Bursty Channels," in *Proceedings of the IEEE International Symposium on Information Theory (ISIT 2001)*, Washington, D.C., pp. 123, June 2001.

48. T. F. Wong, L. Gao, and T. M. Lok, "A type-I hybrid ARQ protocol over optimal-sequence CDMA link," in *Proceedings of the IEEE Military Communications Conference (MILCOM '00)*, Los Angeles, CA, pp. 559–563, Oct. 2000.

49. L. Gao and T. F. Wong, "RLS-based adaptive multicode CDMA system," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '00)*, Chicago, IL, pp. 1506–1510, Sep. 2000.

50. T. M. Lok and T. F. Wong, "High capacity fixed wireless access systems with antenna arrays," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '00)*, Chicago, IL, pp. 415–419, Sep. 2000.

51. T. F. Wong and T. M. Lok, "Spreading sequence adaptation in multicode CDMA systems," in *Proceedings of the IEEE International Conference on Communications (ICC '00)*, New Orleans, LA, pp. 1375–1379, June 2000.

52. S. Subramanian and T. F. Wong, "Transmission scheduling scheme for multirate multicode CDMA networks," in *Proceedings of the IEEE Military Communications Conference (MILCOM '99)*, Atlantic City, NJ, pp. 403–407, Nov. 1999.

53. T. F. Wong and T. M. Lok, "Doubly spread DS-CDMA for efficient interference cancellation," in *Proceedings of the IEEE Military Communications Conference (MILCOM '99)*, Atlantic City, NJ, pp. 177–181, Nov. 1999.

54. A. F. Almutairi, H. A. Latchman, T. F. Wong, and S. L. Miller, "MMSE based fully distributed power control algorithm," in *Proceedings of the IEEE Military Communications Conference (MILCOM '99)*, Atlantic City, NJ, pp. 167–171, Nov. 1999.

55. T. M. Lok and T. F. Wong, "Transmitter and Receiver Optimization in MC-CDMA Systems," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '99)*, New Orleans, LA, pp. 1567–1571, Sep. 1999.

56. S. Tsai, T. F. Wong, and J. S. Lehnert, "Joint Channel Estimation and MAP Detection in Time-Selective Fading CDMA Channels," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '99)*, New Orleans, LA, pp. 1484–1488, Sep. 1999.

57. J. Namgoong, T. F. Wong, and J. S. Lehnert, "Subspace MMSE Receiver for Multicarrier CDMA," in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC '99)*, New Orleans, LA, pp. 90–94, Sep. 1999.

58. T. M. Lok, T. F. Wong, and J. S. Lehnert, "Blind Adaptive Signal Reception for MC-CDMA Systems with Interference Suppression," in *Proceedings of the IEEE Military Communications Conference (MILCOM '98)*, Boston, MA, pp. 752–756, Oct. 1998.

59. T. F. Wong, Q. Zhang, and J. S. Lehnert, "MAP Demodulator for Time-Selective Fading CDMA Channels," in *Proceedings of the IEEE Military Communications Conference (MILCOM '98)*, Boston, MA, pp. 355–359, Oct. 1998.

60. R. T. Derryberry, T. F. Wong, and J. S. Lehnert "An Iterative Blind Adaptive Receiver for DS-SSMA Systems," in *Proceedings of the IEEE Military Communications Conference (MILCOM '98)*, Boston, MA, pp. 160–164, Oct. 1998.

61. Q. Zhang, T. F. Wong, and J. S. Lehnert, "Stability of a Type-II Hybrid ARQ Protocol for Slotted DS-SSMA Packet Radio Systems," in *Proceedings of the IEEE Conference on Computer Communications (INFOCOM '98)*, San Francisco, CA, pp. 1301–1308, Apr. 1998.

62. Q. Zhang, T. F. Wong, and J. S. Lehnert, "Adaptive Coding for Slotted DS-SSMA Packet Radio Systems," in *Proceedings of the IEEE Military Communications Conference (MILCOM '97)*, Monterey, CA, pp. 291–295, Nov. 1997.

63. T. F. Wong, T. M. Lok, and J. S. Lehnert, "Chip Waveform Selection in Asynchronous DS-CDMA Systems with Interference Suppression," in *Proceeding of the IEEE International Conference on Universal Personal Communications (ICUPC '97)*, San Diego, CA, 1, pp. 208–212, Oct. 1997.

64. T. F. Wong, T. M. Lok, J. S. Lehnert, and M. D. Zoltowski, "Spread-Spectrum Signaling Techniques with Antenna Arrays and Blind Adaptation," in *Proceedings of the IEEE Military Communications Conference (MILCOM '96)*, McLean, VA, pp. 194–198, Oct. 1996.

65. T. F. Wong, T. M. Lok, and J. S. Lehnert, "Performance evaluation of a blind adaptive linear receiver for cellular DS/CDMA systems," in *Proceedings of the 34th Annual Allerton Conference on Communications, Control, and Computing*, Allerton House, Monticello, IL, Oct. 1996. Invited.

66. T. F. Wong, L. H. C. Lee, and D. J. Skellern, "An Automatic procedure to construct the optimal soft-decision quantizers and branch metrics for Viterbi decoders," in *Proceedings of the 3rd URSI International Symposium on Signals, Systems and Electronics (ISSSE '95)*, San Francisco, CA, pp. 423–426, Oct. 1995.

Invited Presentations

1. "Generalizing routing in wireless networks," ECE Brown Bag Seminar, University of Florida, Sep. 2007.

2. "Cooperative Transmission for the Relay Channel with Flow Optimization," Hong Kong University, May 2007.

3. "Cooperative Transmission via Flow Optimization," Center for Broadband OFDM Mobile Access, Pohang University of Science and Technology, Korea, Apr. 2007.

4. "Diffusive point source localization using binary observations from a network of simple sensors," University of Waterloo, Canada, May 2006.

5. "Collaborative decoding," Samsung Advanced Institute of Technology, Seoul, Korea, May 2005.

6. "Timing estimation in MIMO systems," Yonsei University, Seoul, Korea, May 2005.

7. "Turbo equalization for fast fading multipath channels," Communications & Mobile R&D Center, LG Electronics, Seoul, Korea, May 2005.

8. "Rapid acquisition of ultra-wide band signals," Politecnico di Milano, Italy, Apr. 2004.

9. "Some designs for high-rate wireless communication system with multiple antennas," Ericsson Research, Research Triangle Park, NC, Oct. 2003.

10. "Adaptive Transmitter Design for Wireless Communication Systems," Oak Ridge Associated Universities, Oak Ridge, TN, Feb. 2002.

11. "Optimal spreading sequences for CDMA systems," University of Central Florida, Orlando, FL, Dec. 2001.

12. ECE Brown Bag Seminar in Electronics, University of Florida, Gainesville, FL, June 2000.