M. Sadegh Riazi

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EDUCATION

- **Rice University** *Houston, USA*
  Graduate student in Electrical and Computer Engineering *August 2014 - present*
  Overall G.P.A.: **4.11**/4 *Expected M.Sc. degree until July 2016*
- **Sharif University of Technology** *Tehran, Iran*
  B.Sc. Electrical Engineering *2010 - 2014*
  Overall G.P.A.: 17.62/20 (3.75/4)
- **Shahid Dastgheyb NODET* High School Center** *Shiraz, Iran*
  Diploma in Mathematics and Physics *2006 - 2010*
  Overall G.P.A. : 18.80/20 (4/4) *NODET= National Organization for Development of Exceptional Talents, a special school for talented students, Iran

SKILLS

- **Languages**
  Persian: Native
  English: Fluent(TOEFL iBT score: 100) Reading:26 Listening:29 Speaking:23 Writing:22
- **Programming Languages** MATLAB, Java, C, C++, C#, QB, Assembly, LaTeX
- **Hardware** Verilog, VHDL, FPGA, DSP, PCB design
- **Other** HTML, git, Linux Kernel
- **Specialized Software** MATLAB, Xilinx ISE, Simulink, Orcad, ModelSim, PSpice and Schematic, Altium Designer, Proteus, Quartus, NS2, Microsoft visual studio, SimpleScalar

RESEARCH EXPERIENCE

- **Privacy-Preserving Computing** Performing a secure multiparty secure function evaluation , under supervision of Prof. Koushanfar *January-February 2015*
- **BIG Data Processing** Making a fast and efficient way for NNS (Nearest Neighbor Search), under supervision of Prof. Koushanfar *September-January 2014*
- **BCI (Brain Computer Interface)** Designing BCI Using SSVEP (Steady State Visual Evoked Potentials) Method for intelligent phone dialing by looking at the dialing pad, under supervision of Prof. Shamsollahi *Summer 2013-Summer 2014*
  1st Prize among all B.Sc projects of EE Department in SUT, *July 2014*

PROJECTS

- **Analyzing and simulating the perforemance of "SCORE"**
  A Score-Based Memory Cache Replacement Policy *Spring 2014*
- **Area-Efficient FFT** Implementing an area-efficient 16 point FFT on Xilinx Spartan 3AN by using less than 25% total area usage *Fall 2014*
- **Software, Hardware Co-Design** Implementing an efficient system for solving N by N sudoku using Xilinx Spartan 3AN and MicroBlaze IP Processor *Spring 2014*
- **Implementation and Simulating** Solving percolation problem using Quick union and Quick find algorithms in Java *Fall 2014*
- **Implementing OFDM** with both Altera FPGA and designing ASIC core (Verilog HDL)
  Complete implementation to find the start bit of frame of input stream of data *Spring 2013*
- **Analyzing Data Link Layer protocols** (Sliding window, etc.) with NS2 *Fall 2013*
- **Analyzing and simulating** Ethernet, CSMA-CD, Wireless LAN with OP-NET *Fall 2013*
- **Design and Implementation** of DC Regulator with output error less than 0.1% *Spring 2013*
- **Designing PCB of USB ASP** (Microcontroller programmer) for ATMEGA microcontroller families with very efficient size (Personal interest) *Summer 2012*
- **Designing and implementing** of a Cycle computer, using ATMEGA16 *Spring 2012*
- **Simulation of the Statistical random walk problem** for the propagation of photons inside the sun (using MATLAB) *Spring 2012*
- **Displaying animation** on the monitor using ALTERA DE2 Devel. and educ. board *Fall 2011*

- **Analyzing filters** (Butterworth, Lowpass, Bandpass, Highpass and different time-windows such as hamming, Hann, Blackman, Barlett) and simulating the output results in different situations of inputs using MATLAB *Spring 2013*

Selected Courses & Grades

- **Design and Analysis of Algorithms** Prof. Palem, A^+
- **Advanced Digital Hardware Design** Prof. Koushanfar, A^+
- **Computer Architecture** and microprocessors, Prof. Movahedian, 19/20
- **Logic Circuits and Digital Systems**, Dr. Shabany, 18.6/20
- **DSP** (Discrete Time Signal Processing), Prof. Shamsollahi, 19.2/20
- **Numerical Computing** Dr.Bagherpour 19.5/20

AWARDS & HONORS

- **Rice ECE Fellowship** *April 2014*
- **ACES Fellowship** *October 2014*
  (Adaptive Computing and Embedded Systems Lab)
- **1st Prize of B.Sc project competition** *July 2014*
  (Organized by EE department of Sharif University of Technology)
- **SILVER Medal,** *Beijing, China*
  International Olympiad on Astronomy and Astrophysics *September 2010*
- **GOLD Medal,** *Tehran, Iran*
  Iranian Olympiad on Astronomy and Astrophysics *September 2009*
- **Semifinalist,** National Mathematics Olympiad *2008, Iran*
- **Semifinalist,** National Physics Olympiad *2008, Iran*
- **First Rank Member** of National Elites Foundation of Iran and financially supported by this Foundation *2010-2014*
- **Exempted from M.Sc. Entrance Exam** in Iran as an exceptionally talented undergraduate student *2013*

TEACHING & WORKING EXPERIENCE

- **Teaching Assistant** of Prof. Johnson in Fundamentals of Electrical Engineering I *Fall 2015*
- **Teaching Assistant** of Prof. Shamsollahi in DSP (Discrete Time Signal Processing) *Fall 2013*
- **Teaching Assistant** of Prof. Movahedian in "Computer Architecture" course *Summer 2012*
- **Teaching Assistant** in Digital Sys. Lab SUT, under supv. of Dr. Movahedian *Summer 2012*
- **Teaching Assistant** Dr. M. R. Pakravan in Communication Systems *Fall 2013*
- **Trainee in Ertebat Sanat Pishro Co.** (tel: +98-21-82144760) *Summer 2013*
- **Teaching Astronomy and Physics Olympiad courses in NODET high schools** in the following cities of Iran: Tehran (Allameh Helli high school and three other high schools), Shiraz (Three different NODET high schools), Qom, Babol, Rasht, and Hamedan *2008-2014*

EXTRA-CURRICULAR ACTIVITIES

- **Membership of Sharif Cup (national competition on robotics and computer vision) 2012** Referee committee *Summer 2012*
- **First prize** Spaghetti bridge structure competition *Shiraz, Iran, 2007*
- **First prize** Iranian competition on unmanned balloon making *Tehran, Iran, 2005*

REFERENCES

- **Prof. Farinaz Koushanfar** Professor, Rice University
  farinaz@rice.edu, http://www.ece.rice.edu/koushanfar.aspx, Phone: 713 348 3906
- **Prof. Behanm Aazhang** Professor, Rice University
  aaz@rice.edu, http://aaz.blogs.rice.edu/, Phone: 713 348 4749
- **Prof. Mohammad Bagher Shamsollahi** Professor, Sharif University of Technology
  mbshams@sharif.edu, http://sharif.edu/ mbshams, Phone: +98-21-66164356