Atul Kumar Varshney

(Ph.D, M.Tech., and B.Tech.)

(ECE (RF Components and Antennas), Microwave Engineering, and ECE)

Electronics and Communication Engineering,

FET, Gurukul Kangri (Deemed to be University), Haridwar (Uttarakhand), India

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CAREER OBJECTIVE:

I intend to learn in a leading university/institute/corporate environment with committed and dedicated people, which will enhance my knowledge and realize my potential. I am willing to work as a learner and researcher in a challenging and creative environment.

PRESENT ENGAGEMENT:

Asst. Prof.: In the Department of Electronics & Communication Engineering, **FET, Gurukul Kangri (Deemed to be University), Haridwar, (Uttarakhand), India,** from August 2012**.**
Nature of Work: Teaching & Research.
Teaching Areas: Not limited to RF and Microwave Engineering, Electromagnetic Field theory, Electronics Devices and Circuits, Control System Engineering, and Network Systems.
Research Areas: Design of RF and Microwaves components (specialization in transition design), filters, transition, substrate integrated waveguide (SIW), Leaky wave antenna (LWA), fundamental 5G and 6G antenna design, fabrication, and measurements with RLC equivalent circuit generation of RF components and high frequencies antennas, Active and Passive antenna design, MIMO antenna design, frequency/pattern reconfigurable antenna, Metamaterial's design, Fractal antenna design, Microstrip Antennas sensors design, Interdisciplinary research etc.

WORK EXPERIENCE:

Gate Exam qualified TWO times in 2010 & 2005, as well with 19 years of teaching experience (including Ph.D and M. Tech), as follows:

S. No.	Designation	Work Span	Employer	Nature of Work
1.	Asst. Prof.	Aug.2012 to till now	FET, Gurukula Kangri (Deemed to be University), Haridwar (Uttarakhand)	Teaching, Research & Development of labs
2.	Asst. Prof.	Aug.2010 to Aug.2012	MVN, University, Palwal (Haryana)	Teaching, Research & Developments of labs
3.	Asst. Prof.	Feb.2010 to Aug.2010	MIT, Bulandshahar (Uttar Pradesh)	Teaching, Research & Developments of labs
4.	Sr. Lecturer	Sep.2009 to Jan.2010	VIT, Meerut (Uttar Pradesh)	To deliver lectures &conduct labs
5.	Lecturer	Aug.2008-Aug.2009	Mangalayatan University, Aligarh (Uttar Pradesh)	Teaching, Research & Developments of labs

6.	Project Trainee	Jan.2008-Jun.2008	Indian Space Research Organization ISRO-SAC, Ahmedabad (Gujrat)	Design various Microstrip to Rectangular Waveguide transitions using CST-MWs studio, HFSS, ADS-MW, and IE-3D software.
7.	Guest Lecturer	July2005-June2006	FET, Agra College, Agra (Uttar Pradesh)	To deliver lectures & conduct labs

Research Summary:

S. No.	Degree	Number	Details
1	Book Published	03	International: 01 National: 02
2	Patents	09	Granted: 06 Published: 02
3	Research Papers	56	IEEE Published: 02 SCI: 21 Scopus: 35
4	Book Chapter	04	Scopus: 04
5	Conferences Papers	39	International: 22 National: 10
6	Invited Talks	07	--------
7	FDP	07	--------
8	STC	02	--------
9	Workshops	07	--------
10	Guided M.Tech Scholars	02	Mangalayatan University, Aligarh (Jan.-2022 to June-2022) Uttarakhand Technical University, Dehradun (Feb. 2021 to Oct. 2021)
11	Ph.D. Co-guide	01(Pursuing)	ECE, FET, GK(DU), Haridwar (From-03 Feb. 2025)
12	Best Paper Award	01	ICACCD-2024, 3-4 Oct. 2024

EDUCATIONAL QUALIFICATION:

S. No.		Degree	Subject	Year	Board/Univ.	Division
1		**Ph.D**	**ECE (Microwave Transitions)**	**December 2019 to March 2023**	**GKV, Haridwar**	**Pre-presentation:**16/12/2022 **Submitted:**02/01/2023 **Defense:** 23/03/ 2023 **Notification:** 08/04/ 2023

2		M.Tech	Microwave Engineering	2006-2008	MITS/RGPV, Bhopal	**First**
3		GATE	ECE	2005 & 2010	IIT	------
4		B.Tech	ECE	2001-2005	SIT/UPTU, Lucknow	**First**
5		Intermediate	Science, Math	1998-2000	U.P. Board	Second
6		High school	Science	1996-1998	U.P. Board	**First**

BOOK PUBLISHED: (No. 03)

S. No.	**(a) INTERNATIONAL BOOK: 01**	
1.	**Title of Book**	**Night Time Earth Energy Harvester**
	ISBN	978-3-659-91067-8
	Publisher	**Lambert Academic Publishing, Germany**
	Edition	21 June **2016**, First
S. No.	**(b) NATIONAL BOOK: 02**	
2.	**Title of Book**	**Digital and Analog Communication**
	ISBN	978-93-81335-27-7
	Publisher	**International Book Publications (P) Ltd., Delhi**
	Edition	May **2012**, First
3.	**Title of Book**	**Signals & Systems**
	ISBN	**978-93-81348-02-4**
	Publisher	**Vayu Education India (P) Ltd., Delhi**
	Edition	Feb **2011**, First

RESEARCH CONTRIBUTIONS: (Patents/Published Research Papers/Conferences)

Authors and Patent Titles (No. 09)	**Country**	**Granted/ Published**
1. Simerpreet Singh, Deepinder Singh Wadhwa, Jagpal Singh Kinda, **Atul Kumar Varshney**, **"Low-loss four-element enhanced patch mm-wave antenna with gain control tunability and reconfigurable features,"** India Design Patent—application number 202411083100, Published on 30 Oct, 2024.	India	Published
2. **Atul Kumar Varshney**, Vivek Jaiswal, Dr. Vipul Sharma, Dr. Tanuj Kumar Garg, and Dr. Issa Elfergani, **"An offset-fed slotted monopole antenna,"** India Design Patent—application number 202211067200, Published on 31 May 2024.	India	Published
3. **Atul Varshney**, Vipul Sharma, and Alok Srivastava**, "A novel simplified equivalent modeling method for microstrip line interconnects,"** India Patent—application number 202111019468, Granted on 22 February 2024.	India	**Granted**
4. **Atul Kumar Varshney**, Dr. Vipul Sharma, **"A Claw-shaped ultra-wideband fractal antenna,"** India Patent—application number 350083-001, Granted on 16 December 2022.	India	**Granted**
5. **Atul Kumar Varshney**, Dr. Vipul Sharma, **"A Claw-shaped ultra-**	India	Published

