

Alireza Tavazo

 AlirezaTvz |  alireza.tavazo14@gmail.com |  (+98) 9330635754

EDUCATION

B.Sc. Electrical Engineering

2022 - Present

Department of ECE, University of Tehran, Tehran, Iran

Cumulative GPA: 18.41/20

High School Diploma

2019 - 2022

Andisheh High School, Shiraz, Iran

GPA: 18.99/20

RESEARCH INTERESTS

- Microwave and Antennas
- Microwave Test and Measurements
- Wireless Power Transfer
- Microwave Active Circuits
- RFIC and MMIC Design
- Photonics
- Photonic IC's(PIC's)
- Signal Processing
- Analog IC Design
- Computational Electromagnetics
- Communication Theory
- Wireless Communication

HONORS AND AWARDS

- **Bronze Medalist** of National Physics Olympiad.
- Awarded **4th place** in the National Student Olympiad in Electrical Engineering.
- **Member of** National Elites Foundation.
- **Ranked 5th** out of 128 B.Sc. Electrical Engineering students.
- **Ranked top 0.1%** among almost 133,000 participants in the Nationwide Iranian University Entrance Exam in Mathematics and Physics.

TEACHING ASSISTANT EXPERIENCE

Engineering Mathematics

Fall 2025

Prof. Mohammadpour Aghdam

Responsible for designing homework and project assignments and developing corresponding solutions.

Electronics 3

Spring 2025 and Fall 2025

Prof. Navid

Responsible for designing homework and project assignments and developing corresponding solutions.

Signals and Systems

Spring 2025

Prof. Rabiei

Responsible for designing homework and project assignments and developing corresponding solutions.

Engineering Probability and Statistics

Fall 2025

Prof. Rabiei

Responsible for designing homework and project assignments and developing corresponding solutions.

Linear Control Systems

Fall 2025

Prof. Yaghmaei

Responsible for designing homework and project assignments and developing corresponding solutions.

Electrical Circuits 1

Spring 2023

Prof. Nasiri

Responsible for designing homework and developing corresponding solutions.

Circuits and Measurement Laboratory

Spring 2023

Responsible for guiding and assisting students in performing laboratory experiments and grading lab reports.

Teaching in Top High Schools

2022 - present

Teaching Olympiad Applicants Advanced Physics and Mathematics.

RELEVANT COURSES

- | | | | |
|-------------------------------------|---------|--------------------------|----------|
| • Fundamentals of Photonics (M.Sc.) | 18.1/20 | • Antenna I | 19.75/20 |
| • MMIC (M.Sc.) | Ongoing | • Communication Circuits | 17.5/20 |

PROJECTS

- **Design, Fabrication, and Testing of an X-Band Microwave Detector (In Collaboration with [Armin Maddah](#))** Under supervision of [Prof. Mahmoud Shahabadi](#)
Developed an X-Band microwave detector to detect and measure microwave signals within the 8–12 GHz range for [Microwave Laboratory](#). The project involved circuit design, component selection, PCB fabrication, assembly, and experimental testing to evaluate sensitivity, linearity, and frequency response. The project is available on our GitHub through this [link](#).
- **Design, Fabrication and Testing of a 2.4 GHz PCB based wideband Quasi-Yagi Antenna (In Collaboration with [Armin Maddah](#))**
Designed and fabricated a PCB-based Quasi-Yagi antenna achieving 7 dBi gain and 700 MHz bandwidth at the center frequency of 2.4 GHz, validated through measurements at [Tehran University Antenna Approach Laboratory](#). Capable for wideband wireless communications. The project is available on our GitHub through this [link](#).
- **Voice Pitch Correction Using MATLAB (In Collaboration with [Armin Maddah](#) and [Amirreza Nadi Chaghadari](#))**
Designed and supervised a DSP project where students corrected $2\times$ pitch distortion in a voice signal using overlap-and-add and other fundamental digital signal processing methods. The project is available on my GitHub through this [link](#).
- **High-Gain Folded-Cascode Op-Amp with Two Types of Compensation Techniques (In Collaboration with [Armin Maddah](#))**
Designed and simulated a high-gain folded-cascode operational amplifier employing two compensation methods to optimize stability and bandwidth. As a Teaching Assistant, guided students in circuit-level analysis, biasing design, and performance evaluation using SPICE simulations.

SKILLS

- **Softwares:**
 - Expert at **Keysight ADS**, **Ansys HFSS**, **MATLAB/Simulink**, **Cadence Virtuoso**
 - Experienced in **COMSOL**, **CST**, **Ansys Lumerical**, **AWR**, **PSPICE**, **Altium Designer**
 - Familiar with **HSPICE**
- **Programming Languages:** Experienced in **C**, **C++**, **Python**, **Latex**, **MATLAB**.
- **Language: English:** Intermediate, **Persian:** Native