ANNUAL PROGRESS REPORT (2024-25)

01 July 2024- 30 June 2025

Department of Electronics & Communication Engineering
Faculty of Engineering & Technology, GKV Haridwar

About the Department:

Electronics has become the backbone of modern life, powering everything from smartphones, computers, and fitness trackers to navigation systems, medical devices, and entertainment platforms. Behind every such innovation lies the foundation of electronic systems, which continue to shape the way we live, work, and connect with the world.

The **Department of Electronics & Communication Engineering (ECE)** at the **Faculty of Engineering & Technology, Gurukula Kangri (Deemed to be University), Haridwar**, is dedicated to advancing this transformative field. The department blends teaching, research, and innovation to prepare students for the rapidly evolving demands of the industry. Today's and tomorrow's requirements—such as faster and more reliable communication solutions, energy-efficient systems, advanced storage technologies, and intelligent processing—form the core of our academic and research endeavors.

Our expertise spans a wide range of areas, including **microelectronics, wireless communication, signal and image processing, navigation technologies, nanotechnology, embedded systems, and voice & music processing**. With this broad spectrum, the department nurtures students not only in theoretical foundations but also in practical problem-solving and cutting-edge research.

Established in **2001**, the department holds the distinction of being the **pioneer department of the Faculty of Engineering & Technology (FET)**. What began with a modest intake of 30 students has, over time, flourished into one of the most sought-after programs, now accommodating **115 bright minds each year**. This growth reflects the department's consistent excellence in academics, innovation, and student development.

Located in the serene and inspiring environment of **Shardhanand Puram, Bhadrabad, Haridwar**, the Department of ECE continues to uphold its mission of shaping competent engineers, researchers, and innovators who contribute meaningfully to industry, academia, and society.

Head of the Department: Dr. Vipul Sharma

Faculty Members:

1. Dr. Tanuj Garg (In charge)
2. Mr. Anuj Kumar Sharma
3. Mr. Shiv Kumar Singh
4. Dr. Gorav Kumar Malik
5. Dr. Ashish Nainwal
6. Dr. Atul Varshney
7. Mr. Prateek Agarwal
8. Mr. Amrish
9. Mr. Sanjay Singh

1. Publication work/Research work
   A. Number of Research Papers Published:**21** (**Annexure-1)**
   B. Number Project Completed/Ongoing: **01 (Annexture-2)**

2. Paper presented in Seminars/Conference/Webinar/Workshop: **22 (Annexture-3)**

3. Awards from Society or Government: **Nil**

4. No. of Seminars/Conferences/Webinar/Workshop organized: **04(Annexture-4)**

5. Any other Important Information: **(Annexure-5)**
   1. Book Chapter Published: - **03**
   2. List of patents published/granted by the department: **01**
   3. FDP/STC/Refresher course attended by the faculty: - **09**
   4. Conference full-length paper published: **08**
   5. Invited lecture given by Faculties**: 01**

Head
Department of ECE
Faculty of Engineering & Technology

Annexure-1

Details of Research Publications

1. Ashish Nainwal, Gorav Kumar Malik, and Amrish. "Production and optimization of soybean biodiesel production at fixed temperature 50 °C with RSM and ANN." *Environmental Science and Pollution Research* (2025). doi:10.1007/s11356-025-36564-4.

2. Prateek Agarwal, T. K. Garg, and A. Kumar. "Router chip with RSA embedded security for delay and power study in sensory data communication." *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences* 95 (2025): 163–175.

3. Prateek Agarwal, et al. "Fingerprint recognition using artificial neural networks." *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences* 95 (2025): 127–135. doi:10.1007/s40010-025-00917-y.

4. Anuj Kumar Sharma, Vipul Sharma, and Sanjay Singh. "Design and fabrication of mutually coupled feed-based Cantor fractal patch antenna array for satellite communication." *International Journal of Microwave and Optical Technology* 20.2 (2025): 78–90.

5. Anuj Kumar Sharma, Vipul Sharma, and Sanjay Singh. "Design and fabrication of SRR-loaded cantor fractal slotted DGS antenna using quarter wave transformer fed for microwave C-band communication." *Progress in Electromagnetics Research C* 153 (2025).

6. Atul Varshney, et al. "Low SAR-UWB rectangular microstrip magnetic monopole antenna for S-band and biomedical applications." *ACES Journal* 40.3 (2025): 212–225.

7. Sanjay Singh, Vipul Sharma, N. Sharma, and Atul Varshney. "Low-profile nature-inspired triple-tuned parasitically loaded with SRR quadruplets antenna for SDARS and weather RADAR." *Microwave Review* (2024).

8. Atul Varshney, et al. "Microwave and mm-wave band-wise microstrip line-to-waveguide transitions: A review." *Microwave Review* (2024).

9. Atul Varshney, et al. "Low-loss high gain 1×4 circular microstrip frequency reconfigurable array for X-band applications." *International Journal of RF and Microwave Computer-Aided Engineering* (2024). doi:10.1155/1970/5760927.