wideband fractal antenna," India Patent—application number 202111043290, published on November 05, 2021.		
6. **Atul Kumar Varshney**, Dr. Vipul Sharma, "**Nature-inspired claw-shaped ultra-wideband fractal antenna loaded with SRR for Sub-6 GHz and ITU-8 GHz bands applications**," Australia Patent—application number 2021104449, Granted on 23 March 2022.	Australia	**Granted**
7. **Atul Varshney**, Devendra Singh, Rajeev Saxena, **"Miniaturized dodecagon-shaped delta-loaded monopole antenna for Wi-MAX, ISM and 5G-Wireless applications,"** Australia Patent—application number 2021104113, Granted on 20 April 2022.	Australia	**Granted**
8. **Atul Varshney**, Vipul Sharma, and Narinder Sharma, **"A low-cost UWB windmill-shaped antenna using CSRR for industrial and society applications,"** Australia Patent—application number 2021103794, 11 August 2021.	Australia	**Granted**
9. **Atul Varshney**, Vipul Sharma, and Vivek Arya, **"Tri-blade table fan-shaped ultra-wideband microstrip antenna using parasitic SRR triplet,"** Australia Patent—application number 2021101898, Granted on 19 May 2021.	Australia	**Granted**
Authors and Research Articles Title (No. 55)	**Status**	**SCIE/ Scopus**
1. **Atul Varshney; Satyam Kumar; Raghav Dwivedi; Nurhayati Nurhayati; Circular Layout Hybrid Patch CSRR Loaded Antenna for Sub-6GHz n77, n78, n79 Band Applications with Applications-Interference Eliminations**, E3S Web of Conferences, 465, 2025, 04005, pp. 1-12, 28 August 2025. https://doi.org/10.1051/e3sconf/202564504005	**Published**	**Scopus**
2. **Atul Varshney**; Low-loss high gain corporate-feed 2 × 2 circular microstrip frequency reconfigurable array for X-band applications, **Optical and Quantum Electronics**, 57, 08, 487, pp. 1-31, 14 August 2025. https://doi.org/10.1007/s11082-025-08422-7	**Published**	**SCIE**
3. Nur Ikhfan Efendi, Nurhayati Nurhayati, Nurulazlina Ramli, **Atul Varshney**; Textile Metasurface Antenna for 2.4 GHz Remote Health Monitoring Applications, **International Journal of Microwave and Optical Technology (IJMOT)**, 20, 4, 430-439, 27 July 2025.	**Published**	**Scopus**
4. **Atul Varshney** & Duygu Nazan Gençoğlan; Bio-inspired Spider-Shaped Antenna with Frequency and Gain Reconfigurability for 5G and Emerging Lower 6G Bands, **Arabian Journal of Science and Engineering**, 08 July 2025 (online). DOI: 10.1007/s13369-025-10396-3	**Published**	**SCIE**
5. **Atul Varshney,** Novel Mutually-Coupled with Microstrip Glass Fed Circular Ring Antenna for Wi-Fi WLAN and ISM Band Applications, **International Journal of Electronics Letters,** Taylor & Francis, 1-17, 05 April 2025 (online). DOI: 10.1080/21681724.2025.2487795	**Published**	**Scopus**
6. C. Zebiri, **A. Varshney** et al. Low SAR-UWB Rectangular Microstrip Magnetic Monopole Antenna for S-Band and Biomedical Applications, **ACES Journal**, vol. 40, no. 03, pp. 212–225, Mar. 2025.	**Published**	**SCIE**
7. Shabnam Ara, Nunna Prasanthi Kumari, and **Atul Varshney**, Antenna Miniaturization and Application In-band Interference Reduction using Dipole Array Mirror Reflector FSS for Sub 6GHz Applications, **Physica Scripta**, Vol. 100, No. 2025, 035517, pp 1-21, 31, Jan. 2025. DOI: 10.1088/1402-4896/adb0fc	**Published**	**SCIE**

8. Seifeddine Maouni; Aissa Salhi; Issa Elfergani; Chemseddine Zebiri; Jonathan Rodriguez; Felipe Gil-Castiñeira, Younes Alfitorey Mousa, **Atul Varshney,** "Miniaturized Biomedical Wearable Patch Antenna design with Low SAR Content," *2024 International Conference on Advances in Electrical and Communication Technologies (ICAECOT)*, Setif, Algeria, 2024, pp. 1-6, doi: 10.1109/ICAECOT62402.2024.10828726.	**Published**	**Scopus**
9. Aissa Salhi; Seifeddine Maouni; Issa Elfergani; Chemseddine Zebiri; Jonathan Rodriguez; Felipe Gil-Castiñeira, Younes Alfitorey Mousa, **Atul Varshney,** "Design of a Compact UWB SISO Antenna for Enhanced Wireless Communication Systems," *2024 International Conference on Advances in Electrical and Communication Technologies (ICAECOT)*, Setif, Algeria, 2024, pp. 1-4, doi: 10.1109/ICAECOT62402.2024.10829165.	**Published**	**Scopus**
10. **A. Varshney,** D. N. Gençoğlan, I. Elfergani, J. Rodriguez, C. Zebiri, and T. M. Neebha, "Characterizations of Effective Parameters and Circuit Modeling of U-Coupled Hybrid Ring Resonator Band Pass Filter," in *IEEE Access*, vol. 13, pp. 2529-2545, 2025, doi: 10.1109/ACCESS.2024.3523440.	**Published**	**SCIE**
11. **Varshney, A**., Kumar, S., Gençoğlan, D. N., Tiwari, S., Ara, S., Elfergani, I., Zebiri, C., Rodriguez, J., Compact metasurface antenna for Sub-6 GHz applications with isolated n77/n78 bands using CSRR, Physica Scripta, Vol. 100, No. 2025, 015508, 2024. DOI: 10.1088/1402-4896/ad96f1	**Published**	**SCIE**
12. **Atul Varshney** & Duygu Nazan Gençoğlan: Gain and bandwidth enhancement using superstrate-loaded 2×2 circular-array antenna for X-Band and RADAR applications, International Journal of Electronics, (online), 29 Nov 2024. DOI: 10.1080/00207217.2024.2431994	**Published**	**SCIE**
13. **Atul Varshney**, Microwave and mm-Wave Band-Wise Microstrip Lineto-Waveguide Transitions: A Review, Microwave Review, Vol. 30, No. 2, 99-123, Dec, 2024.	**Published**	**Scopus**
14. S Singh, V Sharma, S Narinder, **A Varshney**, "Microwave and mm-Wave Band-Wise Microstrip Lineto- Waveguide Transitions: A Review," Microwave Review, Vol. 30, No. 2, 23-35, Dec, 2024.	**Published**	**Scopus**
15. **Atul Varshney,** Vipul Sharma, T. Mary Neebha, And N. Prasanthi Kumari Nunna, Table Lamp Inspired Miniaturized Fractal Antenna for 5G Enabled Green Communications in Smart Cities, 5G Green Communication Networks for Smart Cities, Book Chapter 8, AAP, CRC, Taylor and Francis, 2024, 149-166.	**Published**	**Scopus**
16. **Atul Varshney,** Vipul Sharma, T. Mary Neebha, And N. Prasanthi Kumari Nunna, "A Tri-band Meander Line Fed Alpha-Numeric Antenna for Military Band, WiFi, and 5G Wireless Green Communications," 5G Green Communication Networks for Smart Cities, Book Chapter 8, AAP, CRC, Taylor and Francis, 2024, 167-186.	**Published**	**Scopus**
17. Nurhayati, N., Fahmi, A. N. D. N., Puspitaningayu1, P., Wiriawan, O., Raafi'u, Iskandarianto, F.A., Al-Gburi, A. J. A., **Varshney, A.,** and Johari, S., **Wearable Wideband Textile Coplanar Vivaldi Antenna for Medical and IoT Application,**" Progress In Electromagnetics Research C, Vol. 148, 145-156, 2024.	**Published**	**Scopus**
18. **Varshney, A.,** and Gençoğlan, D. N., "**High-Gain Multi-Band Koch Fractal FSS Antenna for Sub-6 GHz Applications**," Antenna Design and Microwave Engineering, **Applied Sciences**, MDPI, 14 (19), 9022, 6 Oct	**Published**	**SCIE**

