

Shobhit Agarwal



Contact

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Languages

English, Hindi, Punjabi,
Italian(neophyte)

Software

ANSYS HFSS, CST MWS,
Keysight ADS, MATLAB

Hardware

Vector Network Analyzer,
Spectrum Analyzer,
CNC machines

Objective

Seeking an opportunity to turn mirror into windows and thereby educating younger generation minds. To explore invention and innovation possibilities with the formula of hunger, passion, experience, and perseverance.

Education

2019-now	Doctor of Philosophy in Electrical, Electronic and Information Engineering. (Pursuing)	Università di Bologna, Italy
2014-2016	Master of Technology in Electronics & Communication Engineering (9.0 CPI)	The IIT, Jaipur, India
2009-2012	Bachelor of Technology in Electronics & Communication Engineering (70.27%)	RTU, Kota
2005-2009	Engineering Diploma in Electronics Engineering (61.97%)	BTE, Jodhpur, Rajasthan
2005	Secondary Examination General subjects (78.67%)	RESB, Ajmer

Certificates

June 2021	Recent Advances in Freeform Electronics Grade Achieved: 96.60%. Click for certificate	Yonsei University, South Korea
June 2021	Microwave Engineering and Antennas Grade Achieved: 86.09%. Click for certificate	Eindhoven University of Technology, Netherlands
May 2021	Wireless Communications for Everybody Grade Achieved: 93.47%. Click for certificate	Yonsei University, South Korea
Apr. 2021	RF and millimeter-Wave Circuit Design Grade Achieved: 100%. Click for certificate	Eindhoven University of Technology, Netherlands
Feb. 2021	Antenna Systems for 5G Communications <i>Offered by European School of Antennas</i>	University of Siena
2018	Microwave Theory & Techniques <i>Offered by NPTEL, Ministry of India. Secured All India Rank - 7.</i>	IIT Bombay, India
2017	Microwave Integrated Circuits <i>Offered by NPTEL, Ministry of India. Secured All India Rank - 1.</i>	IIT Bombay, India
2017	Antennas <i>Offered by NPTEL, Ministry of India. Secured All India Rank - 1.</i>	IIT Bombay, India
2017	National Eligibility Test (NET) <i>Qualified for Assistant Professor</i>	
2017	Graduate Aptitude Test in Engineering (GATE) <i>Qualified with AIR-5830 and 95%ile</i>	
2013	Graduate Aptitude Test in Engineering (GATE) <i>Qualified with AIR-6442 and 97.4%ile</i>	

Experience

Aug'16-Dec'18	The LNM Institute of Information Technology <i>Research Associate</i> Stepped into a new research area of RF and Microwaves under the supervision of Prof. Raghuvir Tomar, (Emeritus Professor). The project includes designing antennas and RF circuits for different applications viz. Ultra Wide band technology, wearable technology etc.	Jaipur, India
Jul'14-Jul'16	The LNM Institute of Information Technology <i>Teaching Assistant</i> The main responsibility was handling laboratories and conducting tutorials for undergraduate and postgraduate students. During the tenure I was indulged in Basic Electronics, Signal & Systems using MATLAB, Analog Communication, and Digital Communication laboratories and a course on Digital circuits & systems.	Jaipur, India
2012 - 2014	MANAV CLASSES <i>Faculty Member</i>	ALWAR, India
2011-2012	MODERN INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE <i>Teaching Assistant</i>	ALWAR, India
2019-2010	BALKRISHNA INDUSTRIES LTD. <i>Diploma Engineer Trainee</i>	BHIWADI, India

Achievements

Oct 2021	IEEE Travel Grant Award <i>Awarded IEEE-APS travel grant to attend IEEE APS-URSI 2021, Singapore</i>	
Nov. 2018	Young Scientist in Antennas & Microwave <i>Awarded by World Research Council and IDAMAS Learning Center, Malaysia</i>	
2015-2018	The LNM IIT Students' Gymkhana <ul style="list-style-type: none">Received Academic Excellence Award for securing highest GATE Score in Post Graduation batch 2014.Member of Academic Council, The LNM IIT, Jaipur from July 2015 - Dec. 2018.PG Senator and Research Scholars' representative in AC-PGC of LNMIIT Student Gymkhana from July 2015 - Dec. 2018.PG Senator of LNMIIT Student Gymkhana during 2014 - 2015.	Jaipur, India

Industrial Trainings

May-Jul'12	HINDUSTAN ZINC LIMITED Electronics & Instrumentation Department	Dariba, Rajasthan
May-Jun'11	CETPA INFOTECH PVT. LIMITED Electronics & Communication Department	NOIDA, UP
Jul-Aug'10	HINDUSTAN ZINC LIMITED Capacitive Power Plant for Electricity Generation (CPP)	Dariba, Rajasthan
May 2007	BHARAT SANCHAR NIGAM LIMITED Broadband Department	Alwar, Rajasthan

