

CURRICULUM VITAE

Ufuk Tureli

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Education

Ph.D. in Electrical Engineering, University of Virginia, May 2000
Dissertation: *Multicarrier Wireless Systems: Enabling Studies on Carrier Frequency and Channel Estimation.*

M.Sc. in Electrical Engineering, University of Virginia January 1998
Thesis: *Multirate OFDM for wireless indoor communication systems.*

B.Sc. in Electrical Engineering, Bogazici University, Istanbul, Turkey June 1994

Employment

Assistant Professor, Electrical and Computer Engineering
Stevens Institute of Technology 2000-

Director, Wireless Research Laboratory,

Research Assistant, University of Washington 1998-2000
Research Area: Wideband Wireless Communications and
Testbed Development

Teaching Assistant, University of Virginia 1995-1997
Courses: Electronic Circuits I & II Laboratory, Signals and Systems,
Control Theory

Awards

1. 2005 Davis Memorial Award for Research Excellence at Stevens for the research paper "Low Complexity Nonlinear Least Squares Carrier Offset Estimator for OFDM: Identifiability, Diversity and Performance," IEEE Transactions on Signal Processing, 52(9):2441 –2452, September 2004, authored by U. Tureli, P.Honan and H. Liu.

I. RESEARCH

I.A.1 *Journal articles.*

I.A.1.a *Refereed journals*

Refereed journals

1. Z. Cao, **U. Tureli** and Y.-D. Yao, "Low Complexity Orthogonal Spectral Signal Reconstruction for Generalized OFDMA Uplink with Frequency Synchronization Errors", IEEE Transactions on Vehicular Technology, May 2007.
2. D. Wang, C. Comaniciu and **U. Tureli**, Cooperation and Fairness for Slotted Aloha, Special Issue on Cooperation in Wireless Networks, Springer - Wireless Personal Communication, dx.doi.org/10.1007/s11277-006-9240-5, December 2006.
3. D. Wang and **U. Tureli**, "Joint MIMO-OFDM and MAC Design for Broadband and Multihop Ad Hoc Networks," EURASIP Journal on Wireless Communications and Networking, vol. 2006, Article ID 60585, 9 pages, 2006.
4. Y. Chen, E. Aktas and **U. Tureli**, "Optimal Space-Frequency Group Codes for MIMO-OFDM System", IEEE Transactions on Communications, March 2006, (54)3:553-562.
5. **U. Tureli**, P.Honan and H. Liu, "Low Complexity Nonlinear Least Squares Carrier Offset Estimator for OFDM: Identifiability, Diversity and Performance," IEEE Transactions on Signal Processing, 52(9):2441 –2452, September 2004.
6. Z. Cao, **U. Tureli** and Y-D.Yao, "Deterministic Multiuser Carrier Frequency Offset Estimation for Interleaved OFDMA Uplink," IEEE Transactions on Communications, 52(9):1586–1595, September 2004.
7. **U. Tureli**, Didem Kivanc and H. Liu, "Experimental and Analytical Studies on a high resolution OFDM Carrier Estimator," IEEE Transactions on Vehicular Technology 50(2):629 –643, March 2001
8. **U. Tureli**, H. Liu and M. D. Zoltowski, "OFDM Blind Carrier Estimation: ESPRIT," IEEE Transactions on Communications, 48(9): 1459 –1461, September 2000.
9. H. Liu and **U. Tureli**, "A high-efficiency carrier estimator for OFDM communications," IEEE Communications Letters, 2(4):104-106, April 1998.
10. G.A. Tsihrintzis, **U. Tureli**, and C.L. Nikias, "Fractional Lower-Order Statistics-based Ambiguity Functions for Differential Delay-Doppler Estimation," IEE Proceedings: Radar, Sonar and Navigation, 143(6):358-365, December 1996.

I.A.2 **All published reports.**

- "OFDM-CDMA for Wireless Indoor Systems", H. Liu, M. Brandt-Pearce, **U. Tureli**, A. Dharap, Sep.96-Jun.98, sponsor: Gary O'Neil, Technical Program Manager, International Business Machines Corporation, Jun. 18, 1998.

I.A.3 All articles in review.