2024.		
19. Samira, M., **Varshney, A.,** et al., "**Design and Investigation of Orthogonal Hybrid Dual-Mode Single-CDR-Based MIMO Antenna with High Self-Isolation at 5.8GHz**," **IEEE Access**, 24 Sep. 2024. DOI: 10.1109/ACCESS.2024.3467035.	**Published**	**SCIE**
20. **Varshney, A.,** and Gençoğlan, D. N., Offset-fed Slotted Antenna Practically Loaded with Split Ring as Water Quality Sensor for X-Band Industrial Applications, **Advanced Electromagnetics (AEM)**, 13 (2), 39-52, 14 August 2024.	**Published**	**SCIE**
21. **Varshney, A.,** Singh, S., Elfergani, I., Zebiri, C., Hussaini, A., and Rodriguez, J., "An Anti-Symmetric Half Koch-Minkowski Offset Fed Hybrid Fractal Antenna for Sub-6GHz and S-band, **Proceedings of the 3rd International Multi-Disciplinary Conference: Integrated Sciences and Technologies, IMDC-IST 2023, 25-27 October 2023, Yola, Nigeria**, on 25-27 October 2023, Published 14 August 2024. http://dx.doi.org/10.4108/eai.25-10-2023.2348732	**Published**	**Scopus**
22. Zegadi, R., Bouknia, M. L., Sayad, D., Elfergani, I., **Varshney, A.,** Mekki, S., Ibtissam, B. R., Mosbah, S., Rodriguez, J., Zebiri, C., **"Study and Analysis of a Circular Patch Antenna for Biomedical Applications," Proceedings of the 3rd International Multi-Disciplinary Conference: "Integrated Sciences and Technologies", IMDC-IST 2023, 25-27 October 2023, Yola, Nigeria**, on 25-27 October 2023, Published 14 August 2024. http://dx.doi.org/10.4108/eai.25-10-2023.2348742	**Published**	**Scopus**
23. Salhi, A., Maouni, S., Elfergani, I., Zebiri, C., Rodriguez, J., Mousa, Y. A., and **Varshney, A.**, **Design of a Compact UWB SISO Antenna for Enhanced Wireless Communication Systems**, International Conference on Advances in Electrical and Communication Technologies, **IEEE Xplore**, pp. 1-4, 09 Jan. 2025. DOI: 10.1109/ICAECOT62402.2024.10829165	**Published**	**Scopus**
24. Maouni, S., Salhi, A., Elfergani, I., Zebiri, C., Rodriguez, J., Mousa, Y. A., and **Varshney, A.**, **Design of Biomedical Wearable Patch Antenna Miniaturized with Low SAR Content**, International Conference on Advances in Electrical and Communication Technologies, **IEEE Xplore**, 1-6, 0 9 JAN 2025. doi: 10.1109/ICAECOT62402.2024.10828726.	**Published**	**Scopus**
25. **Varshney, A.,** Low-Loss High Gain 1×4 Circular Microstrip Frequency Reconfigurable Array for X-band Applications, **International Journal of RF and Microwave Computer-Aided Engineering**, Wiley, Accepted 08 July 2024. DOI: 10.1155/1970/5760927	**Accepted**	**SCIE**
26. **Varshney, A., Microwave and mm-Wave Band-wise Microstrip Line-to-Waveguide Transitions: A Review**, Microwave Review, 02 December 2024.	**Published**	**Scopus**
27. Singh, S., Sharma, V., Sharma, N., and **Varshney, A., Low-Profile Nature-Inspired Triple-Tuned Parasitically Loaded with SRR Quadruplets Antenna for SDARS and Weather RADAR**, Microwave Review, published 02 December 2024.	**Published**	**Scopus**
28. **Varshney, A.,** Sharma, V., Neebha, T. M., and N. Prasanthi, K., Table Lamp Inspired Miniaturized Fractal Antenna for 5G Enabled Green Communications in Smart Cities, **Book Chapter, 5G-Green Communication Network and Diversity for Smart Cities**, 1st Edition, Apple Academic Press (AAP), CRC Press, Taylor & Francis, September 2024.	**Published**	**Scopus**

