SINA OJAGHI

Sabbatical PhD Students

- DoB: 19/9/1995
- Marital Status: Single
- Military Service: Educational Exemption

As a Ph.D. student in Computer Architecture at the University of Tehran, my academic journey has been deeply committed to research and education. Having served as an instructor at both Hamedan University of Technology and the University of Tehran, I've contributed significantly to my students' academic growth while honing my teaching and research skills. Currently, I balance my roles as IT Manager at HamVta Arya Co. and a hardware programmer at Afra Turbine Energy Co., applying my technical expertise to tackle real-world challenges. At my core, a passion for discovery and innovation propels me forward. My extensive involvement in research and development projects underscores my dedication to advancing computer architecture. I'm now seeking a study opportunity to enhance my research capabilities further, aiming to offer groundbreaking insights into hardware security and the applications of spiking neural networks in sustainable technologies.

Contact

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📍 P23, marvi , W kamali , Pounak, Tehran, Iran

Education

PhD in Computer Engineering

Branch: Computer Architecture
Institute/University: Tehran University
Tehran, Iran
Proposal Title: Design and Implementation of Remote Side-Channel Attacks and Countermeasures on Spiking Neural Networks
Supervisor: Dr. Siamak Mohammadi and Dr. Ahmad Khonsari
GPA: 18.05
2020 - Present

Master of Computer Engineering

Branch: Computer Architecture
Institute/University: Islamic Azad University
Science and Research Branch
Tehran, Iran
Thesis Title: Design and manufacture of audio processor for smartening domestically produced vehicles
Supervisor: Dr. Somaye Jafar Ali jassbi and Dr. Media Reshadi
GPA: 18.45
2017 - 2019

Bachelor of Computer Engineering

Branch: Computer Architecture
Institute/University: Hamadan University of Technology
Hamadan, Iran
Thesis Title: Transfer voice data under secure protocol and use it in smart homes
Supervisor: Dr. Mehdi Seyfipour
GPA: 16.34
2013 - 2017

Publications

Maleki, Pouria, Abbas Ramazani, Hassan Khotanlou, Sina Ojaghi, Milad Mousavi, Alexey Kalinin, and Amir Mosavi. "Object Detection for Vehicles with Yolo". 2024 IEEE 22nd World Symposium on Applied Machine Intelligence and Informatics (SAMI): IEEE, 2024.
Link : https://ieeexplore.ieee.org/document/10432884

Maleki, Pouria, Abbas Ramazani, Hassan Khotanlou, and Sina Ojaghi. "Iranian Vehicle Images Dataset for Object Detection Algorithm." Journal of AI and Data Mining 12, no. 1 (2024): 127-36.
Link : https://jad.shahroodut.ac.ir/article_3164.html

Ojaghi, Sina, Farzan Barati, and Somaye Jafari jassbi. "Stress-Strain Modeling of an Al-Mg Using an Artificial Neural Network." Paper presented at the 3rd International Conference on Electrical, Computer and Mechanical Engineering papers, 2020.
Link : https://civilica.com/doc/1128854/

Ojaghi, Sina, Farzan Barati, and Somaye Jafari jassbi. "Modeling of Az52 Flow Curve at High Temperature by Implicating the Genetic Algorithm Method." Paper presented at the 3rd International Conference on Electrical, Computer and Mechanical Engineering papers, 2020 .
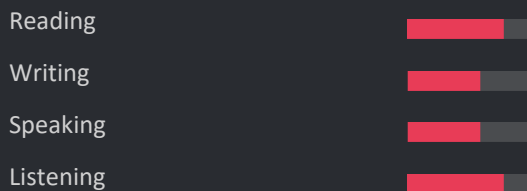Link : https://civilica.com/doc/1128855/