1. J. Ling, **U. Tureli**, D. Chizhik and C. Papadias, “Rician Modeling and Prediction for Wireless Downlink Packet Systems,” submitted to IEEE Transactions on Wireless Communications, May 2007, accepted July 2007, revision sent September 2007.
2. E. Zeydan and **U. Tureli**, “Differential Space-Frequency Group Codes for MIMO-OFDM”, submitted to IEEE Transactions on Wireless Communications, September 2007.
3. **U. Tureli** and X.Chen , “Passive Swimmer Detection and Localization”, submitted to IEEE Journal of Ocean Engineering, September 2007.
4. **U. Tureli** and J. Desai, “Joint Localization of Wireless LAN and Bluetooth Networks”, submitted to EURASIP Journal on Advances in Signal Processing, Special Issue, Cooperative Localization in Wireless Ad Hoc and Sensor Networks, September 2007.
5. N. Patel, D. Kivanc and **U. Tureli**, “Effective channel utilization using multiple antennas receiver initiated busy tone medium access (MARI-BTMA) MAC scheme”, submitted to Elsevier Physical Communications (PHYCOM) Journal, July 2007.
6. J. Ling and **U. Tureli**, “Signal to noise ratio prediction and scheduling for downlink packet access in EVDO networks”, submitted to IEEE Transactions on Wireless Communications, July 2007.
7. T. Kamakaris, D. Kivanc and **U. Tureli**, “Opportunistic Spectral Reuse in Cellular Systems”, submitted to EURASIP Journal on Wireless Communications and Networking Special issue on Cognitive Radio and Dynamic Spectrum Sharing Systems, July 2007.
8. D. Wang, C. Comaniciu, **U. Tureli**, “Cross Layer for Localization and MAC,” submitted to Elsevier Computer Networks Special Issue on Wireless Multimedia Sensor Networks, April 2007.

I.A.4 All presentation of papers, seminars, lectures, etc.

I.A.4.a Invited International Conference Papers:

1. N. Shah, T. Kamakaris, **U. Tureli** and M. Buddhikot, “Wideband Spectrum Probe for Distributed Measurements in Cellular Band”, In IEEE First International Workshop on Technology and Policy for Accessing Spectrum (TAPAS), August 2006.
2. Y. Chen and **U. Tureli**, “Experimental studies on optimal space-frequency codes for MIMO-OFDM systems”. In IEEE Asilomar Conference on Signals, System and Computers. November 2004.
3. Z. Cao, **U. Tureli** and Y. D. Yao, “Synchronization in Interleaved OFDMA Systems,” in IEEE Symposium on Advances in Wireless Communications (ISWC'02), Sep. 2002, pp. 53-54.
4. **U. Tureli** and H. Liu, “Blind Carrier Synchronization in OFDM Communication,” In Proceedings International Conference on Telecommunications, Porto Carras, Greece, June 1998.

I.A.4.b Refereed International Conference Papers:

1. T. Kamakaris, D. Kivanc and **U. Tureli**, “Inteference Model for Cognitive Coexistence in Cellular Systems”, to be presented at the IEEE Global Communications Conference (GLOBECOM) 2007, November 26-30, Washington, DC.
2. D. Kivanc, N. Patel and **U. Tureli**, “Effective channel utilization using the MARI-BTMA protocol”, to be presented at the IEEE Military Communications Conference (MILCOM), 2007, October 29-31, Orlando, FL.
3. E. Zeydan, D. Kivanc, and **U. Tureli**, “Joint Iterative Channel Allocation and Beamforming Algorithm for Interference Avoidance in Multiple-Antenna Ad Hoc Networks”, to be presented at the IEEE Military Communications Conference (MILCOM), 2007, October 29-31, Orlando, FL.
4. T. Kamakaris, D. Kivanc and **U. Tureli**, “Opportunistic Cellular Reuse in Cellular Systems”, IEEE Personal Indoor and Mobile Radio Communications Conference (PIMRC) 2007, 3-7 September, Athens, Greece.
5. J. Desai and **U. Tureli**, “Evaluating performance of various localization algorithms in wireless and sensor networks”, IEEE Personal Indoor and Mobile Radio Communications Conference (PIMRC) 2007, 3-7 September, Athens, Greece.
6. X. Chen and **U. Tureli**, “Underwater Source Localization on an Underwater Sensor Network”, SPIE Defense and Security Symposium 9 - 13 April 2007 Orlando, Florida.
7. D. Kivanc-Tureli, **U. Tureli** and H. Liu, Fair resource allocation in an uplink OFDMA system, IEEE Wireless Communications and Networking Conference (WCNC'07), Hong Kong, March 2007.
8. E. Zeydan and **U. Tureli**, “Differential Space Frequency Group Codes for MIMO OFDM” in Proceedings of the 41st Annual Conference on Information Sciences and Systems 2007 (CISS'07), Baltimore, MD, Johns Hopkins University, 14-16, March 2007.
9. J. Ling and **U. Tureli**, “Signal to Interference Prediction for Adaptive Radio Links”, in IEEE Global Communications Conference (Globecom'06), San Francisco, CA, Nov.27-Dec.1 2006.
10. X. Chen, and **U. Tureli**, “Passive Acoustic Detection of Divers Using Single Hydrophone”, in IEEE Asilomar Conference on Signals, Systems and Computers, Pacific Grove, CA, Nov. 2006.
11. N. Patel, D. Kivanc-Tureli, and **U. Tureli**, “The effect of frequency offset on the multiple antennas receiver initiated busy tone medium access (MARI-BTMA) protocol”, in Military Communications Conference (Milcom'06), Washington, DC, Oct. 26-Nov 1, 2006.
12. J. Ling and **U. Tureli**, “Signal to Interference Prediction with Arbitrary Number of Co-Channel Interferers”, in 2006 Military Communications Conference (Milcom'06), Washington, DC, Oct. 26-Nov 1, 2006.
13. P. Honan, **U. Tureli** and Z. Cao, “Adaptive Reduced-Rank MIMO Decoder for Military Communications,” in 2006 Military Communications Conference (Milcom'06), Washington, DC, Oct. 26-Nov 1, 2006.

14. D. Wang, C. Comaniciu, and **U. Tureli**, "A fair and efficient pricing strategy for slotted Aloha in MPR Channels," in IEEE Fall Vehicular Technology Conference (VTC-Fall'06), Montreal, Canada, Sep.25-28, 2006.
15. X. Chen, R. Wang, and **U. Tureli**, "Passive Acoustic Detection of Divers under strong interference," in 2006 IEEE OCEANS Conference, Boston, MA, Sep. 18-20, 2006.
16. P.J. Honan, Z. Cao, and **U. Tureli**, "Adaptive Reduced-Rank Interference Suppression for MIMO-OFDM Decoding," in International Conference on Digital Telecommunications (ICDT '06), Côte d'Azur, France, August 29 - 31, 2006.
17. J. Ling, D. Chizhik, **U. Tureli**, C. Papadias, "Performance of Linear Prediction for Wireless Scheduled Downlink Systems," in IEEE Communications Conference (ICC'06), Istanbul, Turkey, Jun. 2006.
18. D. Wang, C. Comaniciu, and **U. Tureli**, "Cross Layer Design for Localization and MAC," in 40th IEEE Conference on Information Systems and Sciences (CISS'06), Princeton University, Princeton, NJ, Mar. 2006.
19. A. Awad and **U. Tureli**, "Delay Estimation for Two Objects by using Blind Beamforming on a Randomly Distributed Sensor Array," in the 40th IEEE Conference on Information Systems and Sciences (CISS'06), Princeton University, Princeton, NJ, Mar. 2006.
20. Y. Chen and **U. Tureli**, "Optimal Space-frequency group code for MIMO-OFDM system," in IEEE Military Communications Conference (Milcom'05), Oct. 2005, vol. 3, pp.1549-1554.
21. D. Wang and **U. Tureli**, "Cooperative MIMO-OFDM and MAC design for broadband ad hoc network," in IEEE Military Communications Conference (Milcom'05), Oct. 2005, vol.1, pp.201-207.
22. D. Wang and **U. Tureli**, "Cross layer design for broadband ad hoc network with MIMO-OFDM," in 6th IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC'05), Jun. 2005, pp. 630-634.
23. D. Wang and **U. Tureli**, "Cooperative transceiver architecture and MAC scheme for broadband ad hoc network," in 39th Annual Conference on Information Systems and Sciences (CISS'05), Mar. 2005, pp. 159-163.
24. **U. Tureli**, Y. Chen and R. Iyer, "A comparison of space-frequency codes for MIMO OFDM Systems", in 39th Annual Conference on Information Systems and Sciences (CISS'05), Mar. 2005, pp. 174-178.
25. Z. Cao, **U. Tureli**, Y.-D. Yao and P. Honan, "Frequency Synchronization for Generalized OFDMA uplink," in IEEE Global Communications Conference (Globecom'04), Nov. 2004, vol. 2, pp.1071-1075.
26. Y. Chen and **U. Tureli**. "Blind localization and counting of multiple acoustic sources in a randomly distributed sensor system," in 38th IEEE Asilomar Conference on Signals, System and Computers, Nov. 2004, vol.2, pp. 1392-1396.

