

Dear Sir,

My specialization is in the field of Microwave Engineering. I am quite familiar with most of EM – software. During my Ph.D., I have worked in the field of Antenna Design. It includes Design simulation, fabrication, and testing of different types of antennas.

Recently, I have completed my Ph.D. with a thesis entitled "***Design and Development of Reconfigurable Antennas with Single and Hybrid Reconfigurability Functions***" from the **Department of Electronics Engineering, IIT (BHU)** and presently working as an **Assistant Professor at NIET Greater Noida where I am working on criteria-4 of NBA accreditation apart from the teaching.** During my Ph.D., I have worked on different types of reconfigurable antennas with single and hybrid reconfigurability functions and published **four journals** and **five conference articles** and one article is under review. I have designed a beam steering array antenna that can switch its main beam from -36° to $+36^\circ$ in the H plane for WLAN applications and a circular polarization agile (LHCP and RHCP) beam switchable array antenna having $\pm 30^\circ$ beam switching for 5G-n78 and WLAN applications. Both of these works are published in the reputed journal "***AEU- International Journal of Electronics and Communication***". I have also worked on a quad polarization agile antenna having four different polarization states, including VLP, HLP, LHCP, and RHCP, with 2-D beam switching upto $\pm 28^\circ$ in both the E-plane and H-plane and having wide impedance and axial ratio bandwidth. This work is under review in "***IEEE Transactions in Circuit and Systems II***". During the ME dissertation, I explored different EM real-time software like IE3D and HFSS. I also have expertise in various EMI/EMC tools like LISN, the current probe, and the anechoic chamber used for electromagnetic compatibility and antenna testing. Kindly find my attached resume for your ready reference and kind perusal.

Thanking you

Sincerely Yours

Dr. AKANKSHA SINGH,

Assistant Professor, NIET Greater Noida

Orchid ID: <https://orcid.org/0009-0007-8585-5188>

Google Scholar ID: https://scholar.google.com/citations?user=hCZ_3PIAAAAJ&hl=en

CURRICULUM VITAE

Dr. AKANKSHA SINGH

E-mail: akankshasingh.rs.ece18@itbhu.ac.in

Mobile Number: +91-7355483368

WORKING EXPERIENCE

- **August 2024 to present:** Assistant Professor, NIET Greater Noida
- **August 2017 to December 2017:** Assistant Professor, BITS Ghaziabad

RESEARCH INTERESTS

- Design, analysis, and characterization of microstrip antennas.
- Design, analysis & characterization of reconfigurable antennas.
- Microstrip Application for High/Radiofrequency.

ACADEMIC QUALIFICATIONS

- **Ph.D. (Microwave Engineering)** **2018-2024**
IIT (BHU) **Awarded**
- **M. Tech (Microwave Engineering)** **2015-2017**
BIT MESRA Ranchi **Percentage: 85.0%**
- **B. Tech. (Electronics & Communication Engineering)** **2008-2012**
UIETCSJMU Kanpur, UP **Percentage: 70%**
- **Senior Secondary (XII Standard) from** Uttar Pradesh Board, Allahabad
- **Secondary (X Standard) from** Uttar Pradesh Board, Allahabad

PUBLICATIONS AND ACADEMIC ACHIEVEMENTS

Peer Review Journal papers

- [1].**A. Singh**, R. Dubey, R. Jatav and M. K. Meshram, “Electronically Reconfigurable Microstrip Antenna with Steerable Beams,” *AEU - International Journal of Electronics and Communications*, Vol. 149, pp. 154179, 2022, doi: 10.1016/j.aeue.2022.154179. (**IF = 3.2**)
- [2].**A. Singh**, R. Dubey, Ajitesh, S. K. Srivastava and M. K. Meshram, “Circular Polarization-Agile and Beam Switching Enabled Reconfigurable Cavity-Backed Antenna,” *AEU - International Journal of Electronics and Communications*. Vol. 165, pp. 154664, 2023, doi: 10.1016/j.aeue.2023.154664 (**IF = 3.2**).

- [3].R. Dubey, S. K. Srivastava, **A. Singh** and M. K. Meshram, "Compact and Efficient Dual-Band Rectifier Using Modified T-Section Matching Network," *IEEE Microwave and Wireless Technology Letters*, doi: 10.1109/LMWT.2023.3248786. (IF = 3.5)
- [4].R. Dubey, **A. Singh**, S. K. Srivastava, Ajitesh and M. K. Meshram, "A Dual Wide-Band Implantable Antenna Design for Wireless Capsule Endoscopy," *AEU - International Journal of Electronics and Communications*, pp. 154935, 2023, doi: 10.1016/j.aeue.2023.154935. (IF = 3.2).
- [5].S. Agarwal, **A. Singh**, and M. K. Meshram, "Frequency Reconfigurable Circular Monopole Antenna with Key Shaped Ground Stub," *Progress In Electromagnetics Research C*, Vol. 144, 127-135, 2024, doi:10.2528/PIERC24032102.
- [6].S. Agarwal, **A. Singh**, and M. K. Meshram, "A Low-Profile Single-Layered Wideband Combinational Reconfigurable Antenna for 4G and 5G Applications," *Progress In Electromagnetics Research B*, Vol. 109, 17-28, 2024, doi:10.2528/PIERB24091803
- [7].**A. Singh** and M. K. Meshram, "A Multifunctional Stacked Array Antenna with 2-D Beam Switching and Quad-Polarization Agility for 5G-Sub 6 GHz Application," *IEEE Access*, (Under Revision).