29. **Varshney, A.,** Sharma, V., Neebha, T. M., and N. Prasanthi, K., A Tri-band Meander Line Fed Alpha-Numeric Antenna for Military Band, WiFi, and 5G Wireless Green Communications, **Book Chapter, 5G-Green Communication Network and Diversity for Smart Cities,** 1st Edition, Apple Academic Press (AAP), CRC Press, Taylor & Francis, September 2024.	**Published**	**Scopus**
30. Neebha, T. M., Andrushia, A. D., **Varshney, A.,** Bruntha, P. M., and Manimekalai, M. A. P., Compact microstrip patch antenna loaded with Artificial Transmission Line for wireless applications, **International Journal of Electronics**, Taylor & Francis, 1–15, 02 February 2024.	**Published**	**SCIE**
31. Bensid, C., Bouknia, M. L., Sayad, D., Elfergani, I., Bendjedi, Zegadi, H., R., Rodriguez, J., **Varshney, A.,** and Zebiri, C., A Novel Pentagonal-Shaped Monopole Antenna with a CSRR Metamaterial Loaded Defected Ground for UWB Applications, **Progress In Electromagnetics Research C**, Vol. 139, 175-185, 23 December 2023.	**Published**	**Scopus**
32. **Varshney, A.,** Neebha, T. M., Sharma, V., Jency, J.G., and Andrushia, A. D., Dodecagon-shaped frequency reconfigurable antenna practically loaded with 3-delta structures for ISM band and wireless applications, **IETE Journal of Research**, Taylor & Francis, 69 (11), 7747-7759, 30 November 2023.	**Published**	**SCIE**
33. **Varshney, A.,** and Sharma, V., A Comparative Study of Conventional Transition Model and Reverse Transition Model for Wireless and Radar Applications, **SAMRIDDHI:** A Journal of Physical Sciences, Engineering and Technology, 15 (03), 346-353, 23 November 2023.	**Published**	**Scopus**
34. **Varshney, A.,** Sharma, V., and Agarwal, A., A W-Band Metallic Via-Based Inline Microstrip-to-WR10 Transition for mm-Wave, Satellite, and RADAR Applications, **Journal of The Institution of Engineers (India): Series B**, Springer, 104, 1241-1255, 15 November 2023.	**Published**	**Scopus**
35. Sanjay, S., **Varshney, A.,** Sharma, V., Elfergani, I., Zebiri, C., and Rodriguez, J., A Compact Off-Set Edge Fed Odd-Symmetric Hybrid Fractal Slotted Antenna for UWB and Space Applications, **Progress in Electromagnetics Research B**, 102, 37-60, 15 October 2023.	**Published**	**Scopus**
36. **Varshney, A.,** Neebha, T. M., Sharma, and Andrushia, A. D., Low-Cost L-Band to Ku-Band Frequency Reconfigurable BAR64-02V Controlled Antenna for Satellite, Military, and Radar Applications, **IETE Journal of Research**, Taylor & Francis, 69 (11), 1-14, 25 September 2023.	**Published**	**SCIE**
37. Nunna, P.K., Kuchhal, P., **Varshney, A.**, Wearables and Implantables in MICS- A Review, **Alexandria Engineering Journal,** Elsevier, 79 (2023), 73-80, 08 August 2023.	**Published**	**SCIE**
38. **Varshney, A.,** Sharma, V., and Sharma, A. K., "RLC Equivalent Circuit based Stub Loaded 2×2 MIMO Antenna for Wireless Applications, **Microwave Review**, 29(1), 44-54, 18 July 2023.	**Published**	**Scopus**
39. **Varshney, A.,** Sharma, V., Neebha, T. M., Kumari, N. P., Notch-band eliminator wideband CSRR loaded monopole fractal antenna for ISM and PCS communications, **World Journal of Engineering,** 21 (04), 821-834, 13 June 2023.	**Published**	**SCIE**
40. **Varshney, A.,** Sharma, V., and Agarwal, A., Next-Generation MS-to-RWG Interconnects for Microwave and mm-Wave Communications Using Microstrip Antenna as RF Energy Launcher@ 140 GHz, J**ournal of The Institution of Engineers (India): Series B**, Springer, 104 (3), 749-756, 09	**Published**	**Scopus**

May 2023.		
41. Pradhan, D., **Varshney, A.,** Singh, S., A Critical Review on Challenges and Limitations in Artificial Intelligence-Based e-Health Applications, **Engineering Technology an Open Access Journal**, 5(1), 001-005, May 2023.	**Published**	-------
42. **Varshney, A.,** and Sharma, V., Aerodynamic slotted SIW-to-MS line transition using mitered end taper for satellite and RADAR communications, **World Journal of Engineering,** 21 (03), 588-603, 14 April 2023.	**Published**	**SCIE**
43. Neebha, T. M., Andrushia, A.D., Bruntha, P.M., **Varshney, A.,** Manjith, R., Dhanasekar, S., On the design of miniaturized C-shaped antenna based on artificial transmission line loading technique, **Journal of Electromagnetic Waves and Applications**, Taylor & Francis, 37 (6), 814-826, 13, April 2023.	**Published**	**SCIE**
44. **Varshney, A.,** and Shindhja, N. M. M., Hybrid βΩ-indexing fractal slotted multiband antenna for electronics wireless sensor applications, **Journal of Electronics, Electromedical Engineering, and Medical Informatics,** 5(2), 59-68, 12 March 2023.	**Published**	**Scopus**
45. **Varshney, A.,** Sharma, V., Nayak, C., Goyal, G., and Massoud, Y., A Low-loss impedance transformer-less fish-tail-shaped MS-to-WG transition for K-/Ka-/Q-/U-band applications, **Electronics,** MDPI, 12(3), 670, 29, Jan, 2023.	**Published**	**SCIE**
46. **Varshney, A.,** and Sharma, V., An Economic Low-profile MSL-to-RWG Transition using Microstrip Antenna as Launcher for X-Band Applications, **International Journal of Electrical and Electronics Research (IJEER),** Forex Publication, 10(2), 1-7, 26, December 2022.	**Published**	**Scopus**
47. **Varshney, A.,** Sharma, V., and Kumar, R., Microstrip interconnect design and modeling using the reverse approach to obtain an efficient wideband MS line-to-RWG hybrid transition, **Book Chapter, Printed Antennas,** 1st Edition, CRC Press, Taylor & Francis, November 2022.	**Published**	**Scopus**
48. **Varshney, A.,** Sharma, V., Neebha, T. M., and Kumar, R., A compact low-cost impedance transformer-fed wideband monopole antenna for Wi-MAX N78-band and wireless applications, **Book Chapter, Printed Antennas**, 1st Edition, CRC Press, Taylor & Francis, November 2022.	**Published**	**Scopus**
49. **Varshney, A.,** Sharma, V., Elfergani, I., Zebiri, C., Vujicic, Z., and Rodriguez, J., An inline V-Band WR-15 transition using antipodal dipole antenna as RF energy launcher@ 60 GHz for satellite applications, **Electronics,** MDPI, 23 (11), 3860, 23, November, 2022.	**Published**	**SCIE**
50. **Varshney, A.,** Cholake, N., and Sharma, V., Low-cost ELC-UWB fan-shaped antenna using parasitic SRR triplet for ISM band and PCS applications, **International Journal of_Electronics Letters,** Taylor & Francis, 10 (04), 391-402, 02, October, 2022.	**Published**	**Scopus**
51. Andrushia, A.D., Neebha, T. M., Patricia, A.T., Umadevi, S., Anand, N., and **Varshney, A.,** Image-based disease classification in grape leaves using a convolutional capsule network, **Soft Computing**, Springer Berlin Heidelberg, 27(3), 1457-1470, 25 August 2022.	**Published**	**SCIE**
52. Evangelin, P.S., Neebha, T. M., Andrushia, A. D., Jayasingh, J.R., **Varshney, A.**, and Mary, X. A., Design and Analysis of Meander Slitted Monopole Antenna for Wireless Application, **IEEE Xplore**, 480-483, 30 May 2022.	**Published**	**Scopus**

