

Naji Khosravan

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Address: Real Time Lab,
Department Of Electrical Engineering,
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Education

Sep.2010 – Present **B.Sc. in Electrical Engineering**

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
(Center of Excellence in Telecommunication)

Senior Project: Image Motion Compensation For Robot-Assisted Beating-Heart Surgery

Supervisor: Prof. H.A. Talebi

2006-2010 **Diploma in Mathematics and Physics Discipline**

Seyedkamal high school, Kerman, Iran
Ranked **1st** among more than 100 students.

Fields of Interest

- Computer Vision
- Image Processing
- Biomedical Signal and Image Processing
- Machine Learning
- Artificial Intelligence

Awards and Honors

Fall 2012 "Modeling and Simulation of a Planar Robot with 2 Degrees of Freedom using MATLAB", Final project of "Linear Control Systems" course, Ranked **1st (Best Project)**, In collaboration with: A.Tasbihi, M.Honari, M.Heravi

Sep. 2010 Ranked within the top 0.4% among over 350,000 participants in Nationwide Universities Entrance Exam (Konkour).

Publication

Fall 2013 "Car tracking in large metropolitan areas using heterogeneous parallel processing", M.Motamedi, N.Khosravan, Iranian Conference on Electrical Engineering (ICEE2015), (submitted)

Selected Presentations & Technical Reports

Spring 2014 "Construction methods and applications of optical fibers in communication systems", presented for "Data Transmission" course, Dr. Noori

Spring 2013 "What is TDR method?", presented for "Transmission Systems" course, Dr. Safavi

Spring 2013 "Traveling sales man problem solved by Simulated Annealing", presented for "Introduction to Computational Intelligence" course, Dr. Kiani

Spring 2012 "Brief explanation of Ant Colony", presented for "Research Methods And Report Writing" course Presentation, Supervisor: Dr. Ardehali

Fall 2012 "An adaptive multi-agent routing algorithm combining AntNet", presented for "Technical English" course, Dr. Safavi

Research Experience & Membership

Since 2013 **Research Assistant at Real-Time Lab, Department Of Electrical Engineering, Amirkabir University of Technology, Tehran, Iran.** **Real-Time Lab website:** <http://ele.aut.ac.ir/~rtl/>

Since 2013 **Research Assistant at AIMS Lab, Department Of Electrical Engineering, Amirkabir University of Technology, Tehran, Iran.** **AIMS Lab website:** <http://aims.aut.ac.ir/>

Selected Academic Projects

Spring 2014 "A Method of Moment Code for Calculating the Input Impedance of a Small Dipole", final project of "Antenna Theory" course, Prof. A. Tavakoli

Spring 2014 "Filtering an Arbitrary Band-limited Signal Using Fourier Transform, Convolution and Filter Function of MATLAB, on a Band-limited Channel and Comparing the Results Using MATLAB", final project of "Digital Communication Systems Lab", Dr. Tayaranian

Spring 2014 "Design and Simulation of a Stepped Impedance Using ADS", final project of "Microwave Lab" course, Dr. Khoshniat

Winter 2014-Present "Image Motion Compensation For Robot-Assisted Beating-Heart Surgery", senior project under supervision of Prof. H. A. Talebi. In order to assist a surgeon while operating on a beating heart, visual stabilization makes the beating heart appear still by providing the current heart view as stationary and non-moving. In this way, the surgeon is not disturbed during an operation by the motion of the heart and has the impression of performing conventional surgery.

Spring 2013 "Design and Simulation of a Two-stage Miller Compensated CMOS OTA as a Sample and Hold Circuit Using HSPICE", final project of "Electronics III" course, Dr. M. Yavari

Fall 2013 "Car Tracking in Large Metropolitan Areas Using Heterogeneous Parallel Processing", In collaboration with Mohammad Motamedi. Detecting and extracting desirable characters from a noisy image using different filters to reduce noise and then using the histogram of images to extract characters and finally using a neural network for character detection.

Fall 2013 "Simulation and Implementation of a Digital Clock on FPGA Board Using Xilinx ISE Tools", final project of "Logic Circuits Lab" course, Mohammad Motamedi

Fall 2012 "Modeling and Simulation of a Planar Robot with Two Degrees of Freedom Using MATLAB", N.Khosravan, A.Tasbihi, M.Honari, M.Heravi, final project of "Linear Control System" course, Prof. H.A. Talebi (Best Project Award)

Fall 2012 "Design and Simulation of a Three-Stage BJT Amplifier Using HSPICE", final project of "Electronics I" course, Dr. M. Yavari

Spring 2012 "Design and Simulation of a Digital Circuit for Displaying a Scrolling Text on LED Matrix Using Proteus", final project of "Logic Circuits" course, Dr. A. Raie

Fall 2011 "Writing a Computer Program Using 'C' Programming Language to Implement TETRIS Game", final project of "Principals of Computer Programming", Dr. Sharifian

[More information is available on my website](#)

Selected Academic Courses

- o Engineering Mathematics: 4/4
- o Data Transmission: 4/4
- o Microwave: 4/4
- o Transmission Systems: 4/4
- o Communication Systems I: 4/4
- o Research Methods and Report Writing: 4/4
- o Numerical Analysis: 4/4
- o Differential Equations: 4/4
- o General Mathematics II: 4/4
- o General Mathematics I: 4/4

Sep. 2013 Workshop on Image Processing by MATLAB (30 hours) **Certificated from Amirkabir University of Technology (Tehran Polytechnic).**

Internship

Summer 2013 **"Telecommunication Company of Iran (TCI)", This company is The First and the most prestigious telecommunication company in Iran.**

Skills

Computer skills

Programming: MATLAB, C/C++, Python ,VHDL

Engineering Softwares: ADS, HSPICE, Proteus, Xilinx ISE, MATLAB Simulink and Image Processing toolboxes

Applications and Scripting: Adobe Photoshop, L^AT_EX, Microsoft Office

Web Design: HTML

Operating Systems: Mac (OS X user), Microsoft Windows

Language Skills

English: Fluent

Certificated from Iran Language Institute (ILI) for 4 years of academic english studies.

TOEFL: Reading:25, Listening:27, Speaking:27, Writing:28, Total:107

Persian: Native

Arabic: Familiar

Hobbies

Photography

Driving

Camping