

# 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 ◊ NegarNd.github.io

## EDUCATION

---

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

<sup>1</sup>Selected 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

<sup>2</sup>Computer 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<sup>A</sup>T<sub>E</sub>X, 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 IPM<sup>3</sup> 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

---

<sup>3</sup>Institute for Research in Fundamental Sciences