

## Ehsan Azarnasab

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- CONTACT INFORMATION** 50 S. Central Campus Dr. *Voice:* (801) 979-8437  
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Department of Electrical and *E-mail:* azarnasa@ece.utah.edu  
Computer Engineering,  
University of Utah, SLC, UT *Web:* www.ece.utah.edu/~azarnasa  
84112-9206, USA
- RESEARCH INTERESTS** Embedded System Programming, Cognitive Radio, Dynamic Spectrum Access (DSA), Software Defined Radio (SDR)
- EDUCATION** **University of Utah (UoU)**, Salt Lake, Utah USA  
Ph.D. Student, Electrical Engineering, Since December 2006, Expected: Summer 2009, GPA:3.95
- Dissertation Topic: “MAC Layer for Dynamic Spectrum Access”
  - Advisor: Behrouz Farhang
- Georgia State University (GSU)**, Atlanta, GA USA
- M.S., Computer Science, May 2007, GPA:4.0
- Dissertation Topic: “Robot-In-The-Loop Simulation To Support Multi-Robot System”
  - Advisor: Xiaolin Hu
- Isfahan University of Technology (IUT)**, Isfahan, Iran
- B.S., Electrical Engineering (Controls), 2004
- HONORS AND AWARDS** Invited to DySPAN Demonstration of UoU cognitive radio for first responders, Chicago, IL, 2008  
Best Paper Award, Smart Radio Challenge, SDR Technical Conference, Denver, Colorado, 2007  
2nd Rank in Control Engineering, Electrical and Computer Engineering Department, 2004  
**Robocup:** 3<sup>rd</sup> Place In Robocup Rescue 2003, Padua, Italy  
1st Place In RoboDeminer 2002 , Tehran Polytechnic University, Tehran, Iran
- ACADEMIC EXPERIENCE** **University of Utah**, Salt Lake, Utah USA  
*Graduate Student* **December, 2006 - present**  
Research in design and Implementation of a Cognitive Radio Network.
- Georgia State University**, Atlanta, GA  
*Graduate Student* **January 2005 - December, 2006**  
Research in design and development of a robotic test bed for realtime simulation.
- COMPUTER SKILLS**
- Embedded System Programming (AVR, Arm, Gumstix and Embedded Linux)
  - Programming Languages: C, C++, Java, C#, MATLAB, Microsoft Visual Basic, SQL, Pascal, Delphi, Assembly Language(8086 and 8051 based), HTML
  - Computer Tools: ns-2 network simulator, Simulink and Realtime Workshop with specific application on TI Embedded target for TI6000, and also Lyrtech SFF SDR, Code Composer Studio and embedded programming for DSP, Discrete Event system Specification and DEVJava simulation, Xilinx System Generator for DSP

- Applications: L<sup>A</sup>T<sub>E</sub>X, MS-SQLServer Database management, common Windows word processing, spreadsheet, and presentation software
- Operating Systems: Unix/Linux, Windows.

## PUBLICATIONS

- P. Amini, D. Wasden, A. Farhang, E. Azarnasab, P. Amini, B. Farhang-Boroujeny, “Cognitive Spectrum Management”, Software Defined Radio Technical Conference, 2008, Washington, DC
- P. Amini, Ehsan Azarnasab, P. Amini, S. Akoum and B. Farhang-Boroujeny, “An Experimental Cognitive Radio for First Responders”, IEEE conference on Dynamic Spectrum Access Networks (DySPAN), 2008, USA
- E. Azarnasab, X. Hu, P. Amini, B. Farhang-Boroujeny, “Progressive Simulation-based Design: A Case Study Example on Software Defined Radio”, IEEE Conference on Automation Science and Engineering (IEEE-CASE), 2008
- P. Amini, E. Azarnasab, S. Akoum, X. Mao, H. Rao, B. Farhang-Boroujeny, “Implementation of a cognitive radio modem”, Software Defined Radio Technical Conference, November 5-9, 2007, Denver, Colorado
- E. Azarnasab, P. Amini, B. Farhang-Boroujeny, “Hardware in the Loop: A Development Strategy for Software Radios”, Software Defined Radio Technical Conference, November 5-9, 2007, Denver, Colorado
- E. Azarnasab, R. Kempter, N. Patwari and B. Farhang-Boroujeny, “Filterbank Multicarrier and Multicarrier CDMA for Cognitive Radio Systems”, IEEE CrownCom Conference, August 2007, USA
- E. Azarnasab, *Robot-In-The-Loop Simulation To Support Multi-Robot System Development: A Dynamic Team Formation Example*, **M.Sc. Thesis** Georgia State University, Department of Computer Science, Atlanta, GA, 2007
- E. Azarnasab and X. Hu, “An Integrated Multi-Robot Test Bed to Support Incremental Simulation-Based Design”, IEEE International Conference on System of Systems Engineering (SoSE), 2007, USA
- N. Shams, I. Hosseini, M.S. Sadri and E. Azarnasab, “Low Cost FPGA-Based Highly Accurate Face Recognition System Using Combined Wavelets with Subspace Methods”, IEEE International Conference on Image Processing (ICIP), 2006, USA
- H. MohammadSadeghi, H. Bastani, and E. Azarnasab, “Design and Implementation of Autonomous Mine Detecting Robot to Detect Buried Landmines”, IAV2004, 5th IFAC/EURON symposium on Intelligent Autonomous Vehicles, Portugal, 2004, Elsevier Science, Oxford, England
- H. MohammadSadeghi, H. Bastani and E. Azarnasab, “Robocup Rescue Robot League Competition Awardee Paper, IUTMicrobot”, Robocup 2003: Robot Soccer World Cup VII, Lecture Notes on Artificial Intelligence, 2004, Springer.

## PROFESSIONAL EXPERIENCE

**Commslab of University of Utah**, Salt Lake, Utah, USA

*Research Assistant*

**December, 2006 - Present**

Modeling, analysis, simulation and development of cognitive radio modems.

**Robokit**, Isfahan, Iran *Software Design Engineer*

**2003 - 2005**

Programming the 89c51 chip for educational programmable robots and interfacing the robot to PC.

**Isfahan Communications and Technology Institute (ICTI)**, Isfahan, Iran

*Parttime Researcher*

**2000 - 2003**

Design and implementation of robotics applications. Computer programming for Robotics department.

## LANGUAGES

English, German and Persian