27. Y. Chen, **U. Tureli**, and E. Aktas, "Orthogonal Delay Diversity Realization and Cyclic Group Codes for MIMO-OFDM," in IEEE International Conference on Communications (ICC'04), Jun. 2004, vol. 1, pp.264-268.
28. Y. Chen, **U. Tureli**, and E. Aktas, "High data rate MIMO-OFDM system with orthogonal delay diversity realization," in IEEE Wireless Communications and Networking Conference (WCNC'04), Mar. 2004, vol. 1, pp.98-103.
29. **U. Tureli** and K. M. Pillai, "Analytical and Experimental studies on carrier frequency offset estimation algorithms for OFDM systems," in 37th IEEE Asilomar Conference on Signals, Systems and Computers (Asilomar'03), Nov. 2003, vol. 1, pp.174-178.
30. Z. Cao and **U. Tureli**, "Optimum Subcarrier Assignment in OFDMA," in 37th IEEE Asilomar Conference on Signals, Systems and Computers, Nov. 2003, vol. 1, pp. 708-712.
31. Y. Chen, P. Honan and **U. Tureli**, "Adaptive Reduced-rank Localization for Multiple Wideband Acoustic Sources," in IEEE Military Communications Conference (MILCOM'03), Oct. 2003, pp. 130-134.
32. R. Ambati and **U. Tureli**, "Experimental studies in OFDM carrier frequency offset estimation," in IEEE International Conference on Communications (ICC'03), May 2003, vol. 3, pp. 2056-2060.
33. P. Honan and **U. Tureli**, "Blind and Efficient Sub-Space Based Carrier Offset Estimator for Multi-Antenna OFDM Communications in Correlated Noise," in IEEE International Conference on Communications (ICC 2003), May 2003, vol. 5 pp. 3356 –3360.
34. Z. Cao, **U. Tureli** and Y.-D. Yao, "Efficient Structure-based Carrier Frequency Offset Estimation for Interleaved OFDMA Uplink," in IEEE International Conference on Communications (ICC'03), May 2003, vol. 5, pp. 3361-3365.
35. P.J. Honan, R. Ambati, **U. Tureli**, "Performance analysis of diversity combining method for OFDM blind carrier synchronization," in IEEE Vehicular Technology Conference (VTC Spring'03), Apr. 2003, vol. 4, pp. 2672-2676.
36. P. Honan and **U. Tureli**, "Blind Carrier Offset Estimation for MIMO OFDM Systems: Cramer Rao Bound and Nonlinear Least Squares," in 2003 Conference on Information Sciences and Systems (CISS'03), Baltimore, MD, Mar. 2003.
37. **U. Tureli**, K. M. Pillai and R. Ambati, "Performance comparison of OFDM Carrier synchronization algorithms with Diversity," in Conference on Information Sciences and Systems (CISS'03), Baltimore, MD, Mar. 2003.
38. R. Ambati, P. Honan, K.M. Pillai and **U. Tureli**, "Software Radio Implementation of Carrier offset Estimation for OFDM Communications with Multipath," in Conference on Information Sciences and Systems (CISS'03), Baltimore, MD, Mar. 2003.
39. Y. Chen, P. Honan and **U. Tureli**, "Adaptive Reduced Rank Detection of Multiple Wideband Sources by Sensor Networks," in Conference on Information Sciences and Systems (CISS'03), Baltimore, MD, Mar. 2003.