53. **Varshney, A.,** and Sharma, V., A comparative study of microwave rectangular waveguide-to-microstrip line transition for millimeter wave, wireless communications, and radar applications, **Microwave Review**, 26(2), 26-37, 30, December 2020.	**Published**	**Scopus**
54. **Varshney, A.,** A Cost-Effective Generation of Digital Modulation Techniques (ASK, FSK & PSK) Using LF 398 IC, **Recent Trends in Analog Design and Digital Devices**, HBRP Publication, 1(1), 1-6, 2018.	**Published**	-------
55. **Varshney, A.K.,** and Sharma, V., Circuits for Digital Modulation Applications, **International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET),** 5 (3), 22-31, 28 April 2018.	**Published**	-------
56. **Varshney, A.,** and Rawat, G.S., A microwave rectangular waveguide-to-microstrip line transitions@ 30 GHz, **International Journal of Emerging Technology and Advanced Engineering**, 3(8), 563-568, August 2013.	**Published**	**Scopus**

Papers Presented in Conferences (No. 39)

1. **Atul Varshney**, Satyam Kumar, Raghav Dwivedi, and Nurhyati **"Circular Layout Hybrid Patch CSRR Loaded Antenna for Sub-6GHz n77, n78, n79 Bands Applications with Applications-Interference Eliminations",** 1st International Conference on Green Engineering for Sustainable Future (ICoGESF-2025), State University of Surabaya, Indonesia, 2025, 5 July 2025.
2. **Atul Varshney**, Rohit Kumar, and Rishav Raj"**Design and Investigation of the Lower THz Decagon Slotted Antenna for Biomedical Imaging and Bio-sensing Applications**", International Conference on Sustainable Development in Computational Optimization and Intelligent Systems (ICSDCOIS-2025), BGIET, Sangrur, Punjab, India, 2025, 24-25 April 2025.
3. **Atul Varshney**, Satyam Kumar, "**Practically Cross-loaded Circular-cut Filleted Rectangular Patch Dual-band Millimeter-wave Antenna for Sub 24GHz (FR2) 5G Applications**", International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.
4. **Atul Varshney**, Satyam Tiwari, Satyam Kumar "**Dual-band inset-fed CSRR loaded rounded corner rectangular patch antenna for sub-6 GHz 5G applications in-band applications interference minimization**", International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.
5. **Shiv Kumar Singh, Atul Varshney**, Tanuj Kumar Garg "**High gain miniaturized wearable narrowband hexagonal-shaped antenna for ISM band applications**", International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.
6. **Atul Varshney**, Shabnam Ara, Nunna Prasanthi Kumari "**Multi-tuned octagonal-shaped antenna using triangular-nails defected ground structure for ultra-wideband applications**", International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.
7. **Bhanupriya Dumka, R. P. S. Gangwar, Atul Varshney**, "**SSR loaded mutually-coupled wideband antenna for sub-6 GHz 5G applications**", International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.
8. **Sanjay Singh, Vipul Sharma, Atul Varshney**, Anuj Sharma, Narinder Sharma, "**Dual-tuned decagon antenna for V2V and ISM band applications**", International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.
9. Satyam Kumar, **Atul Varshney**, Satyam Tiwari, Pratham Mishra, Aniket Pandey, and Anurag Kumar, "**SRR Loaded CPW Fed Split Octagon Antenna with Isolated 5G Sub-6 GHz n77/78 and n79 Bands**," 3rd NIELIT's International Conference on Communication, Electronics and Digital

Technologies (NICEDT-2025), NIELIT Ropar, India, 2025,14-15 February 2025.
10. Satyam Kumar, **Atul Varshney**, Aniket Pandey, Satyam Tiwari, and Pratham Mishra, "**Dual-Band CSRR Loaded Ring Antenna for ISM, Wi-Fi, and Sub-7 GHz Wireless Applications without In-band Applications Interference**," 3rd NIELIT's International Conference on Communication, Electronics and Digital Technologies (NICEDT-2025), NIELIT Ropar, India, 2025, 14-15 February 2025.
11. Satyam Kumar, **Atul Varshney**, Pratham Mishra, Satyam Tiwari, Aniket Pandey, and Sanyam Rathor, "**Analysis and Investigation of CPW Fed Parasitically Loaded Rectangular Patch Antenna for Wi-Fi5 in 5G and 6G Applications**", 3rd NIELIT's International Conference on Communication, Electronics and Digital Technologies (NICEDT-2025), NIELIT Ropar, India, 2025, 14-15 February 2025.
12. Wadhwa, D. S., Singh, S., and **Varshney, A.,** "**Design and Analysis of DGS MIMO Antenna for Satellite Communication Applications**," **1st International Conference on Advances in Communication and Computational Devices (ICACCD-2024),** 4-5, Oct.,2024, Bangalore, India.
13. Varshney, A., Kumar, S., Tiwari, S., Kumar, R., and Kumar, V., "**Experimental Comparative Study of Rectangular, Circular, and Triangular Microstrip Antennas at 2.45GHz**," **1st International Conference on Advances in Communication and Computational Devices (ICACCD-2024),** 4-5, Oct.,2024, Bangalore, India.
14. Maouni, S., Salhi, A., Elfergani, I., ZEBIRI, C., Rodriguez, J., Gil-Castiñeira, F., Mousa, Y. A., and **Varshney, A.**, "**Design of Biomedical Wearable Patch Antenna miniaturized with Low SAR Content Communication Technologies**," **IEEE 2024 International Conference on Advances in Electrical and Communication Technologies (ICAECT-2024)**, 1-3, Oct.,2024, Sétif, Algeria.
15. Salhi, A., Maouni, S., Elfergani, I., ZEBIRI, C., Rodriguez, J., **Varshney, A.**, and Mousa, Y. A. "**Design of a Compact UWB SISO Antenna for Enhanced Wireless Communication Systems**," **IEEE 2024 International Conference on Advances in Electrical and Communication Technologies (ICAECOT-2024),** 1-3, Oct.,2024, Sétif, Algeria.
16. **Varshney, A.,** "**Gla-Net: A Deep Learning Model for Glaucoma Detection**," 2nd **International Conference on Robotics, Automation and Intelligent Systems (ICRAINS-24)**, organized by Division of Robotics Engineering, Karunya Institute of Technology and Sciences, Coimbatore, on 17th April 2024.
17. Tiwari, M. M., Sharma, V., and **Varshney, A. K.,** "**Analysis of Rainfall as Well as Ground Water on the Basis of Vedic Literature**," **International Conference Veda Vijnana & Sanskriti MahaKumbha,** Organized by Gurukul Kangri (Deemed to be University), Haridwar, Uttarakhand, on 23-25 December 2023.
18. Singh, S., **Varshney, A.,** Sharma, A. K., and Sharma, V., "Journey of Saptarishi Mandal to modern scientific compass for direction evaluation and various symbols in modern engineering using astronomy," **International Conference Veda Vijnana & Sanskriti Maha Kumbha**, Organized by Gurukul Kangri (Deemed to be University), Haridwar, Uttarakhand on 23-25 December 2023.
19. **Varshney, A.,** Panwar, S., Tiwari, M. M., and Singh, S., "Generation of Electricity from Havan and Havan Kund," **International Conference Veda Vijnana & Sanskriti Maha Kumbha,** Organized by Gurukul Kangri (Deemed to be University), Haridwar, Uttarakhand, on 23-25 December 2023.
20. **Varshney, A.**, Singh, S., Singh, S. K., Sharma, V., Garg, T., and Singh, S., "Low-Cost Wideband Triangular-Notched C-Shaped Wearable Monopole Antenna for PCS and ISM Band Applications," **11th International Conference on Advancements in Engineering & Technology (ICAET - 2023)**, Organized by Bhai Gurdas Institute of Engineering and Technology (BGIET), Sangrur, Punjab, India, on 23-24 Nov. 2023.
21. **Varshney, A.**, Singh, S. K., Garg, T., Singh, S., and Kinda, J. S., "Miniaturized Dual-band Lamp-Shaped Wearable Monopole Antenna for ISM and Public Safety Bands," **11th International Conference on Advancements in Engineering & Technology (ICAET - 2023)**, Organized by Bhai Gurdas Institute of Engineering and Technology (BGIET), Sangrur, Punjab, India, on 23-24 Nov.

