


# Nasrin Karimi

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## Education

- M.Sc. in Electrical Engineering** (Field and Waves Communications) Tehran, Iran  
Faculty of Electrical and Computer Engineering, Shahid Beheshti University Sep. 2022 - Present  
• **Cumulative GPA: 3.85/4 - Ranked 1<sup>st</sup> among graduate students**
- B.Sc. in Electrical Engineering** Tehran, Iran  
Faculty of Electrical and Computer Engineering, Shahid Beheshti University Sep. 2018 - March 2022  
• **Cumulative GPA: 3.34/4, Last two years: 3.6/4, Final year: 3.7/4**  
(Has Finished in 7 Semesters (rather than 8))
- Diploma in Mathematics & Physics** Tehran, Iran  
Shahed Muallem High school and Pre-University Sep. 2014 - Sep. 2018  
• **Cumulative GPA: 19.59/20**

## Research Interests

**Machine Learning**, in general and **Deep Learning and Neural Networks**, in particular with applications in **Field and Waves Communications**, and **Radar Systems**.

## Theses

- MIMO Imaging Radars and Resolution Enhancement Using Deep Learning Methods** Tehran, Iran  
Faculty of Electrical and Computer Engineering, Shahid Beheshti University Present  
• **Supervisor: Prof. Esfandiar Mehrshahi**
- Link Quality Estimation of Wireless Communications with ML Algorithms Using SVM** Tehran, Iran  
Faculty of Electrical and Computer Engineering, Shahid Beheshti University Feb. 2022  
• **Supervisor: Prof. Reza Asvadi** **Score: 19.25/20**

## Honors & Awards

- 2022** Offered **Straight Admission of M.Sc. (Telecommunication Systems) & M.Sc. (Field and Waves Communications)**,  
Faculty of Electrical and Computer Engineering, Shahid Beheshti University
- 2018** **Within 0.5% place among more than 156,000 participants**,  
Nationwide Universities Entrance Exam (B.Sc.)
- 2017** **Ranked 1<sup>st</sup>**, Chemistry Laboratory Competition & Electronic Content Competition, District 4, Tehran, Iran

## Experiences

### Research Experience

- Research Assistant** MCI & Shahid Beheshti University, Tehran, Iran  
MCI (Mobile Telecommunication Company of Iran) Oct. 2022 - Apr. 2023  
• Optical Transmission Networks, Dedicated Fiber, Passive Optical Network, CPRI over Ethernet, OFDM/FDM for 5G  
Under Supervision of [Prof. Esfandiar Mehrshahi](#) & [Prof. Alireza Gholipour](#)

### Work Experience

- Telecommunication Engineering Intern** MCI, Ardebil, Iran  
TCI (Telecommunication Company of Iran) Summer 2021  
• The Components of the Telecommunication Technical Center (Switching, Cable, Control, etc. Rooms), Registering Phone Failures, Concept of Traffic, Volume and its Measurement Methods, Type of Networking System (LAN, MAN, WAN,...), Optimization Software, Mechanism of Switching Networks, ...  
Under Supervision of [Prof. Reza Asvadi](#)

### Teaching Experience

- Teaching Assistant**
- Field and Waves & Linear Algebra** Semester Spring 2024  
• Under Supervision of [Prof. Esfandiar Mehrshahi](#)
- Linear Algebra, Engineering Mathematics, Electromagnetics, Technical Language** Semester Fall 2023  
• Under Supervision of [Prof. Esfandiar Mehrshahi](#), [Prof. Alireza Gholipour](#), [Prof. Abbas Pirhadi](#), [Prof. Shokrollah Karimian](#)
- Linear Algebra, Telecommunication Circuits, Technical Language** Semester Spring 2023  
• Under Supervision of [Prof. Esfandiar Mehrshahi](#), [Prof. Shokrollah Karimian](#)
- Telecommunication Circuits, Physics** Semester Fall 2021  
• Under Supervision of [Prof. Shahrooz Asadi](#), [Prof. Gholam-Mohammad Parsanasab](#)

## Skills

- Programming Languages** Python, MATLAB, C/C++  
**Software** Proteus - Arduino - Multisim - Code Vision - ADS - CST- Feko - HFSS - Visual Code - Studio-Xilinx - Office  
**Soft Skills** Teamwork - Time Management - Decision Making - Adaptable to Change - Problem Solving

## Notable Courses

Fundamentals of Radar Systems (19) - Seminar (20) - Principles of Communication Systems (19.25/20) - Telecommunication Circuits (19.5/20) Advanced Engineering Mathematics (18.5/20) - Convex Optimization (18/20) - Metamaterials (19/20) - Electromagnetic Compatibility (EMC) (19/20) - Active Microwave Circuits (18.5/20) - Filter and Circuit Synthesis (18/20) - Computer Programming (17/20) - Microprocessor and Computer Structure Lab. (18.8/20) - ASIC/FPGA Circuits (19.87/20) - Electronic Physics (20/20) - Electronics (III) Lab. (20/20).

