Mohammad Reza Ali Madadi

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Education

University of Tehran — Tehran, Iran
M.Sc. of Computer Engineering, Computer Architecture; — *2014 – 2017*

- GPA (up to now): 17.01/20 (3.67/4.0)
- Thesis: High Level Synthesis of Approximate Computing Circuits
- Graduate Courses: Advanced Computer Architecture - VHDL - Chip Multiprocessors - Network on a Chip - Parallel Computing - Embedded Systems
- Online Courses: Neural Networks and Deep Learning

Iran University of Science and Technology — Tehran, Iran
B.Sc. of Electrical Engineering, Electronics; — *2009 – 2014*

- GPA: 16.07/20 (3.29/4.0)
- Thesis: Image Encryption using Wavelet Transform

Salam High School — Tehran, Iran
Diploma of Mathematics and Physics Discipline; — *2005 – 2009*

- GPA: 17.28/20

Research Interests

Computer Architecture
Cache, Emerging Memory Technologies, Multi and Many Cores, Big Data Architectures

Field Programmable Logic Arrays
Hardware Software Co-design, Neural Networks Acceleration, Core Design

Electronic System Level Design
High-level Synthesis, Compiler-based Performance and Power Optimization

Publications

M.R. Alimadadi, S. Safari, B. Bahrak *"Propagation of Uncertainty in Approximate Computing"*. Submitted to DATE 2018 Conference.

Research Experiences

Research Assistant at *High Performance Embedded Architecture Lab* — 2014 – Present
University of Tehran, Iran

Undergraduate Research Assistant at *Dependable Systems Lab* — 2012 – 2014
Iran University of Science and Technology, Iran

Teaching Experiences

Head Teacher Assistant of Computer Aided Design — 2015 – 2017
University of Tehran

Head Teacher Assistant of Computer Aided Design Lab — 2015 – 2017
University of Tehran

Teacher Assistant Computer of Architecture Lab — 2015 – 2017
University of Tehran

Head Teacher Assistant of Parallel Computing 2016
University of Tehran

Teaching Digital Electronics 2012
Tehran Non-Profit Institute of Higher Education

Work Experiences

Researcher & ***Designer***, **HooshRavan** 2016 – 2017
Embedded System Developer & PCB Designer

Researcher & ***Designer***, **Hamayeh Corporation** 2012 – 2015
Embedded System Developer & PCB Designer

Chairman, **Robotic Scientific Association** 2011 – 2012
Iran University of Science and Technology

Selected Projects

Chaos-based Image Encryption Accelerator Embedded Systems
Implement with Nios II embedded processor and an accelerator on Altera FPGA *2015*

Workload Characterization
Profile MiBench and PARSEC benchmarks On GEM5 and study the effect of acceleration *2017*

Multiple Issue MIPS
Implement 3-issue MIPS with Verilog *2017*

Custom Instruction Extraction Embedded Systems
Implement according to Exact algorithm with C++ *2015*

Correlated Probabilities for Stochastic Computing Architecture Computer Arithmetic
Implement with C++ *2015*

Tag-less Cache for First-Level Cache Power Reduction Advanced Computer Architecture
Implement with VHDL *2014*

New Low-Power Testability Method
Propose and implement a new testability method based on DFT *2013*

Wireless Digital Hanger Hamayeh Corporation
Implement using IEEE 802.11 as wireless medium with UDP protocol *2013*

Ongoing Projects

Study on Power Efficiency of Batch and Stream Processing Workloads

Honors & Awards

Ranked 63th in **National University Entrance in Computer Engineering among 30,000** Iran
2014

Nominated for Straight Master Program Tehran, Iran
Iran University of Science and Technology *2012*

Ranked 814th in **National University Entrance among 300,000** Iran
2009

Technical Skills

Programming: Expert in C/C++

	Expert in Verilog & VHDL
	Good at Python
	Good at SystemC
Tools & CAD:	Expert in Xilinx ISE & Quartus II
	Expert in Altium Designer
	Good at Design Compiler & Power Compiler
	Worked with Intel VTune & Valgrind
	Good at GEM5 & MARSS
	Worked with Cadence Virtuoso & L-edit

Language Skills

Persian: **Native**

English: **Fluent**

TOEFL: 96

GRE: To be taken on 2, Nov. 2017

References

Saeed Safari
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modarressi@ut.ac.ir

Behnam Bahrak
bahrak@ut.ac.ir