40. Z. Cao, **U. Tureli** and Y. D. Yao, "Analysis of Two Receiver Schemes for Interleaved OFDMA Uplink," in 36th Asilomar Conference on Signals, Systems and Computers, Nov. 2002, vol. 2, pp.1818-1821.
41. Z. Cao, **U. Tureli** and Y. D. Yao, "User Separation and Frequency-Time Synchronization for the Uplink of Interleaved OFDMA," in 36th Asilomar Conference on Signals, Systems and Computers, Nov. 2002, vol. 2, pp. 1842-1846.
42. D. Kivanc, **U. Tureli** and H. Liu, "Capacity Improvement for Uplink OFDMA," in 36th Asilomar Conference on Signals, Systems and Computers, Nov. 2002, vol. 2, pp. 1809-1812.
43. **U. Tureli**, R. Ambati, D. Kivanc and H. Liu, "Performance Analysis of OFDM Carrier Synchronization with Diversity," in IEEE Vehicular Technology Conference (VTC'02), Sep. 2002, vol. 1, pp. 33-37.
44. Z. Cao, **U. Tureli** and Y. D. Yao, "Collision Detection and Resolution via Frequency Offset Estimation in OFDM Based Wireless LAN Environment," in IASTED International Conference Wireless and Optical Communications (WOC 2002), Jul. 2002, pp. 158-163. Published by ACTA Press.
45. **U. Tureli** and P. J. Honan, "Modified high-efficiency carrier estimator for OFDM communications with antenna diversity," in 35th Asilomar Conference on Signals, Systems and Computers, Oct. 2001, vol.2, pp. 1470-1474.
46. **U. Tureli** and P. J. Honan, "Modified High-Efficiency Carrier Estimator for OFDM Communications with Antenna Diversity," ICCIT'2001, Montclair State University, pp.303-310, Editor(s): Antoniou G. & Deremer D., World Scientific Publishing Company, Montclair NJ, October 12, 2001. ISBN: 981-02-4759-1.
47. **U. Tureli**, D. Kivanc and H. Liu, "Multicarrier synchronization with diversity," in Proc. Vehicular Technology Conference (VTC), vol.2, pp.952-956, Atlantic City, NJ, Oct. 2001.
48. **U. Tureli**, D. Kivanc and H. Liu, "Subspace based OFDM carrier offset estimation algorithm in model mismatch," in 34th Asilomar Conference on Signals, Systems and Computers, Oct. 2000, vol.1, pp.264-268.
49. **U. Tureli**, D. Kivanc and H. Liu, "MC-CDMA uplink-blind carrier frequency offset estimation," in 34th Asilomar Conference on Signals, Systems and Computers, Oct. 2000, vol.1, pp.241-245.
50. **U. Tureli**, D. Kivanc and H. Liu, "Channel estimation for Multicarrier CDMA," in IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'00) , Jun. 2000, vol.5, pp.2909-2912.
51. **U. Tureli**, D. Kivanc and H. Liu, "Blind Channel Identification in Multicarrier CDMA based on Second Order Statistics," in Conference on Information Sciences and Systems (CISS'00), Princeton, NJ, Mar. 2000.
52. **U. Tureli** and H. Liu, "Software Radio Implementation of Carrier Offset Estimation for OFDM Communications," in 32nd Asilomar Conference on Signals, Systems and Computers, Nov. 1998, vol.1, pp. 60-64.

53. **U. Tureli** and H. Liu, "Blind Carrier Synchronization and Channel Identification in OFDM Communication," in IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'98), May 1998, vol. 6, pp. 3509-3512.
54. **U. Tureli**, H. Liu and M.D. Zoltowski, "A high efficiency carrier estimator for OFDM communications," in 31st Asilomar Conference on Signals, Systems and Computers, Nov. 1997, vol.1, pp.505-509.