2023.
22. **Varshney, A.**, Gangwar, R. P. S., Raturi, S., Joshi, S., Rana, A., and Pandey, P., "Antenna Gain Enhancement using Yagi-Uda Inspired Multi-layered Microstrip Antenna for Military, Satellite and GPS Applications," **11th International Conference on Advancements in Engineering & Technology (ICAET - 2023),** Organized by Bhai Gurdas Institute of Engineering and Technology (BGIET), Sangrur, Punjab, India, on 23-24 Nov. 2023.
23. **Varshney, A.,** Singh, S., Elfergani, I., Zebiri, C., Hussaini, A., and Rodriguez, J., "An Anti-Symmetric Half Koch-Minkowski Offset Fed Hybrid Fractal Antenna for Sub-6GHz and S-band," **3rd International Multi-Disciplinary Conference "Integrated Sciences and Technologies" IMDC-IST 2023, EAI conference**, American University of Nigeria, Yolo, Nigeria, on 25-27 October 2023.
24. Zebiri, C., Zegadi, R., Bouknia, M., Sayad, D., Elfergani, I., **Varshney, A.,** Mekki, S., Mosbah, S., Rodriguez, J., "Study and Analysis of a Circular Patch Antenna for Biomedical Applications,"**3rd International Multi-Disciplinary Conference "Integrated Sciences and Technologies" IMDC-IST 2023**, American University of Nigeria, Yolo, Nigeria, 25-27 October 2023.
25. **Varshney, A.,** "Findings of Science and Engineering in Vedic Era", in a national conference on "**Knowledge, Cultural traditions & Practices of India**," held at Gurukula Kangri (Deemed to be University), Haridwar, at 29-31 March 2023.
26. **Varshney, A.,** "The Vedic Traditions of Engineering", in a national conference on "**Knowledge, Cultural traditions & Practices of India**," held at Gurukula Kangri (Deemed to be University), Haridwar, at 29-31 March 2023.
27. **Varshney, A.K.,** "An Offset Fed Double Symmetric Koch Fractal Antenna for Sub-6GHz and S-Band Applications," 2nd National Conference on **Recent Advances in Communicative Electronics (NCRACE 2023)**, Organized by ECE Department, SRM TRP Engineering College, Tamil Nadu, on 9-10 March 2023.
28. **Varshney, A.,** Sharma, V., and Singh, S., "An Inline G-band WR-5 Transition using Antipodal Dipole Antenna as Launcher @ 180GHz for Sub mm-wave Lower THz Applications," **10th International Conference on Advancements in Engineering and Technology (ICAET-2022),** Organized by BGIET, Sangrur, Patiyala, Panjab, India, on 11-12, November 2022.
29. Singh, S., **Varshney, A.,** Sharma, V., and Singh, S., "Low-Cost slitted Hybrid Fed Monopole Miniaturize Antenna for Dual Band PCS and ISM Band Applications," **10th International Conference on Advancements in Engineering and Technology (ICAET-2022),** Organized by at Bhai Gurudas Institute of Engineering and Technology (BGIET), SANGRUR, Punjab on 11-12 November 2022.
30. **Varshney, A.,** and Sharma, V., "Design and Optimization of RWG-to-MS Line Ka-Band Transition for Wireless, Satellite and RADAR Applications**," International Conference on Emerging Trends in Information & Communication Technologies** (ETICT-2022), organized by Sethu Institute of Technology, Anna University, Chennai, India, on 28-29 May 2022.
31. Evangelin, P.S., Neebha, T. M., Andrushia, A. D., Jayasingh, J.R., **Varshney, A.**, and Mary, X. A., "Design and Analysis of Meander Slitted Monopole Antenna for Wireless Application," 2022 6th **International Conference on Devices, Circuits and Systems (ICDCS),** organized by Karunya Institute of Technology and Sciences, Coimbatore, India, on 21-22 April 2022.
32. **Varshney, A.,** and Sharma, V., "Using a reverse approach to obtain an efficient design for a wideband MS line-RWG hybrid transition," **Virtual International Conference on Emerging Trends in Applied Sciences (ETAS-2021),** Jointly organized by Veer Narmad South Gujarat University, Surat, India and Vyatka State University, Kirov, Russia on 28-29 October 2021.
33. **Varshney, A.,** and Sharma, Vipul, "Circuits for digital modulation," in Proceedings of the National Conference on **Emerging Trends in RF and Engineering Sciences (ETRES'18)** organized by Dept of ECE, FEAT, Annamalai University on 26-27 April 2018. ISBN:97898193631232.
34. **Varshney, A.,** "Cost-effective generation of digital modulation techniques (ASK, FSK, and PSK) using LF 398 IC," in the one-day national conference on "**Shodarth 2017**" organized by NIT, Delhi