Honors

- **13th place among the candidates in the 2020 PhD entrance exam for Computer Architecture.**
- **1st place in the M.S. class of 2017, Computer Architecture, Islamic Azad University, Science and Research Branch.**
- **2nd place in the B.S. class of 2013, Computer Architecture, Hamedan University of Technology.**
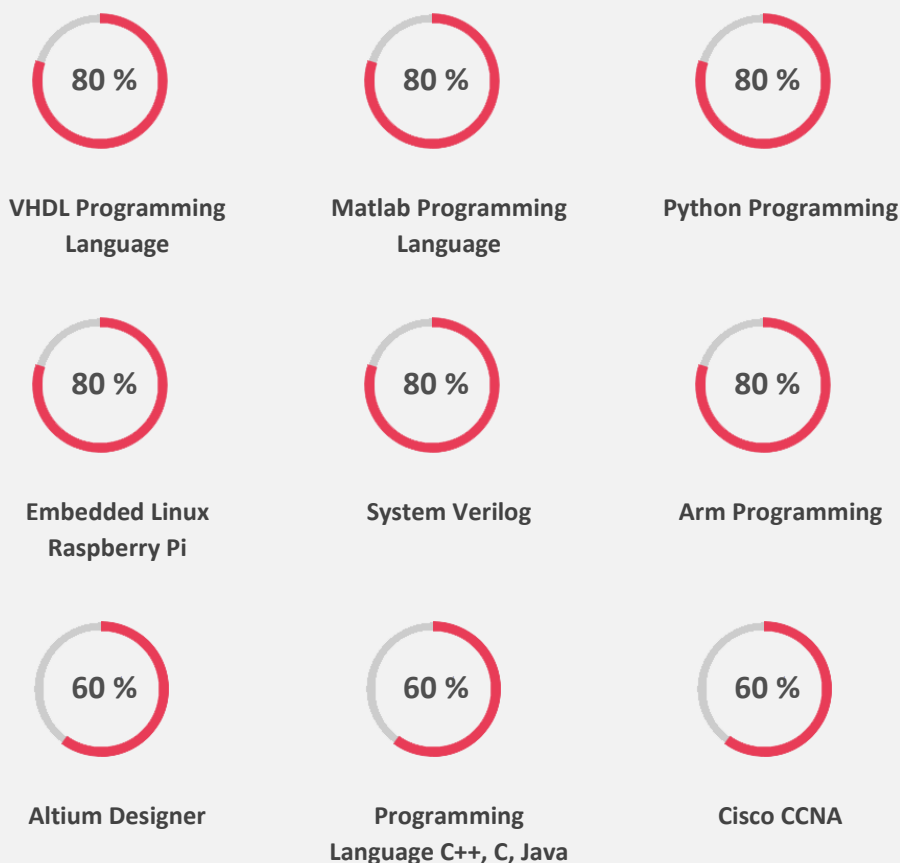- **1st place in the ACM Competitions, Hamedan province**

Skills

80 %
VHDL Programming Language

80 %
Matlab Programming Language

80 %
Python Programming

80 %
Embedded Linux Raspberry Pi

80 %
System Verilog

80 %
Arm Programming

60 %
Altium Designer

60 %
Programming Language C++, C, Java

60 %
Cisco CCNA

Certificates

The Top project of the computer department of Hamadan University of Technology to enter the Elcamp exhibition in Hamadan province (2016)
Certifying Institution: Hamadan University of Technology

The Top project of the computer department of Hamadan University of Technology to enter the exhibition of research, technology and market technology of Hamadan province (2016)
Certifying Institution: Hamadan University of Technology

The Top project of the Computer Department of Hamadan University of Technology Smartening of smart hospitals to lead to a conference on the role of economic prosperity in the prevention of social crimes (2017)
Certifying Institution: Hamadan University of Technology

Work Experience Academic

Instructor Artificial Intelligence (AI)
Hamedan University of Technology

Hamadan, Iran

September 2021 - October 2023

Tasks and Achievements :

▪ Department of Computer and IT Engineering and Department of Electrical Control and Electronics Engineering

Secretary and speaker of Cyber-Physical Systems society if Iran
CPSSI

Instructor Research Methods (RM)
Hamedan University of Technology

Hamadan, Iran

September 2021 - October 2023

Tasks and Achievements :

▪ Department of Electrical Control and Electronics Engineering and Department of Computer and IT Engineering

Idea Developer and Senior Consultant of Targeted Internship Site
Hamedan University of Technology

Tehran, Iran

March 2022 - Present

Tasks and Achievements :

I am the session moderator and the introducer of the professors for the conference presentation.

■ link: https://cpssi.ir/

Hamadan, Iran

September 2016 - January 2019

Tasks and Achievements :

The site we designed worked for about 3 years at the university and then became inaccessible due to the more comprehensive Golestan system.