I.A.4.c Selected Invited Talks:

1. Defense Advanced Projects Agency (DARPA), Wireless Adaptable Network Design (WAND) Program Proposers' Day, "Wireless Research Laboratory and WiNSeC at Stevens Institute of Technology," February 27, 2007, George Mason University, Arlington, VA.
2. Air Force Office of Scientific Research Workshop, "Cross Layer Optimization for Ad Hoc Wireless Networks and Distributed Radio Testbed Implementation", May 12, 2006, Oxford, Ohio.
3. Defense Advanced Projects Agency (DARPA), Wireless Adaptable Network Node (WANN) Program Proposers' Day, "Wireless Research Laboratory and WiNSeC at Stevens Institute of Technology," March 16, 2006, George Mason University, Arlington, VA.
4. Defense Advanced Projects Agency (DARPA), Information Theory for Mobile Ad Hoc Network (ITMANET) Workshop, "Capacity and Implementation: A Position Statement for ITMANET," March 7, 2006, Arlington, VA.
5. Turkish Naval Research Command Talk, "Next generation communications and signal processing techniques for Naval Applications," January 3, 2006, Pendik, Istanbul, Turkey.
6. Aselsan (Turkish Military Electronics Industries) Electronics and Communications Group Talk, "Novel signal processing and communications technologies for Homeland Defense at WRL and WiNSeC," December 30, 2005, Aselsan Headquarters, Ankara, Turkey.
7. Bogazici University Electrical and Electronics Engineering Seminar and IEEE Communications Society Turkey Branch Talk, "Spatio-Temporal Techniques for Signal Processing and Communications," December 23, 2005. Bogazici University, Istanbul, Turkey.
8. University Consortium for Homeland Security Symposium, "Acoustic sensor application for emergency preparedness and response," November 26, 2005, New Jersey Institute of Technology, Newark, NJ.
9. Armed Forces Civil Engineers Association (AFCEA) workshop, "Sensor Networking Research at the Wireless Research Laboratory," February 24, 2005, Fort Monmouth, NJ.
10. Rutgers University, Wireless Information Network Laboratory (WINLAB) Talk, "The Diversity and Multiplexing Framework for Wideband Wireless Channels", November 26, 2003, NJ.

11. Stanford University, Smart Antenna Research Group (Prof A. Paulraj) Talk, “Broadband Wireless System Design and Testing”, November 13, 2003, Stanford CA.
12. New Jersey Institute of Technology, New Jersey Center for Wireless Technology Industry Day, “Wireless Systems Research Testbed Development,” February 21, 2002, Newark, NJ.
13. New Jersey Institute of Technology, New Jersey Center for Wireless Technology, “Multicarrier Synchronization with Diversity,” November 15, 2001, Newark, NJ.
14. Motorola Systems Research Technologies Laboratory, “Multicarrier Wireless Systems: Enabling Studies on Carrier Frequency Offset and Multipath Channel Estimation”, September 30, 1999, Schaumburg, IL.

1.B Research grants and contracts

1. August 2006 – August 2008
“Wireless Data Network Testbed”,
P.I. U. Tureli
NSA-Verizon Program in Security (subcontract)
\$235,062.

2. September 2006- August 2007
“Multiradio Sensor Network Design”,
P.I. U. Tureli,
US Army- Wireless Network Security Program subcontract, \$188,000.

3. September 2006- August 2007
“Diver Localization Using a Hydrophone Array”
P.I. U. Tureli
Marine Security Laboratory (ONR) subcontract, \$84,000.

2. September 2005 – August 2008
“NSF NETS-ProWiN: Wireless Interference and Characterization on Network Performance”
P.I. Dennis Roberson, Illinois Institute of Technology (I.I.T.)
Co-P.I. Cindy Hood, Joe LoCicero (I.I.T.), U. Tureli (Stevens)
NSF Grant 0520232

\$750,000 (Dr. Tureli's portion, \$202,000)

3. September 2005 – August 2006

“Underwater Swimmer Detection Using Acoustic Signals”

P.I. U. Tureli

ONR: Stevens Institute of Tech. Secure Infrastructure Laboratory (SiNTeL)-Winsec Program subcontract \$60,000.

