

Zakieh S. Hashemifar

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Education

- 2014–present **Ph.D. Candidate**, *University at Buffalo, State University of New York*, Computer Science, 3.84.
- 2011–2013 **M.Sc.**, *Sharif University of Technology, Iran*, Information Technology Engineering, 18.25/20.
- 2005–2010 **B.Sc.**, *Tehran University, Iran*, Information Technology Engineering, 16/20.

Honors and Awards

- 2016 Awarded Grace Hopper attendance scholarship from AMC
- 2014 Awarded Dean's Fellowship in University at Buffalo
- 2011 Ranked 3rd among more than 10000 applicants in nationwide university entrance exam for M.Sc. graduate students
- 2010 Ranked 2nd among the students of Information Technology at the Department of Electrical and Computer Engineering, University of Tehran
- 2005 Ranked 188th among more than 400000 applicants in the nationwide university entrance exam for undergraduate students
- 2002 Awarded in the first stage of Mathematics Olympiad contest in Iran

Working Experience

- 2016 **Intern**, *Near Earth Autonomy*, Bradley Hamner.
Worked on distributed mapping of a tunnel using multiple UAVs with minimum communication. In this work, each UAV figures out the center position and the pattern of traversed intersections in its own 2d map using corner detection and delaunay triangulation. The intersections are used as landmarks and UAVs communicate them with each other without any transmission of their poses. Then each UAV makes its own graph and incorporates all the information within it.
- 2014–present **Research Assistant**, *University at Buffalo*, Dr. Karthik Dantu.
Working on autonomous navigation in indoor environments using depth and vision sensors such as kinect. The main challenge herein is building long-term consistent maps in these cluttered and dynamic environments. Currently, we are working on fitting intermediate-level geometrical shapes such as cubes to indoor objects and use them for landmark representation
- 2013 **Editor**, *Mahan Institute*, Tehran, Iran.
- 2012–2013 **Research Assistant**, *Sharif University of Technology*, Dr. Hamidreza R. Rabiee.
Worked on applying Compressive Sensing in complex networks. Designed and simulated a deterministic algorithm in Matlab for accurately recovering the failed links of network when applying CS.

- 2009–2011 **Research Assistant**, *Tehran University*, Dr. Fattaneh Taghiyare.
Worked on Group Modeling in Learning Management Systems. Implemented a Group Modeling plug-in in Moodle; an open source learning platform; using php which could provide a measurement and graphical model of learning progress
- 2007–2008 **Internship**, *ITRC: Research Institute for Information and Communication Technology, Tehran, Iran*.
HCI: Human Computer Interaction

Teaching Experience

- 2015(Spring) **Teaching Assistant**, *University at Buffalo*, Robotics algorithms.
Introducing Robotic Operating System(ROS) to students and how to write simple programs using ROS
- 2014(Fall) **Teaching Assistant**, *University at Buffalo*, Data Structures.
- 2013(Spring) **Teaching Assistant**, *Sharif University of Technology*, Multimedia networks.
- 2013 **Tutor**, *C++ Advanced Programming*, Tehran, Iran.
- 2013 **Tutor**, *C++ Basic Programming*, Tehran, Iran.
- 2012(Fall) **Teaching Assistant**, *Sharif University of Technology*, Computer Networks Laboratory.
- 2006(Fall) **Teaching Assistant**, *University of Tehran, ECE Department*, Fundamental of Computer and Programming..
- 2006(Spring) **Teaching Assistant**, *University of Tehran, ECE Department*, Fundamental of Computer and Programming..

Publications

- H. Mahyar, H. Rabiee, and Z. Hashemifar, "UCS-NT: An unbiased compressive sensing framework for network tomography," in *Acoustics, Speech and Signal Processing (ICASSP), 2013 IEEE International Conference on*, May 2013, pp. 4534–4538.
- H. Mahyar, H. Rabieey, Z. Hashemifar, and P. Siyari, "UCS-WN: An unbiased compressive sensing framework for weighted networks," in *Information Sciences and Systems (CISS), 2013 47th Annual Conference on*, March 2013, pp. 1–6.
- Z. S. Hashemifar, K. Lee, K. Dantu, and N. Napp, "Consistent cuboid detection for semantic mapping," *Autonomous Robots*, to be submitted.

Course Projects

- 2016(Spring) **Implemented a distributed group messenger and distributed file server for android with failure handling**, *University at Buffalo*, Advisor: Dr. Steve Ko.
Distributed Systems
- 2015(Spring) **Implemented Neural Networks for behavior learning using Python and Numpy**, *University at Buffalo*, Advisor: Dr. Varun Chandola.
Machine Learning

- 2014(Fall) **Implemented personalized News search engine using Java**, *University at Buffalo*, Advisor: Dr. Jianqiang Wang.
Information Retrieval
- 2012(Spring) **Implementation of network topology for performance analysis and QoS provision considering bandwidth, delay constraints and service requirements using OPNET Modeler Suite**, *Sharif University of Technology*, Advisor: Prof. Hamid R. Rabiee.
Multimedia Networking
- 2011(Fall) **Modeling and Simulating a queuing system and analyzing the drop and block rate of the packets using Mobius and C#**, *Sharif University of Technology*, Advisor: Prof. Ali Movaghar.
Computer Performance Evaluation
- 2010(Spring) **Designing and implementing an E-Learning application using php**, *University of Tehran*, Advisor: Dr. Abbas Nayebi.
Internet Engineering

Individual Projects

- 2015(Spring) **Implementing a robotic car using python**, Advisor: Dr. Sebastian Thrun.
Artificial Intelligence for Robotics (Udacity)

Computer skills

Microsoft Office	Words, Excel, Powerpoint	OS	Linux, Windows, ROS (Robotic Operating System)
Programming Languages	C++, Matlab, Python, PHP, Java, HTML, C, C#		
Software	OPNET, Visual Studio, SQL Server, Latex, Adobe Flash		