Conference papers

- [1].**A. Singh**, S. K. Dash and V. R. Gupta, "Dual Feed Planar Inverted-F Antenna for MIMO Application," *2017 Innovations in Power and Advanced Computing Technologies (i-PACT)*, 2017, pp. 1-4, doi: 10.1109/IPACT.2017.8245108.
- [2].**A. Singh** and M. Kumar Meshram, "An Ultra-Wideband Circular Ring Monopole Antenna with Reconfigurable Patterns," *2019 IEEE Indian Conference on Antennas and Propagation (InCAP)*, 2019, pp. 1-5, doi: 10.1109/InCAP47789.2019.9134599.
- [3].**A. Singh**, R. Jatav, Ajitesh and M. K. Meshram, "Beam Steering Antenna Array Based on Reconfigurable Feeding Network," *2022 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)*, Bangalore, India, 2022, pp. 424-428, doi: 10.1109/MAPCON56011.2022.10046985.
- [4].Ajitesh, S. K. Srivastava, **A. Singh**, R. Bharati, A. K. Sharma and M. K. Meshram, "A Single Layer Dual Band Reflect Array Antenna for Millimeter-Wave Applications," *2022 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)*, Bangalore, India, 2022, pp. 1615-1619, doi: 10.1109/MAPCON56011.2022.10047644.
- [5].R. Jatav, R. Mali, **A. Singh** and M. K. Meshram, "A Planar Low-Profile Endfire Antenna Based on Spoof Surface Plasmon Polaritons," *2022 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)*, Bangalore, India, 2022, pp. 1844-1847, doi: 10.1109/MAPCON56011.2022.10046846.
- [6].**A. Singh** and M. K. Meshram, "Wideband Dual Circularly Polarized Reconfigurable Cross-Dipole Antenna Using Parasitic Elements," *2025 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Kochi, Kerala, India, 2022, (Accepted)*.

AWARDS AND CO-CURRICULAR ACTIVITIES

- Qualified Graduate Aptitude Test in Engineering **GATE, 2014 with Percentile 94.0%**
- Awarded with Ph.D. initiative award in IEEE International Microwave and RF Conference (IMaRC), 2019.
- Awarded with Student Travel Grant for attending Microwave, Antennas and Propagation Conference (MAPCON), 2022.
- Serving as the Vice-Chairperson of the IEEE Aerospace and Electronic Systems Society (AESS) Student Branch Chapter of the Indian Institute of Technology (BHU)- Varanasi, India and Treasurer of the IEEE Antenna and Propagation Society (APS) Student Branch Chapter of IIT (BHU)-Varanasi, India.

TECHNICAL SKILLS

- **Vector Network Analyzer (VNA):** This device is used for measuring the network parameters of the active and passive devices in their linear mode of operation. I used this for measuring the S-Parameter of the antenna designed.
- **Anechoic Chamber:** Used for Electromagnetic compatibility (EMC) and RF testing while measuring the radiated emission through a cell phone.
- **Zealand (IE3D) and High-Frequency Structure Simulator (HFSS):** It is a 3-dimensional, full-wave, real-time Electromagnetic solver used while working on the antenna modeling and its simulation.
- **Verilog Hardware Description Language:** Used for describing the digital circuits

TEACHING ASSISTANTSHIP (TA) DURING PhD

During my PhD I have the opportunity to assist a few professors in their courses. My primary duties as a TA included preparing assignments, conducting tutorial sessions to clarify the doubts of students, invigilation duties during exams, correcting answer scripts etc. The courses that I have assisted are given in the table below:

Level	Course Type	Courses	Duration
UG	Theory	Introduction to Artificial Intelligence (AI) and Machine Learning (ML)	1 Semester
		Internet of Things (IoT)	2 Semester
		Digital Electronics	2 Semester
		Antenna	4 Semester
		Sensor Technology	1 Semester
		Communication Systems	1 Semester
	Practical	Basic Electronics	3 Semesters
		Digital Electronics	1 Semester
		Microwave and Antenna Lab	1 Semester

Apart from courses taken during teaching assistantship (TA), I have also teaching interest in the subjects **Microprocessor, Data Structures, Information theory and coding, computer organization (CO), Data communication and computer networks, Mobile communication, MEMS and IC technology.**

Referees:

Dr. M. K. Meshram

Professor and HOD

Department of Electronics Engineering.

IIT (BHU), Varanasi

Uttarpradesh-221005

mkmeshram.ece@itbhu.ac.in

Dr. Somak Bhattacharyya

Assistant Professor

Department of Electronics Engineering

IIT (BHU), Varanasi

Uttarpradesh-221005

somakbhattacharyya.ece@iitbhu.ac.in