

NEGAR NEDA

School of Electrical & Computer Engineering, University of Teharn, 16th Azar St, Enghelab Sq., Tehran, Iran
(+98)9155353543 ◊ negar.neda@ut.ac.ir ◊ ne.neda74@gmail.com ◊ negarneda.github.io

EDUCATION

| | |
|--|-----------------------|
| University of Tehran, Tehran, Iran, Master of Science, Computer Architecture Cumulative GPA: 17.3/20 (3.53/4) ¹ | Sep. 2018 - present |
| Amirkabir University of Technology, Tehran, Iran Bachelor of Science, Computer Engineering, Computer Architecture Systems Thesis: Implementation of a Tracking System Using LoRaWAN Protocol GPA (last 3 semesters): 17.81/20 (3.74/4) Total GPA: 17.2/20 (3.52/4) ² | Sep. 2014 - Sep. 2018 |
| National Organization for Development of Exceptional Talents (NODET), Birjand, Iran Diploma, Mathematics and Physics Cumulative GPA: 19.68/20 | Sep. 2010 - Jun 2014 |

RESEARCH INTERESTS

- Hardware Accelerators
- FPGA
- Reconfigurable Computing
- Deep Neural Networks
- Embedded Systems
- Approximate Computing

RESEARCH EXPERIENCES

| | |
|--|---------------------|
| Network on Chip Laboratory, University of Tehran , Research Assistant | Sep. 2018 - present |
| Supervised by Dr. Mehdi Modarressi | |

Network on Chip Laboratory research is focused primarily on the exploration of high-performance and low-power computer architectures with a current emphasis on highly parallel computer architectures, interconnection networks, and in-memory processing. In this Laboratory, I'm working on a FPGA based, multi-precision accelerator for deep neural networks using approximate multipliers based on FPGA LUTs.

| | |
|---|-------------|
| Digital System Design Lab, Amirkabir University of Technology , Researcher | 2017 - 2018 |
| Supervised by Dr.Mahmoud Momtazpour and Dr.Morteza Sahebzamani | |

Working on Amirkabir University of Technology IoT Gateway Project.

HONOR & AWARDS

Ranked Top 3 in term of GPA, among students in the field of Computer Architecture in Amirkabir University of Technology 2019

Eligible to study in two fields simultaneously because of top GPA 2015

Ranked top 0.6%, Nationwide University Entrance Exam, Among Approximately 222,500 Participants in Mathematics and Physics Field 2014

¹Selected Courses GPA: 18.23/20(4/4): Neural Networks 17.7, Computer Arithmetics 19.06, Chip Multiprocessor 19, Advanced Computer Architecture 17.17, Fault Tolerant Systems 18.7, Interconnection Networks 19.3

²Computer Architecture related courses' GPA: 18.61/20(4/4): Logic Circuits 18.4, Computer Architecture 17.54, Electronic Circuits 19.54, Computer Aided Digital System Design 18, Digital Electronics 17.2, Operating System Design 19.2, VLSI Systems Design 18.8, Engineering Mathematics 19.5, Embedded & Real-Time Systems 19, Data Communications 19

FURTHER QUALIFICATIONS

Programming: VHDL, Verilog, Co-Design, Python(Keras, Tensorflow, pyTorch), CUDA, OpenMP, C/C++, Java, Assembly

Frameworks & Scientific Tools: Visual Studio, Qt, MATLAB, Arduino IDE

Hardware CAD Tools: Vivado Design Suite, Xilinx ISE Design Suite, PSPICE, HSPICE, Modelsim, Proteus, Keil

Operating Systems: Microsoft Windows, Linux

Typesetting Tools: L^AT_EX, Microsoft office (Word, Powerpoint, Excel, Visio)

Languages: Persian: Native, English: Fluent

PRACTICAL EXPERIENCES

- "Convolutional Neural Networks" Certificate, Online Course by deeplearning.ai 2020
- "Neural Networks and Deep Learning" Certificate, Online Course by deeplearning.ai 2019
- "Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization" Certificate, Online Course by deeplearning.ai 2019
- Third IPM³ Advanced School on Computing, Computer Architecture 2019
- 8th IPM-HPC Workshop on Multi-core Systems and Parallel Platforms 2019
- Introduction to FPGA, Co-design and hardware implementation 2016
Amirkabir University of Technology
- Teaching Assistant, Computer Aided Digital, Under Supervision of Dr. Mehdi Modarressi 2019
- Lab Instructor, Logic Circuit Lab 2018
- Teaching Assistant, Computer Networks, Under Supervision of Dr. Siavash Khorsandi 2017
- Teaching Assistant, Digital Design Automation, Under Supervision of Dr. Morteza - Sahebzamani 2017
- Teaching Assistant, Electrical Circuit1, Under Supervision of Dr. Siavash Khorsandi 2016
- Teaching Assistant, Logic Circuits, Under Supervision of Dr. Mehdi Sedighi 2016

NOTABLE COURSE PROJECTS

- Utilize OpenMp & CUDA to speed up CNN inference, (MultiCore Embedded Systems) 2020
- Forecast the number of taxi requests by RNN, (Deep Neural Networks) 2019
- Template Matching using OpenMP & CUDA, (Multi-Core Programming) 2018
- Temperature controller, using Bluetooth module and Arduino (Computer Interface Design) 2018
- Implementation of various projects for FRDM-KL25Z board, (Embedded Systems) 2018
- Implementation of a home environment controller, using VHDL and Co-Design (Digital Design Automation) 2017
- Implementation of SRAM, using HSpice (Digital Electronics) 2016
- Implementation of an Engineering Calculator, using CORDIC IP Core 2016
- Implementation of a Basic Computer, Cache and RAM, using VHDL (Computer Architecture) 2016
- Implementation of Robo Kill game, using JAVA (Advanced Programming) 2015

³Institute for Research in Fundamental Sciences