

Javad Bahrami

ELECTRONICS ENGINEER · PH.D. STUDENT

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Research interests

- Image Processing
- Deep Learning
- Computer Architecture
- High Performance Computing
- Digital Circuit Design
- Low Power Circuit Design
- Design of FPGA-based Digital Circuit
- ASIC Design

Education

George Mason University

Washington DC, USA

PH.D. STUDENT, RESEARCH ASSISTANT

September. 2019 - August, 2024

- Working on implementation of PQC algorithms on the hardware platforms such as FPGAs and ASICs
- Advisor: Dr. Kris Gaj

Technical University of Berlin

Berlin, Germany

RESEARCHER

April. 2019 - August, 2019

- Research Topic: Efficient implementation of Neural Networks on the FPGAs

University of Tehran

Tehran, Iran

M.Sc. IN ELECTRONICS ENGINEERING

Sept. 2013 - 2016

- Ranked 105th among approximately 4203 participants in the nationwide university entrance exam for M.Sc. studies in Electronics Engineering Program
- Master Thesis with the Title: "Design of pipeline architecture for real-time image processing and implementation of sobel edge detection algorithm with image noise reduction on FPGA using VHDL code"
- Hardware/software implementation using VHDL code and FPGA IP CORE, respectively
- Advisor: Prof. Samad Sheikhaei
- Overall GPA: 4/4

PROJECTS

- Integrated circuit design of a differential and telescopic OTA in 0.18u Technology
- Integrated circuit design and simulation of a Sample and Hold (S/H) circuit in 0.13u Technology
- Radio frequency integrated circuit design and simulation of 1.5V low noise figure mixer for 3.5GHz WiMAX systems with Advanced System Design (ADS) Software
- Design and implementation of integer divider on FPGA DE2-115 Lab board using Synthesizable VHDL code
- Implementation of Wavelet algorithm on GPU with CUDA C
- Implementation of Stereo Vision algorithm using intel SIMD instructions and OpenMP directives
- Design and implementation of Parallel BCD adder with synthesizable Verilog code on FPGA DE2-115 Lab board using time multiplexing technique for frequency reduction of circuit
- implementation of CORDIC algorithm using synthesizable VHDL code on FPGA DE2-115 Lab board for Sin and Cos calculation

Iran University of Science and Technology (IUST)

Tehran, Iran

B.Sc. IN ELECTRICAL (ELECTRONICS) ENGINEERING

Sept. 2006 - Mar. 2012

- Ranked 598th among approximately 400.000 participants in the nationwide university entrance exam in mathematics and physics for B.Sc. studies
- Thesis Title: Implementation and design of wireless keyboard using AVR ATmega16 micro controller and HM-TR transceiver module using C Programming
- Thesis Grade: 19/20
- Advisor: Prof. Mojtaba Ayatollahi

PROJECTS

- Design, simulation, and implementation of a variable speed smart fan based on smoke density
- Design, simulation, and implementation of a comparator, counter circuit using Proteous
- C++ coding to create an academic search engine for a sample university library

Salam Private High School

Tehran, Iran

DIPLOMA IN MATHEMATICS AND PHYSICS

Sept. 2002 - June. 2006

- Overall GPA: 19.67/20
- Succeeded in participating in one step of Iran's computer and mathematics olympia team selection

Teaching Experiences

Advanced Computer architecture (ACA)

Technical University of Berlin, Berlin,

Germany

STUDENT TEACHER ASSISTANT

April. 2019

- Help in providing supplementary material
- Grading students exams and homeworks

Advanced Embedded Project (AEP)

Technical University of Berlin, Berlin,

Germany

STUDENT TEACHER ASSISTANT

April. 2019

- Assigning projects to graduate students and helping them in their problems
- Grading students projects

High Performance Computing Course

University of Tehran, Tehran, Iran

STUDENT TEACHER ASSISTANT

Spring. 2017

- Prof. Saeid Safari
- Help in providing supplementary material (lecture notes as well as simulation demos)
- Holding weekly sessions with students to solve their computer assignments with CUDA, SIMD and OpenMP

Logical Circuit Design Lab

IUST, Tehran, Iran

STUDENT TEACHER ASSISTANT

Nov. 2008

- Prof. Karim Mohammadi
- Design, Simulation and Modeling of Digital Circuit
- Help in providing supplementary material (lecture notes as well as simulation demos) and Helping Studnet with their Design Problems

Official Certificates

Printed Circuit Board (PCB) Design	Certificate of Excellence, Tehran Institute of Technology	Oct. 2014
AVR Tutorial Course	Certificate of Excellence, Tehran Institute of Technology	Aug. 2014
Introduction to Matlab	Certificate of Excellence, Tehran Institute of Technology	Oct. 2013

Language Skills and Qualifications

English	Full professional proficiency (Total Score: 98, Reading: 25, Listening: 26, Speaking: 23, Writing: 24)
Persian	Native speaker
Arabic	Basic knowledge
GRE	Verbal Reasoning: 151, Quantitative Reasoning: 161, Analytical Writing: 3

Computer skills

Software tools	Xilinx Vivado, Xilinx ISE, MATLAB, Microsoft Visual Studio, Quartus Synthesis Tool, ModelSim Altera, Hspice, Pspice, Advanced Design System (ADS), Linux
Documentation Tools	MS Office, LaTeX
Programming	C, C++, CUDA C, OpenMP, SIMD, VHDL, Verilog, Python

Publication

4th Iranian Conference on Signal Processing and Intelligent Systems

F. AHMADINEJAD AND J. BAHRAMI, "ALTITUDE CONTROL OF QUADCOPTERS IN THE PRESENCE OF GROUND EFFECT"

References

- Dr. Samad Sheikhaei, Assistant Professor, ECE Department, University of Tehran, Email: sheikhaei@ut.ac.ir
- Dr. Saeid Safari, Associate Professor, ECE Department, University of Tehran, Email: saeed@ut.ac.ir
- Dr. Behjat Forouzandeh, Associate Professor, ECE Department, University of Tehran, Email: bforooz@ut.ac.ir

Extracurricular Activities

- Organization skills** Voluntarily formed team-work as an active member of students' scientific committee of EE Dept. @ IUST
- Sports** Volleyball, soccer, basketball, ping-pong, cycling, running
- Hobbies** Playing Electric Guitar (expert), Socializing, traveling