4. April 2005 – May 2008

“Distributed Radio Access and Networking Testbed”

P.I. U. Tureli

Co-P.I. C. Comaniciu

Air Force Office of Scientific Research

\$72,000.

5. September 2005 – August 2007 NSF NeTS:ProWiN: Dynamic Intelligent Management of Spectrum for Ubiquitous Mobile Networks (DIMSUMnet).

P.I. U. Tureli (formerly Paul Kolodzy Sep.2004-Aug. 2005),

Co-P.I.s Kevin Ryan (Stevens), Milind Buddhikot, Scott Miller (Lucent).

\$899,995.

6. May 2005 – December 2006

“Self Localizing Ad Hoc Networks”

P.I. U. Tureli

US Army Picatinny Arsenal, Center of Excellence in Acoustics

\$100,000.

7. October 2004 – October 2005

“Localizing Snipers on an Acoustic Sensor Network”

P.I. U. Tureli and D. Donskoy

US Army Picatinny Arsenal, Stevens Inst. Tech .Wireless Network Security Center Information Assurance Program

\$90,000.

8. September 2004 – August 2005

“NSF NETS-ProWiN: Wireless Spectral Interference and Its Impact on Dynamic Network Connectivity”

P.I. Dennis Roberson (I.I.T.)

Co-P.I. C. Hood, Francis Leung, J. LoCicero, D. Ucci (I.I.T.), U. Tureli (Stevens)

NSF Grant 0435389

\$150,000.

9. December 2004

“Hardware and Software for Remote Laboratory in Electronic Circuits”

P.I. U. Tureli

National Instruments Academic Equipment Grant

\$5,000.

10. January 2004 – July 2004

“NSF NRT: National Radio Networking Research Testbed (NRNRT)”

P.I. Paul Kolodzy

Co-P.I. U. Tureli

\$162,000 subcontract from the University of Kansas Center for Research, NSF Grant 0335272.

\$60,805. (Dr. Tureli’s part)

Note: originally the proposal was NSF Grant 0338490. This was declined, but the proposal was funded through subcontract from another program, with the above Grant number.

11. May 2003 – January 2007

“A Wireless Testbed Development for a Telediagnosis and Telemammography Network”

P.I. Yu-Dong Yao

Co-P.I. Hong Man, U. Tureli

US Army Medical Unit

\$155,000.

12. September 2002 – 2011

“Wireless Systems Laboratory Equipment Acquisition”

P.I. U. Tureli

Co-P.I. Hongbin Li and Yu-Dong Yao

New Jersey Equipment Leasing Fund Program, from Stevens Institute of Technology

\$78,000.

13. September 2002 – 2004

“Wireless Testbed Development”

P.I. U. Tureli

New Jersey Center for Wireless Technology (NJCWT)

\$90,000.

14. February 2002

“FY2001: Wireless Testbed Equipment Purchase”

P.I. U. Tureli

New Jersey Center for Wireless Technology (NJCWT)

\$43,000.00.

15. February 2001

“Teaching and Research in Multicarrier Systems: SystemView software package donation with CDMA & PCS, DVB, M-Link, FPGA Architect and Automatic Program Generator”

P.I. U. Tureli

Elanix Incorporated, West Lake Village, California

software donation valued at \$51,754.

II. SERVICE

II.A Institution Service.

- October 2005 – present: Associate Director, Wireless Network and Security Network Center (WiNSeC), Stevens Institute of Technology. (10 hours a week): Responsible for developing proposals and managing funding from Federal and State resources. Organizing symposia and workshops, and increasing academic collaborations, and building the next generation WiNSeC testbed. Manage over \$2M of funding.
- Departmental Committees (Ph.D. Exams, Graduate Admissions)
- Engineering School ABET accreditation Committees
- Institute Appeals Committee

II.B Professional Community Service

Jul. 2006 NSF Panel Reviewer for Hybrid Communications Systems

Jan. 2005 – present Telecis Wireless Inc., Santa Clara, CA in the areas of Wireless Metropolitan Area Networking and Broadband Wireless Systems.

Oct. 2004 – present Round Table Group, Washington D.C. in the areas of Digital Subscriber Lines, Digital Audio Broadcasting and Multicarrier Technologies.