■ link: http://intern.hut.ac.ir/

Projects

Verification Calculator II & III & RISC-V

Under Supervision : Dr. Siamak Mohammadi (University of Tehran)
January 2021
This verification includes: circuit performance simulation, design of a Stimuli production platform, Golden Model design, Checker design, Scoreboard design and implementation of Coverage techniques

Training and replacing the heavy part of the circuit with a neural network and accelerating the circuit

Under Supervision : Dr. Mehdi Modaresi (University of Tehran)
June 2021
Chip multiprocessor (CMP) Advanced lesson project

Investigation and detection of hardware malware in AES-T300 RS232-T400

Under Supervision : Dr. Siamak Mohammadi (University of Tehran)
June 2021
Hardware Security and Trust Advanced lesson project

Automatic annotation of photos with genetic algorithm in MATLAB environment

Under Supervision : Dr. Mohsen Fathiyan (Hamadan University of Technology)
2017
computer vision Advanced lesson project and this project was used to identify the status of the signature and the owner of the signature in banking operations.

Data transfer in FPGAs (UART) in VHDL language in ISE environment

Under Supervision : Dr. Mohsen Ahmad Vand (Hamadan University of Technology)
2015
Data transfer Advanced lesson project

MIPS processor design with some commands in VHDL language in ISE environment

Under Supervision : Dr. Ehsan Aerabi (Hamadan University of Technology)
2009
Computer architecture Advanced lesson project

Work Experience az T.A. and ACS and School

Teaching Assistant for Master's and PhD Programs

University of Tehran

Courses :

■ Hardware Security and Trust
January 2023 - Present
■ Functional Verification of HDL Models
September 2021 - Present
■ Performance Evaluation
December 2021 - Present
■ Computer Network (B.S)
September 2021 – Present

Teaching for Association of Computer Science at Hamedan University of Technology

Hamedan University of Technology

Courses :

■ Data Transfer and Telecommunications
December 2016 - June 2017
■ Microprocessor and Assembly Language
September 2016 - June 2017
■ Computer Architecture
February 2015 - January 2017
■ Digital Electronics
December 2016 - June 2017
■ Logic Circuits
September 2014 - December 2015

Teaching Assistant for Bachelor Programs

Hamedan University of Technology

Courses :

■ Microprocessor and Assembly Language
September 2015 - June 2016
■ Computer Architecture
December 2015 - December 2016
■ Logic Circuits
December 2015 - June 2016
■ Discrete Mathematics
December 2015 - June 2016

Teaching at School

Courses :

■ IOT
School Khadije Kobra Tehran
Tehran, Iran
September 2017 - May 2019

■ Computer
School Dar ol Fonoon Hamedan
Hamedan, Iran
September 2014 - May 2016

■ Algorithm Design
December 2015 - June 2016
■ C Programming Language
September 2014 - December 2015

Work Experience Industry

Idea Developer and Senior Consultant of Targeted Internship Site
Hamedan University of Technology
Hamedan, Iran September 2016 - January 2019
Tasks and Achievements :
■ link: http://intern.hut.ac.ir/

Hardware Programmer
Afra Turbine Energy Co.
Hamedan, Iran September 2022 - Present
Tasks and Achievements:
■ Designed and implemented embedded software for microcontroller-based hardware systems
■ Developed firmware updates to improve the functionality and performance of hardware devices

IT Manager
HamVeta Co.
Tehran, Iran September 2023 - June 2024
Tasks and Achievements :
■ Developing and implementing IT policies and procedures to streamline processes and enhance security

R & D
Nabz
Tehran, Iran November 2019 - April 2020
Tasks and Achievements :
■ link: https://nabzgroup.com/

Supporter, Group Manager
Qalam Chi Educational Foundation
Hamadan, Iran
September 2015 - May 2017

Laptop and Computer Software and Hardware Repairs
DPC
Hamadan, Iran
May 2013 - September 2014

References

Dr. Siamak Mohammadi
Computer department group manager Tehran University
smohammadi@ut.ac.ir

Dr. Ahmad khonsari
Member of the Scientific Council of the IPM Basic Knowledge Research Institute
ak@ipm.ir

Dr. Somaye Jafar Ali Jasbi
Computer department group manager islamic azad university science and research branch
s.jassbi@srbiau.ac.ir

Dr. Ahmad khademzade
Deputy of Iran Telecommunication Research Center and member of the Scientific Council of Islamic Azad University, Science and Research Branch
a_khademzadeh@azad.ac.ir

Dr. Ehsan Aerabi
PhD student of Gronoble University of Technology and former faculty of Hamadan University of Technology
e_aerabi@comp.iust.ac.ir

Dr. Mir Hossin Dezfoulial
Computer department group manager Bu ali sina university
dezfoulian@basu.ac.ir