

Abhishek Choudhary

Assistant Professor, Department of Electronics & Communication Engineering
UIET, Kurukshetra University, Kurukshetra, Haryana, India

Professional Summary

Dedicated Assistant Professor in the Department of Electronics & Communication Engineering with strong academic and research experience in RFID systems, antenna design, RF energy harvesting (RF-to-DC), and microwave engineering. Demonstrated expertise in UHF RFID tag and reader antenna design, PCB antenna development, measurement techniques (VNA, S-parameters), Effective teacher, research supervisor, and project lead with experience preparing technical papers, supervising student projects, and delivering lectures and labs.

Key Skills

- Antenna design (UHF, HF, CP/RHCP/LHCP), HFSS simulation., ADS.
 - RF measurements: Vector Network Analyzer (VNA), S11/S21 measurements, near-field testing
 - RFID technologies: UHF RFID tags/readers antenna.
 - Embedded systems: Arduino UNO, MSP-32
 - Programming & tools: HFSS, ADS (workflow), Keil, Proteus Design Suite, Eagle, LaTeX, Python, Excel, MS Word
 - Experimental skills: PCB prototyping, antenna measurements, phased-array/array analysis
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Education

- **Ph.D. (Electronics & Communication Engineering)** — *Pursuing*, ECE Department, UIET KUK.
- **M.Tech in Electronics / Communication Engineering** — ECE Department, UIET KUK
- **B.Tech in Electronics / Communication Engineering** — ECE Department, UIET KUK.

Professional Experience

Assistant Professor, Department of ECE

UIET, Kurukshetra University, Kurukshetra, Haryana —

Teach undergraduate and postgraduate courses in RF & microwave engineering, antennas, communication systems, and digital electronics.

- Supervise student projects and laboratory sessions; guide M.Tech / B.Tech thesis work related to RFID and antenna design.
- Develop course material, lab manuals and assessment plans.

Researcher / Project Lead

- Design and prototyping of UHF near-field RFID tags and reader antennas with platform-insensitive performance.
- Design and testing of rigid and flexible UHF RFID **passive and active tags** for metal and non-metal surface operation, achieving extended read ranges (>10 m in specific designs). Developed **near-field UHF RFID tags** and optimized tag performance through advanced matching, antenna miniaturization, and platform-insensitive design techniques.
- Measurement campaigns using linearly polarized antennas and circularly polarized AUTs to extract RHCP and LHCP radiation patterns.

Publications & Conference Papers

Published 8 SCI-indexed research papers in reputed international journals, including:

- ***IEEE Antennas and Wireless Propagation Letters (AWPL)***
- ***IEEE Journal of Radio Frequency Identification (JRFID)***
- ***International Journal of Microwave and Wireless Technologies (IJMWT)***
- ***Indian Journal of Pure and Applied Physics (IJPAP)***
- ***Advanced Electromagnetics (AEM)***

Teaching & Academic Contributions

- Courses taught: Antenna and Wave Propagation, Digital Electronics, Digital Communication, Introduction to Python, Soft Computing, Basic Electronics Engineering

- Laboratory courses: Idea Workshop (PCB Designing and Fabrication), Idea Workshop (Python), RF & Microwave Lab, Antenna Lab, Embedded Systems Lab, Microprocessor Lab.
 - Student supervision: Guided B.Tech and M.Tech projects in RFID, Antenna Design, Dielectric Resonator Antenna (DRA) Design for W-band, and RF Energy Harvesting
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Professional Activities & Memberships

- Participated in a 40-hour Online FDP on “Emerging Innovations in Microwave Sensors and Antennas Design for Wireless Applications,” Sponsored by MeitY, Govt. of India, organized by NIT Warangal and IIIT Bhubaneswar, 14–24 July 2025.
 - Participated in a **2-day Hands-on Workshop on Robotics** organized by Nirman Labs at UIET, Kurukshetra University. of India. 06.5.2025, 8.5.2025
 - Reviewer for: **Sensing and Imaging, Scientific Reports, IEEE Journal of Radio Frequency Identification.**
 - Department roles: Deputy COE (ECE), Coordinator in Sessional Committee, AISHE Committee, Fine Arts Club, Sports Club.
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Awards & Honors

- Qualified **GATE** in Electronics & Communication Engineering.
 - Qualified **UGC-NET** in Electronics Science
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Personal Details

- **Date of Birth:** 16 February 1991
- **Place of Birth:** Karnal, Haryana, India
- **Current Address:** ECE Department, UIET, KUK
- **Languages:** English, Hindi