

Hesam Amiri

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PROFILE

I am a Telecommunication Engineering student with a strong academic foundation in wireless systems, electromagnetics, and RF design. My primary interests include 5G and next-generation communication networks, antenna and propagation engineering, high-frequency and microwave circuit design, and radar sensing technologies. I am particularly motivated by the integration of mm-wave, RAN, and satellite communication systems that shape the future of global connectivity. With a proactive and analytical approach, I aim to apply my technical knowledge to innovative research and development projects in advanced communication engineering.

EDUCATION

Master of Science in Telecommunication Engineering <i>University of Bologna</i>	2024 – Present Bologna, Italy
Bachelor of Science in Electrical Engineering <i>University of Birjand</i>	2019 – 2023 Birjand, Iran

INTERESTS

5G and Next-Generation Wireless Systems | Antenna and Propagation Engineering |
RF and Microwave Circuit Design | Millimeter-Wave and Radar Sensors |
Satellite and Space Communication Networks | Radio Access Networks (RAN)

PROJECTS

Design and Implementation of an IoT Network Using NRF Modules

Developed an energy-efficient IoT network based on NRF24Lo1 and NRF52 modules, focusing on low-power wireless communication and reliable data transmission. The system was designed to support real-time sensing, remote monitoring, and scalable connectivity for applications such as smart home automation and environmental monitoring.

Design and Simulation of a Dipole Antenna in CST Studio Suite

Designed and optimized a half-wave dipole antenna using CST Studio Suite, focusing on impedance matching, radiation pattern analysis, and return loss performance. Conducted frequency-domain simulations to evaluate antenna efficiency and gain, verifying results through parametric studies and tuning for desired bandwidth and operating frequency.

Design and Analysis of Digital Filters Using MATLAB

Developed and simulated FIR and IIR digital filters in MATLAB to analyze frequency response, phase characteristics, and filter stability. Applied signal processing concepts such as windowing, Butterworth, and Chebyshev design methods to achieve optimal noise suppression and signal quality improvement.

LANGUAGES

English	● ● ● ● ●	Persian	● ● ● ● ●
German	● ● ● ● ●	Italian	● ● ● ● ●

SKILLS

- Matlab
- Python
- Altium Designer
- Verilog
- CST
- C,C++
- LaTeX
- Linux