## Workshops & Certificates

Deeplearning.ai, Stanford	<a href="#">Probability &amp; Statistics for Machine Learning &amp; Data Science</a> , <a href="#">Neural Networks and Deep Learning</a> , <a href="#">Linear Algebra for Machine Learning and Data Science</a> , <a href="#">Supervised Machine Learning: Regression and Classification</a>
IEEE	Introductory to advanced Python Course, Workshop on Machine Learning
Duke University	<a href="#">Introduction to Machine Learning</a>
University of Michigan	<a href="#">Python Data Structures</a> , <a href="#">Programming for Everybody (Getting Started with Python)</a>
Northwestern University	<a href="#">Fundamentals of Digital Image and Video Processing</a>
Yonsei University	<a href="#">Wireless Communications for Everybody</a>
Yale	<a href="#">Managing Emotions in Times of Uncertainty &amp; Stress</a>
Shahid Beheshti University	Verilog Programming Language

## Languages

Persian, Azerbaijani	Mother Language (Native)
Turkish, Korean	Beginner
English	IELTS (Oct. 20, 2022) <b>Overall 7 (Reading: 8.5, Listening: 7.5, Speaking: 6.5, Writing: 6)</b>

## Projects

Feko, CST	Design and Fabricate Multiple Antennas with Specific Characteristics: <b>Printed Dipole - Dipole - Conical Horn - Pyramidal Horn</b> , Study the Influence of Gap in Dipole Antennas
ADS, CST, Altium Designer	Design and Fabricate a <b>Metamaterial</b> Unit cell for <b>CRLH Bandpass Filter</b> with specific Characteristics, Design a <b>Coplanar Wave Guide</b> and <b>Microstrip Line</b> with the specific 77 ohms Characteristic Impedance
MATLAB	<a href="#">Analog Modulation (DSB, USSB, ... + Demodulation)</a> , <a href="#">Echo and Noise Removing</a>
Python	<a href="#">Yes/No Audio Verification</a> , <a href="#">Solving Sudoku Tables using Optimization</a>
Arduino, Proteus	<a href="#">4 Floor Elevator + Ground floor with Many Features</a> , <a href="#">Museum Protector</a> , Smart Dustbin, RGB Bedside Lamp, Smart Flower
Verilog, Xilinx	<a href="#">Detecting Edge of Pictures</a>
C++	<a href="#">Calculator (with many features)</a>

## Activities

NOA Entrepreneurship Event	Summer - Fall 2023
Science and Technology Park of Shahid Beheshti University (Accepted Team as First Stage)	Tehran, Iran
Tehran Investment Summit International Event	Summer 2022
(Accepted Team - Smart Dustbin)	Milad Tower, Iran, Tehran
NOA Entrepreneurship Event	Winter - Spring 2021
Science and Technology Park of Shahid Beheshti University (Accepted Team - Smart Audio Assistant)	Tehran, Iran
Spaghetti Bridge Competition	Winter 2019
Shahid Beheshti University	Tehran, Iran

IEEE	Summer 2020
IoT based Decentralized Architectures for Flexibility Service Provision Webinar, Frequency Control in Low-Inertia Power Systems Webinar, Vision, Roadmap and Strategy of Electricity Industry (Energy, Information Technology and Interdisciplinary Industries ) Webinar, Haptic Technology in Intra ocular Surgeries Webinar	

## Hobbies

Cars! - Work out - Reading - Painting - Games - Robotics - Watching Movie - Motor bicycles!

## References

Prof. Esfandiar Mehrshahi   Associate Professor	Email: <a href="mailto:mehr@sbu.ac.ir">mehr@sbu.ac.ir</a>
Faculty of Electrical and Computer Engineering, Shahid Beheshti University	
Prof. Shokrollah Karimian   Assistant Professor	Email: <a href="mailto:dr.s.karimian@gmail.com">dr.s.karimian@gmail.com</a>
Faculty of Electrical and Computer Engineering, Shahid Beheshti University	
Prof. Alireza Gholipour   Assistant Professor	Email: <a href="mailto:a_gholipour@sbu.ac.ir">a_gholipour@sbu.ac.ir</a>
Faculty of Electrical and Computer Engineering, Shahid Beheshti University	
Prof. Gholam-Mohammad Parsanasab   Assistant Professor	Email: <a href="mailto:gm_parsanasab@sbu.ac.ir">gm_parsanasab@sbu.ac.ir</a>
Faculty of Electrical and Computer Engineering, Shahid Beheshti University	