

## Ebrahim M. Songhori

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<b>Education</b>	<b>Ph.D. in Electrical and Computer Engineering</b> 2012–expected Spring 2016 Rice University, TX, GPA: 3.95/4 Supervisor: Dr. Farinaz Koushanfar Graduate Courses: High Performance Computer Architecture, Advance VLSI, Parallel Computing, Architecting Modern Learning Algorithms, Security Topics of Embedded Systems, Computer Architecture, Random Process, and Digital Signal Processing.
	<b>B.Sc. in Computer Engineering</b> 2007—2011 University of Tehran, Iran, GPA: 17.94/20 Ranked 1 <sup>st</sup> out of 150 computer engineering students. Relevant Courses: VHDL Design, Computer Architecture, VLSI, Micro-controllers, Compiler, Operating Systems, Computer Networks, Algorithm Design, Artificial Intelligence, Database, Theory of Computation and Automata.
<b>Technical Skills</b>	<b>HDL:</b> Verilog, VHDL <b>Programming</b> C, C++, C#, java, Python <b>Parallel programming</b> OpenMPI, OpenMP, Cilk, Cilk++, CUDA, Pthread <b>Other</b> Amazon EC2, Xilinx ISE, ModelSim, Xilinx AutoESL, Quartes II, MATLAB, GraphLab, Apache Hadoop
<b>Employment Experiences</b>	<b>Software Engineer Intern</b> , Nadco., Tehran, Iran 2009—2010 Designed and implemented of an application and compiler for educational robots in Windows platform using C# in an robotic startup ( <a href="http://www.nad-co.com">www.nad-co.com</a> ). <b>Research Assistant</b> , Rice University, TX 2012—Present Accelerating Big Data Learning Problem on Distributed Computing Platforms. Enabling Ultra-low Power ASIC Devices to Run High Energy Consuming Application (e.g., Cryptographic Algorithms) by adding Checkpoints at HLS Level. <b>Teaching Assistant</b> , Rice University, TX 2012—Present TA of Digital Logic Design, Implementation of Digital Systems. <b>Teaching Assistant</b> , University of Tehran, Iran 2009—2011 TA of Computer Architecture Lab, Computer Architecture, Advance Programming, . <b>Course Instructor</b> , Tehran, Iran 2007-2010 Instructor of high school Physics II and III.
<b>Technical Projects</b>	<b>B.Sc. Honor Thesis</b> , Prof. Z. Navabi 2011 Communication Synthesis and Mapping to Standard on-chip Communications. <b>Parallel Computing Project</b> 2012 Implemented of Gaussian Elimination using OpenMP, OpenMPI, and Pthread and Bitonic Sort using CUDA <b>Computer Architecture Lab TA</b> 2011 Designed and implemented of a dynamic Huffman decoder in Verilog on FPGA. <b>Computer Architecture Lab</b> 2010 Designed and implemented of a pipelined MIPS processor in Verilog on FPGA.

	<b>Computer Aided Design</b> 2009 Implemented of a domain transform module of H264/AVC using VHDL on FPGA and test it with NOIS II.
<b>Awards and Honors</b>	<b>Fellowship</b> , Houston, TX 2012 Rice University ECE Graduate Fellowship. <b>Olympiad</b> , Tehran, Iran 2006—2010 Silver Medal in the National Scientific Olympiads for Students in Physics. Ranked 5 <sup>th</sup> among students of computer engineering of Iran Universities National Scientific Olympiads for University Students in Computer Engineering. <b>National Entrance Exam</b> , Tehran, Iran 2010-2011 Ranked 16 <sup>th</sup> in Computer Architecture in 2011, 20 <sup>th</sup> in Computer Architecture, and 15 <sup>th</sup> in Artificial Intelligence in 2010 among 18000 students on National Entrance Exam for Master of Science.
<b>Extracurricular Activities</b>	President, The Duncan Hall Fridge Room Club, Rice University, Houston, TX 2013–Present. Secretary, ACM Student Chapter, ECE, University of Tehran, Iran 2009–2010. Editor, 88, The Reformist Students of University of Tehran, the socio-political student publication, University of Tehran, Iran 2008–2009. Member of the general council of Student Association of University of Tehran and Tehran University of Medical Science (the main opposition and reformists political group among student associations in Iran), University of Tehran, Iran 2008–2011. Secretary of Public Relations, The Central Council of Student Association of Collage of Engineering, University of Tehran, Iran 2009–2010. Members of the central council of Student Association of ECE, University of Tehran, Iran 2008–2009.
<b>Publications</b>	<b>Ebrahim M. Songhori</b> , Siam U. Hussain, Ahmad-Reza Sadeghi, Thomas Schneider and Farinaz Koushanfar, TinyGarble: Highly Compressed and Scalable Sequential Garbled Circuits. Security and Privacy, 2015 IEEE Symposium on May, 2015.  <b>Ebrahim M. Songhori</b> , Siam U. Hussain, Ahmad-Reza Sadeghi and Farinaz Koushanfar, Compacting Privacy-Preserving k-Nearest Neighbor Search using Logic Synthesis. Proceedings of the 52nd Design Automation Conference (DAC) May, 2015.  <b>Ebrahim M. Songhori</b> ShuFFLE: Automated Framework for Hardware Accelerated Iterative Big Data Analysis. Master Thesis, Rice University April, 2014.  <b>Ebrahim M. Songhori</b> , Azalia Mirhoseini, Xuyang Lu and Farinaz Koushanfar Ahead: Automated Framework For Hardware Accelerated Iterative Data Analysis. Design, Automation and Test in Europe Conference (DATE) March 2015.  A. Mirhoseini, <b>E. M. Songhori</b> , F. Koushanfar. Idetic: A High-level Synthesis Approach for Enabling Long Computations on Transiently-powered ASICs.” IEEE Pervasive Computing and Communication (PerCom) March 2013.  A. Mirhoseini, <b>E. M. Songhori</b> , F. Koushanfar. Automated Checkpointing for Enabling Intensive Application on Energy Harvesting Devices.” IEEE Low Power Electronics and Design (ISLPED) April 2013.