on 9 December 2017.
35. **Varshney, A.,** "Earth Energy Harvesting Using Various Antennas," in the two-day AICTE-sponsored (QIP Grant) national conference on "**Recent Advances in Electronics and Communication Engineering,**" organized by Madahv Institute of Technology and Sciences (MITS), Gwalior, on 4-5 March 2016.
36. **Varshney, A.,** "Effects of Pain Rays or Microwave Radiations on Human Body," in the national conference on **"Emerging Trends in Engineering & Sciences" (ETES-2013)** organized by FET, GKV, Haridwar, Uttarakhand, on 9-10 November 2013.
37. **Varshney, A.,** "A Microstrip Patch Antenna with Aperture Coupled Technique@ 5.9GHz," in the national conference on **"Emerging Trends in Engineering & Sciences" (ETES-2013)** organized by FET, GKV, Haridwar, Uttarakhand, on 9-10 November 2013.
38. **Varshney, A.,** "A Microstrip line-to-Rectangular Waveguide Transition @ 30GHz," in the national conference on **"Progress in Electronics & Allied Sciences" (PEAS-2012)** organized by ECE Department, FET, GKV, Haridwar, Uttarakhand on 3-4 November 2012.
39. **Varshney, A.,** and Mishra, N., "Preparation and Characterization Method of ActivatedCarbon from the Pyrolysis of Organic Waste," in the national conference on **"Progress in Electronics & Allied Sciences" (PEAS-2012)** organized by ECE, Department, FET, GKV, Haridwar, Uttarakhand, on 3-4 November 2012.

REVIEWER:

S. No.	Journal Name
1.	Progress in Electromagnetic Research (PIER, PIER B, PIER M)
2.	Scientific Reports
3.	Discover Electronics
4.	Cluster Computing
5.	Discover Applied Sciences
6.	Analog Integrated Circuits and Signal Processing
7.	International Journal of Electronics (IJE)
8.	Physica Scripta
9.	Microwave Review
10.	Southeast Asia Development Research
11.	Journal of Electromagnetic Waves and Applications
12.	Indian Journal of Science & Technology
13.	Journal of Engineering and Technological Sciences (JETS)
14.	Applied Computational Electromagnetics Society Journal (ACES)
15.	Optical and Quantum Electronics
16.	Advanced Wireless Communication Systems: A Comprehensive Guide

EXTRA CONTRIBUTIONS: (Guided 02 M.Tech students Projects)

Supervised two M.Tech students from other universities in their Major Projects.

a. **Name of the Student:** Mr. Divyanshu Gaur (Registration No. 20200498)
University: Mangalayatan University, Aligarh (U.P.)
Project Title: Substrate Integrated Waveguide-to-Microstrip Line Transition.
Duration of Project: Six Months (January 2022 to June 2022)

b. **Name of the Student:** Ms. Nishigandha Shantaram Cholake (Enrollment No. 170240708003)
University: Uttarakhand Technical University, Dehradun (Uttarakhand)
Project Title: A microstrip patch antenna at 2.45 GHz for Bluetooth and WLAN applications.
Duration of Project: Nine Months (February 2021 to October 2021)

LECTURES/INVITED TALKS: (No. 07)

Lectures/ Invited Talks
1. Delivered one session (Invited Speaker) on "**Circular Layout Hybrid Patch CSRR Loaded Antenna for Sub-6GHz n77, n78, n79 Bands Applications with Applications-Interference Eliminations**," in the 1st International Conference on Green Engineering for Sustainable Future (ICoGESF-2025), State University of Surabaya, Indonesia, 2025, 5 July 2025.
2. Delivered two sessions (Interactive Lectures) on "**Microstrip Antenna Design and Fabrication**," in the state-level one-week residential program on Skill development in electronics (Hardware, Software & Devices) organized by the School of Electronics and Communication Engineering, **Shri Mata Vaishno Devi University (SMVDU), Katara (J & K),** from 11-15 March 2024.
3. Delivered an e-expert talk (**Keynote Speaker**) on "**Microstrip to Waveguide Transition and their role in mm-wave future wireless communications**," at **Bhai Gurdas Institute of Engineering and Technology (BGIET), Sangrur, Punjab, India**, on 12th June 2023.
4. Delivered an e-expert talk (**Keynote Speaker**) on "**Substrate Integrated Waveguide and their components for 5G and beyond Communication**," at **Bhai Gurdas Institute of Engineering and Technology (BGIET), Sangrur, Punjab, India**, on 22nd May 2023.
5. Delivered an e-expert talk (**Keynote Speaker**) on "**RLC Equivalent Circuit Modelling and Generation for Microstrip Antenna and Microwave Components**," at Bhai Gurdas Institute of Engineering and Technology (**BGIET), Sangrur, Punjab**, India, in Association with **IEEE Prakash Bharti India, IEEE Photonics Society (Rajasthan Chapter, Delhi Section) and Great Alliance Foundation** from 23rd -27th January 2023.
6. Delivered an **Invited talk** on "**Research Paper Writing**," in **National Workshop on Research and Innovation** by Researchers organized by the Department of Computer Science & Engineering, Faculty of Engineering & Technology, Gurukula Kangri (Deemed to be University), Haridwar in collaboration with IIC Cell GKDU, G20 Events Committee, & NDLI Club on 27th Feb 2023.
7. Delivered a **Lecture** on "**Transmission Lines: The base of Transitions Interconnect for Space and Radar Communication**," in a one-day workshop on **Teaching and Learning Methods in Science & Technology** organized by the Faculty of Engineering & Technology, Gurukula Kangri (Deemed to be University), Haridwar, on 09th January 2023.

FACULTY DEVELOPMENT PROGRAMS (FDP): (No.: 07)

Faculty Development Programs (FDP) (No. 07)
1. Participated & completed AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "5G Antenna Design Engineering" from 06/12/2021 to 10/12/2021 at MAILAM ENGINEERING COLLEGE, Mailam, Tamil Nadu.
2. Participated & completed AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Recent Trends and Advances in Photonic Integrated Circuits and Its Applications" from 04/10/2021 to 08/10/2021 at University Institute of Technology, Himachal Pradesh.
3. Participated & completed AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Smart City Technologies" from 20/09/2021 to 24/09/2021 at Gurukul

Kangri Vishwavidyalaya, Haridwar
4. Attended a Webinar on" Reconfigurable Antennas and Prospective Applications" Organized by the IEEE APS Chapter Student Branch and the IEEE Student Branch MNIT, Jaipur, 15 March 2022.
5. Participated in a two-day Faculty development program (FDP) on **"Teaching and Soft skills", at the Faculty of Engineering and Technology, Gurukula Kangri University, Haridwar (Uttarakhand)** from October 3-4, 2018.
6. Participated in a one-week AICTE-approved Faculty development program (FDP) on **"Advances in Information" (AIS-2016) at Delhi Technological University, Delhi,** from January 18-22, 2016.
7. Participated in a two-week AICTE-approved Faculty development program (FDP) on **"Power Transmission, Generation and distribution"** at Vishwesharya Group of Institutions, Greater Noida, from June 16-27, 2015. That includes various industrial visits a. NPCIL, Narrora b. NTPC, Dadari c. BHEL, Haridwar d. Hydro-power plant, Chilla, and e. UPPTCIL, Palli Noida.

