Seyed J. Kazemitabar

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Education

2003- 2008 **University of California Irvine, MS and PhD in Electrical and Computer Engineering.** Advisor: Prof. H. Jafarkhani

PhD Thesis *Coping with Interference in Wireless Networks.*

MS Thesis *On the non existence of quasi-orthogonal space-time block codes for more than four transmit antennas, and code design for rank-deficient correlated channels*

1999-2003 **Sharif University of Technology, BS in Electrical Engineering**

Work Experience

- July 2009-present: Communications Systems Engineer at Maxlinear Inc.

- April 2008-July 2009: Systems Engineer at Wilinx Corporation responsible for design and characterization of UWB (multi-band OFDM) systems. Projects covered:

  1. Design and implementation of LDPC-based UWB 1.5 in MATLAB.

  2. Characterization and optimization of UWB 1.2 RF and base-band end-to-end system performance (EVM, NF, Sensitivity and etc.) and data acquisition and processing.

  3. Front-end design of UWB base-band (detection, frequency offset calculation).

  4. Testing the UWB MAC software through FPGA boards.

- Summer 2007: Intern at Wionics/Realtek, responsible for development of "detect and avoid" (DAA) algorithm for WiMAX downlink. Final work was presented to standard regulators in France. The tasks included:

  1. Data acquisition and processing of WiMax signal.

  2. Developing a detection algorithm based on WiMax standard, and implementing it by C++.

- Summer and Fall 2001: Intern at Electronics Research Center in Sharif University of Technology. Tasks covered were:

  1. *Firmware developing for USART chip in C++*
  2. *Driver developing for dial-up modem in C++*

Skills

- Solid theoretical background in communication theory, signal processing and optimization.
- Programming skills in C/C++, MATLAB, VHDL, Pascal, Assembly, and fixed point.
- Proficient with lab equipment such as Agilent logic analyzer, vector signal analyzer, spectrum analyzer, signal generator, scope, and etc.
- Expert in RF transceiver blocks characterization.
- Expertise in using Xilinx ISE.

School Projects

- Writing several base-band simulation programs in C++ and MATLAB for transmission of data in wireless fading channels, including multiple-antenna space-time codes, OFDM and bit-interleaving.
- Implementing a multi-tap equalizer for cable-like channels in MATLAB.
- Simulating several signal and image processing algorithms with MATLAB and C.

Honors & Awards

- 2008 **Dissertation fellowship winner**, UCI dept. of Electrical Engineering and Computer Science
- 2007 **Best student paper award**, UCI dept. of Electrical Engineering and Computer Science
- 2005 **Broadcom /Conexant** CPCC research fellowship winner.
- 1999 **Ranked 3rd** nationally among more than 350,000 participants in the university entrance exam in Iran, and awarded by the President**.**
- 1998 **Ranked 2nd** and awarded Silver Medal in the National Mathematics Olympiad.

Selected Publications

- J. Kazemitabar and H. Jafarkhani, "On the Non-Existence of Rate One Full-Diversity Quasi-Orthogonal Space-Time Block Codes,'' *Allerton 2005.*
- J. Kazemitabar, H. Jafarkhani, and S. Ekbatani, "Code Design for Rank-Deficient Correlated Channels," *IEE electronics letters,* October 05**.**
- J. Kazemitabar and H. Jafarkhani, "Multiuser Interference Cancellation and Detection for Users with More than Two Transmit Antennas," *IEEE Transactions on Communications,* April 08.
- H. Yousefi'zadeh, H. Jafarkhani, and J. Kazemitabar, "A Study of Connectivity in MIMO Fading Ad-Hoc Networks*," IEEE Journal of Computer Networks,* January 09.
- J. Kazemitabar, V. Tabatabaee, and H. Jafarkhani, "Joint Routing, Scheduling and Power Control for Large Interference Wireless Networks," *IEEE Globecom 08.*
- J. Kazemitabar and H. Jafarkhani, "Performance Analysis of Multiple-Antenna Multi-User Detection," *ITA 09.*