- [7] Manoj Kumar, Shobit Agarwal, and Ashwani Sharma. "A Multi-application Compact Ultra Wideband Vivaldi Antenna for IoT, 5G, ITS, and RFID". In: 2019 IEEE Indian Conference on Antennas and Propagation (InCAP). 2019, pp. 1–3. doi: 10.1109/InCAP47789.2019.9134579.
- [8] Shobit Agarwal, Umair Rafique, and Vasu Jain. "Wideband E-Shaped Planar Antenna for Cellular, GPS, and Wireless Applications". In: International Conference on Intelligent Computing and Smart Communication 2019. Springer, 2020, pp. 633–641. doi: 10.1007/978-981-15-0633-8_64.
- [9] Umair Rafique, Hisham Khalil, and Shobit Agarwal. "A Compact Planar Antenna for Super Wideband Applications". In: 2019 Photonics & Electromagnetics Research Symposium-Fall (PIERS-Fall). IEEE, 2019, pp. 3256–3261. doi: 10.1109/PIERS-Fall148861.2019.9021605.
- [10] Umair Rafique, Ifikhar Ahmad, Shobit Agarwal, and Vasu Jain. "Multiband Planar Antenna for Cellular and Wireless Applications". In: 2019 IEEE Indian Conference on Antennas and Propagation (InCAP). IEEE, 2019, pp. 1–4. doi: 10.1109/InCAP47789.2019.9134617.
- [11] Umair Rafique and Shobit Agarwal. "A Modified Frequency Selective Surface Band-stop Filter for Ultra-wideband Applications". In: 2018 International Conference on Advances in Computing, Communications and Informatics (ICACCI). IEEE, 2018, pp. 1653–1656. doi: 10.1109/ICACCI.2018.8554690.
- [12] Shobit Agarwal, Rahul Kumar Garg, and Raghuvir Tomar. "C-Band Microstrip Band Pass Filter Design". In: International Journal of Research in Advent Technology (IJRAT) 6.7 (2018), pp. 1777–1783.
- [13] Rahul Kumar Garg, Shobit Agarwal, and Raghuvir Tomar. "Multi-Band Rectangular Patch Antenna with F-Type Defected Metal Structure". In: International Journal of Research in Advent Technology (IJRAT) 6.7 (2018), pp. 1784–1788.
- [14] Shobit Agarwal and Raghuvir Tomar. "A newly proposed multi-band rectangular patch antenna using defected ground structures". In: 2017 Progress in Electromagnetics Research Symposium-Fall (PIERS-FALL). IEEE, 2017, pp. 31–36. doi: 10.1109/PIERS-FALL.2017.8293106.

References

1. Prof. Raghuvir Tomar
Emeritus Professor, Department of Electronics & Communication Engineering,
The LNM Institute of Information Technology, Jaipur, India
2. Dr. Ashwani Sharma
Asst. Professor, Department of Electrical Engineering,
Indian Institute of Technology, Ropar, Rupnagar, Punjab, India



Projects

2016	Designing and implementation of Adder & Subtractor circuits in Quantum dot Cellular Automata. <i>Masters' Thesis Project</i>	The LNM IIT, Jaipur
2015	Performance Improvement of DS-CDMA System with Successive Interference Cancellation Receiver. <i>Masters' Course Project</i>	The LNM IIT, Jaipur
2014	OFDMA Simulations on GNU Radio. <i>Masters' Course Project</i>	The LNM IIT, Jaipur
2012	Alcohol Detector Based Car Ignition System. <i>B. Tech. Major project</i>	MITRC, Alwar
2011	Microcontroller Based Clapper Switch. <i>B. Tech. Minor project</i>	MITRC, Alwar
2009	Electronic Metal Detector. <i>Diploma major project</i>	GPC, Alwar

Skill set

Software **ANSYS HFSS, CST MWS, Keysight ADS, MATLAB**

- Rich experience in designing of electromagnetic planar structures using different CAD software.
- Experienced in linear and non-linear circuit level designing for intended frequency using software listed above.
- Co-simulation of EM and linear/non-linear circuit designs using two different software.

Hardware **Vector Network Analyzer, Spectrum Analyzer, CNC machines**

Experienced in measurement of RF and Microwave circuits using VNA, SA and fabrication using CNC machines.

Publications

- [1] Shobit Agarwal, Ghulam Murtaza, Alessandra Costanzo, and Diego Masotti. "A Super Wide-band Angularly Stable Metasurface for Cross Polarization Conversion Applications"; in: 2021 International Microwave and RF Conference IMaRC 2021 to be held in India in Dec'21. 2021, **(Accepted for publication)**.
- [2] Shobit Agarwal, David Chadzichristodoulou, Abdul Quddious, Diego Masotti, Symeon Nikolaou, and Alessandra Costanzo. "HIS Design for An Environment Robust UHF/UWB Antenna with 3D Printed Inclusions". In: 2021 European Microwave Conference. 2021, **(Accepted for publication)**.
- [3] Shobit Agarwal, Diego Masotti, Symeon Nikolaou, and Alessandra Costanzo. "Conformal Design of a High-Performance Antenna for Energy-Autonomous UWB Communication". In: Sensors 21.17 (2021), p. 5939. doi: 10.3390/s21175939.
- [4] Shobit Agarwal, David Chadzichristodoulou, Abdul Quddious, Diego Masotti, Symeon Nikolaou, and Alessandra Costanzo. "A Hybrid RFID/Localization Antenna with HIS and 3D-Printed Inclusions". In: 2021 IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science(APS-URSI). 2021, **(Accepted for publication)**.
- [5] Shobit Agarwal, Alessandra Costanzo, and Diego Masotti. "Dual-Purpose Metasurface for Background Insensitive UWB Tag: (Invited Paper)". In: 2021 15th European Conference on Antennas and Propagation (EuCAP). 2021, pp. 1–5. doi: 10.23919/EuCAP51087.2021.9411341.
- [6] Shobit Agarwal and Ashwani Sharma. "An efficient analytical model for microstrip spurline band-stop filter design". In: Microwave and Optical Technology Letters 62.5 (2020), pp. 1945–1950. doi: 10.1002/aop.32272.