SHORT TERM COURSE AND WORKSHOPS: (No.: 02)

Short Term Course (STC) (No. 02)
1. Attended a one-week AICTE-recognized Short Term Course (STC) on **"Fiber Optic Tests and Measurements"** from October 24-28, 2016, at the National Instituteof Technical Teachers Training and Research **(NITTTR)**, Chandigarh.
2. Attended a one-week AICTE-recognized Short Term Course (STC) on **"Emotional Intelligence"** from July 11-15, 2016, at the National Institute of Technical Teachers Training and Research **(NITTTR)**, Chandigarh.
Workshops: (No. 07)
1. Attended a one-day national workshop on **"Academic Writing & Research Ethics"** organized by the Faculty of Management Studies and IPR Cell, **Gurukula Kangri Vishwavidyalaya, Haridwar, on February** 24, 2020
2. Attended a one-day national workshop on **"Patents (Requirements, Filing, Strategy)"** jointly organized by IPR Cell, FET, Intellectual Property RightsCell, and External Affairs Interface Cell, **Gurukula Kangri Vishwavidyalaya, Haridwar, on February** 10, 2020**.**
3. Attended a two-day national workshop on **"Artificial Neural Networks with MATLAB implementation"** organized by the Department of Computer Science, **Gurukula Kangri Vishwavidyalaya, Haridwar, from January** 24- 25, 2020**.**
4. Attended a two-day conference on **"Emerging Trends in RF & Engineering Sciences"** at **Annamalai University, Tamilnadu on April** 26-27, 2018**.**
5. Participated in a one-day online workshop on **"Hands-on Exposure in LaTeX,"** at FET, GKV, Haridwar, conducted by IIT, Bombay, on May 02, 2017.
6. Participated in a one-day workshop on the **"Personalized Recommender System"** at the **Indian Institute of Technology, Roorkee,** on December 12, 2015.
7. Participated in a three-day conference **"National Symposium on Instrumentation" (NSI-**

39) jointly organized by **FET, GKV, Haridwar, and** the **Indian Institute of Science, Bangalore,** held at the Faculty of Engineering&Technology**,** GKV, Haridwar, on October15-17**,** 2014.

AWARDS: (No. 01)

1. **Received best paper award,** Wadhwa, D. S., Singh, S., and **Varshney, A.,** "Design and Analysis of DGS MIMO Antenna for Satellite Communication Applications," **1st International Conference on Advances in Communication and Computational Devices (ICACCD-2024),** 4-5, Oct.,2024, Bangalore, India.

SESSION CHAIR: (No. 01)

1. **Session Chaired** in International Conference on Sustainable Development in Computational Optimization and Intelligent Systems (ICSDCOIS-2025), BGIET, Sangrur, Punjab, India, 2025, 24-25 April 2025.

PROJECTS:

Ph.D TOPIC: "Microstrip Line to Rectangular Waveguide Transition for Microwave and Millimeter Wave Applications," Under the supervision of Head (ECE) and Dean (FET, GKDU) Prof. (Dr.) Vipul Sharma.

During Ph.D., I have designed many microstrip-to-rectangular waveguide transitions for various microwave bands, modeled, prototyped, and measured them for validation. The transitions have been designed from X-band to G-bands. The novelty of the work is that transition antennas are designed and utilized as energy launchers. Therefore, different types of antennas are also designed and learned for transitions. That mainly consists of rectangular, circular, elliptical microstrip antennas, frequency reconfigurable antennas, pattern reconfigurable antennas, wearable/textile antennas, nature-inspired antennas, MIMO antennas, Substrate Integrated Waveguide antennas, etc. Apart from these, fabrication and measurements, validation, and parameter investigations are the main interests of the work.

M.TECH. PROJECTS:

a. **MAJOR PROJECT: "DESIGN of Microstrip to Waveguide Launcher (Transitions) &Vice-Versa at 30 GHz,"** Work Carried Out at **Indian Space Research Organization (ISRO-SAC), Ahmedabad,** under the guidance of **Scientist R.K. BAHL**.
b. **MINOR PROJECT: "Design of Ring Resonator at 10 GHz,"** from M.I.T.S., Gwalior, under the guidance of **Prof. (Dr.) P.K. Singhal**.

B.TECH. PROJECT:

B.TECH. FINAL PROJECTS: "Home Automation Control System for Switching of Eight Devices Using Microcontroller 89S52," under the guidance of Asst. Prof. Dinesh Singh.

TRAINING:

ORGANIZATION: "Six-month project training at ISRO-SAC Ahmedabad," in SPTA/CAD/PAG **division from** 1 Jan 2008 to 30 June 2008.

ORGANIZATION: "One-month training at BSNL Agra" in EWSD & E-10B Exchange from 1 June to 30 June 2004.

SOFTWARE PROFICIENCY:

Operating Systems: MS-DOS, Win98, Win2000, Windows XP, Windows 2007, Windows 2010, Windows 2011**, MS-Excel**.

Programming skills: C, C++, Python, MATLAB, IoT.

Extra Skills: Knowledge of antennas, transmission line theory, and passive RF circuit design; experience with EM simulation tools such as HFSS; able to measure antennas, RF passive, and Active Circuits using spectrum and network analyzers; prototype building, testing during, and early production stages.

- Antenna/PCB Self-Fabrication without using machines.
- RF Equivalent circuit generation.
- MIMO Antenna Fabrication and Analysis
- Fractal antenna 5G and 6G Antenna design
- Frequency Reconfigurable antenna
- Substrate Integrated Waveguide Antenna Design and Fabrication
- Microwave Filter, Microwave absorber, and Microwave transitions design, etc.

CST-MWs STUDIO, FeKo, Ie-3D, ADS, HFSS: Used for the Microwave Devices project Design

Corel Draw, CAD STAR, LAB-View, Origin-Pro: Used for film designing, etc.

Multisim, Proteus, Xilinx.ISE: Used for digital circuit design support for HDL&VHDL language

Target3001, Proteus, P-spice: Used to design Network Circuits and PCB design

PERSONAL DETAILS:

Name	Atul Kumar Varshney
Date of Birth	26.09.1984
Father's Name	Shri Hari Shankar Gupta
Marital Status	Married
Nationality	Indian
Permanent Address	H-6, Gali No. 4, Dayal Enclave, Jamalpur Kalan, Haridwar-249407 Uttarakhand

DECLARATION:

I declare that the information given above is complete and correct to the best of my knowledge and experience.

Date: 06/10/2025
Place: Haridwar

(Dr. Atul Kumar Varshney)