Mar. 2003 NSF Panel Reviewer for Signal Processing Systems Program

Feb. 2003 NSF Panel Reviewer for Wireless and Optical Communications

Program

II.C Professional Society Service

1. Member of Editorial Board of Elsevier PHYCOM:Physical Communication.
2. Member of Radio Communications Committee of IEEE Communications Society.
3. IEEE Wireless Communications and Networking 2008, Student Grants Chair, Organizing Committee and TPC member.
4. IEEE Asilomar Conference on Signals, Systems and Computers 2004, Special Session, Multicarrier Communications organizer and invited papers, Pacific Beach, CA, November 2004.
5. IEEE International Conference on Information Technology: Research and Education 2003 (ITRE03), Special Session Co-Chair, New Jersey Institute of Technology, Newark, NJ, August 2003.
6. IEEE Vehicular Technology Conference, Fall 2001, Publications Co-Chair, Atlantic City, NJ.
7. IEEE International Conference in Communications (ICC) 2002 Panel Speaker, Business Applications Session, How to prepare Engineers for tomorrow's networks. April 2002.
8. Session chair
 - IEEE Military Communications Conference (MILCOM), Fall 2006, Session Chair, Washington, DC, October 2006.
 - IEEE Vehicular Technology Conference (VTC), Fall 2006 Montreal, Canada, September 2006, & Fall 2001, October 2001.
 - Conference on Information Systems, 2005 and 2003, Johns Hopkins University, Baltimore, MD.
 - IEEE International Conference on Communications (ICC) 2003.
9. Technical Program Committee Member
 - IEEE ICC 2008
 - WCNC 2008
 - IWCMC 2006 Sensor and Wireless Resource Management Conference.
 - IEEE Globecom Conference 2006, Communication Theory and Next Generation Networks Symposia, 2005 Wireless Communications Symposium.
 - IEEE Wireless Networking and Communications, WCNC'05.
 - IEEE ITRE Conference, 2004 and 2005.

- IEEE VTC, Spring 2002, Fall 2003 and Fall'2005.
- IEEE Workshop on Broadband Advanced Sensor Networks (BASENET '04)
- IEEE ICC 2003.

III. TEACHING

III.A Major innovations in teaching

- Integrated computer based design and research experience into the classroom.
- Built the infrastructure for a wireless research laboratory, and a product innovation laboratory.
- Built remotely accessible “virtual laboratory” to perform electronics experiments at home, using software and hardware donated by National Instruments.
- Three teams of undergraduate capstone design students under my supervision have been awarded the institute’s annual Technogenesis senior design awards. (2001,2002, 2003), one a finalist for 2007.

III.B Student Supervision

8 Ph.D. students, 2 Masters on going.

3 Ph.D. students, 3 Masters with thesis, 2 Masters students with projects, 18 Undergraduate students with summer research projects, over 70 students with senior design projects graduated.

III.C Advising and counseling

1. Advised 40-50 undergraduate and graduate students every semester, helping students with study plans and course selection, represented department at graduate school events.
2. Freshmen advisor for incoming undergraduate students.
3. Served in Ph.D. committees of 11 students (not listed above)

III.D Teaching

Below is a list of courses I have taught. All courses were on campus, except EE EE740 Satellite Communications (Spring 2002) which I co-taught for two lectures on spread spectrum technology off campus at Bedminster, NJ, February 13 and February 20, 2002.

- EE 359 Electronic Circuits (Fall 2003-Spring 2007)

- EE 615 Multicarrier Communications (Fall 2002 – Fall 2006)
- EE 670 Information Theory and Coding (Spring 2003 – Spring 2005)
- EE 348 Signals and Systems (Summer 2002)
- EE 475 Advanced Communications Theory (Spring 2002)
- EE 664 Digital Signal Processing II (Spring 2001)
- EE 605 Introduction to Probability (Fall 2000)

Laboratory Development::

1. “Web based Virtual Laboratories for Electronic Circuits and Digital Signal Processing”, Fall 2004.
2. “Development of Product Innovation Laboratory”, Fall 2003 and Spring 2004.
3. “Remotely Controlled Virtual Laboratories”, Department of Electrical and Computer Engineering, Fall 2003.