Saba Jamilan

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Education

2018 - present	**University of California, Santa Cruz**, CA, USA Ph.D. in Computer Engineering Research: Improving Microprocessor IPC for Data Center Workloads Advisor: Prof. Heiner Litz
2014-2017	**University of Tehran**, Tehran, Iran M.Sc. in Computer Architecture Engineering Thesis: "The Effect of Memory Hierarchy Efficiency in Opto-Electrical Networks on Chip" Advisor: Prof. Siamak Mohammadi
2009-2013	**Khajeh Nassir-Al-Deen Toosi (K. N. Toosi) University of Technology**, Tehran, Iran B.Sc. in Computer Hardware Engineering Thesis: "Investigating A Pattern for Data Processing on Many-core Systems and Designing a software process based on This Pattern" Advisor: Prof. Saeed Sedighian Kashi

Research Interests

Computer Architecture
Storage Systems and Data Centers
Memory Management Techniques
Machine Learning
High-performance and
Low Power Computing Systems

Publications

S. Jamilan, M. Abdollahi, S. Mohammadi, *"***Cache Energy Management through Dynamic Reconfiguration Approach in Opto-Electrical NoC***"*, Euromicro International Conference on Parallel, Distributed, and Network-Based Processing **(PDP), 2017**

Research Experiences

2018 - present	**Research Assistant at University of California, Santa Cruz** Working with Prof. Heiner Litz
2014-2017	**Research Assistant at University of Tehran, School of ECE** Dependable System Design Lab, Working with Prof. Siamak Mohammadi

Honors

2014	Top 0.4% of 30,000+ participants in Iranian National Graduate Exam.
2009	Top 0.5% of 400,000+ participants in Iranian National University Exam.
2005-2009	Membership of The National Organization for Development of Exceptional Talents (NODET) for 4 Academic years.

Teaching Experiences

Spring 2019 Winter 2019	**Teaching Assistant for Computer Architecture Course (CSE 120)** University of California, Santa Cruz. By: Prof. Heiner Litz
Spring 2016 Spring 2017	**Teaching Assistant for Multi-core Embedded Systems Course**, School of ECE, University of Tehran. By: Prof. M. Ersali Salehi Nasab

Computer Skills

Programming Languages	C, C#, C++, Java, Python, MATLAB, SQL
ML Frameworks	TensorFlow, Keras
Hardware	Verilog, VHDL, SystemVerilog, HSPICE, Assembly Language for RISC-V
Tools and Simulators	zsim, Graphite, Sniper, MARSSX86, gem5, Booksim, ModelSim, Xilinx ISE, SimpleScalar, Petrify, Balsa
Miscellaneous	Linux, Mac osx, Windows, Microsoft Office, LaTeX, Visual Studio

Selected Courses and academic projects

Advanced Parallel Processing (CSE 226 at UCSC)
Machine Learning (CSE 242 at UCSC)
Advanced Topics in Computer Engineering (CSE 293 at UCSC)
Advanced Computer Architecture
Project: Implementing a Low Power Branch Predictor for MIPS Processor
Interconnection Networks
Project: Investigating the Possibility of Free-Contention Routing in an Electrical Network-on-Chip by BookSim Simulator
Functional Verification of HDL Models
Project: Fully Functional Verification of a MIPS Processor, writing Stimuli Generator and Checker with System Verilog Verification Language
Fault Tolerant System Design
Project: RTL Fault Simulation and Injection on Sayeh Processor
On-Chip Multi-Processors
Project: Analysis of Traces Corresponding to Different Cache Memory Hierarchies During Running Multiple Workloads on a Multicore Processor
Parallel Processing
Project:Using OpenMP and Pthreads Libraries for Improving Speedup at Several Image Processing Algorithms
Asynchronous Circuit Design
Project:Investigating Performance and Power Consumption of Different Kinds of Asynchronous Pipelines (HSPICE, balsa)
Very-Large-Scale Integration Design (VLSI)
Project: Synthesis and Time/Area Optimization of a Simplified MIPS Processor using Synopsys Design Compiler Tool

Languages

Fluent in	English	Native in	Persian and Turkish