10. Atul Varshney, et al. "Design of biomedical wearable patch antenna miniaturized with low SAR content." *International Conference on Advances in Electrical and Communication Technologies (ICAECOT)* (2025): 1–6. doi:10.1109/ICAECOT62402.2024.10828726.

11. Atul Varshney, et al. "Novel mutually-coupled with microstrip glass fed circular ring antenna for Wi-Fi WLAN and ISM band applications." *International Journal of Electronics Letters* (2025): 1–17. doi:10.1080/21681724.2025.2487795.

12. Atul Varshney, et al. "Antenna miniaturization and application in-band interference reduction using dipole array mirror reflector FSS for Sub-6 GHz applications." *Physica Scripta* 100 (2025): 035517. doi:10.1088/1402-4896/adb0fc.

13. Atul Varshney, et al. "Compact metasurface antenna for Sub-6 GHz applications with isolated n77/n78 bands using CSRR." *Physica Scripta* 100 (2024): 015508. doi:10.1088/1402-4896/ad96f1.

14. Atul Varshney, et al. "Characterizations of effective parameters and circuit modeling of U-coupled hybrid ring resonator band pass filter." *IEEE Access* 13 (2025): 2529–2545. doi:10.1109/ACCESS.2024.3523440.

15. Atul Varshney, et al. "Gain and bandwidth enhancement using superstrate-loaded 2×2 circular-array antenna for X-Band and RADAR applications." *International Journal of Electronics* (2024). doi:10.1080/00207217.2024.2431994.

16. Atul Varshney, et al. "Microwave and mm-wave band-wise microstrip line-to-waveguide transitions: A review." *Microwave Review* 30.2 (2024): 99–123.

17. Sanjay Singh, Vipul Sharma, S. Narinder, and Atul Varshney. "Microwave and mm-wave band-wise microstrip line-to-waveguide transitions: A review." *Microwave Review* 30.2 (2024): 23–35.

18. Atul Varshney, et al. "Wearable wideband textile coplanar Vivaldi antenna for medical and IoT application." *Progress in Electromagnetics Research C* 148 (2024): 145–156.

19. Atul Varshney, et al. "High-gain multi-band Koch fractal FSS antenna for Sub-6 GHz applications." *Applied Sciences* 14.19 (2024): 9022.

20. Atul Varshney, et al. "Design and investigation of orthogonal hybrid dual-mode single-CDR-based MIMO antenna with high self-isolation at 5.8 GHz." *IEEE Access* (2024). doi:10.1109/ACCESS.2024.3467035.

21. Atul Varshney, et al. "Offset-fed slotted antenna practically loaded with split ring as water quality sensor for X-Band industrial applications." *Advanced Electromagnetics* 13.2 (2024): 39–52.

Annexure-2

1. Dr. Tanuj Garg has completed a DRDO-funded research project titled "Beam scanning rate enhancement in leaky wave antenna at X-Ku at a fixed frequency." The duration of the project is 2.5 years, and the total fund is Rs. 33.43570 Lakh.

Annexure-3

1. Mr. Anuj Kumar Sharma presented a paper in the 2nd International Conference on Emerging Materials, Smart Manufacturing, and Computational Intelligence (ICEMSMCI-2024) at Chitkara University, Punjab, on 18-19 July 2024, on the topic Design and Performance Analysis of High-Gain Dual-Band Rectangular Microstrip Patch Antenna Array for IoT Application.

2. Mr. Anuj Kumar Sharma presented a paper in the 3rd IEEE World Conference on Applied Intelligence and Computing (AIC-2024) at Soft Computing Research Society, Gwalior, India, on 27-28 July 2024, on the topic Design and Performance Analysis of CSRR Loaded High Gain Multiband Rectangular Microstrip Patch Antenna Array (1x2) for IoT and wireless applications.

3. Mr. Sanjay Singh presented a paper in the International Conference at the Department of Mechanical Engineering, Gurukula Kangri University, Haridwar, "Automation for Sustainable Future" from 7-8 March 2025 on the topic Dual Tuned Decagon Antenna for V2V and ISM band Application.

4. Mr. Anuj Kumar Sharma presented a paper in the International Conference at the Department of Mechanical Engineering, Gurukula Kangri University, Haridwar, "Automation for Sustainable Future" from 7-8 March 2025, on the topic Design and Simulation of Microstrip Patch Antenna for Internet of Things (IoT) Applications.

5. Dr. Atul Varshney presented a paper titled "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.

6. Dr. Atul Varshney presented a paper titled "Design and Investigation of the Lower THz Decagon Slotted Antenna for Biomedical Imaging and Bio-sensing Applications" in the International Conference on Sustainable Development in Computational Optimization and Intelligent Systems (ICSDCOIS-2025), BGIET, Sangrur, Punjab, India, 2025, 24-25 April 2025.

7. Dr. Atul Varshney presented a paper titled "Practically Cross-loaded Circular-cut Filleted Rectangular Patch Dual-band Millimeter-wave Antenna for Sub 24GHz (FR2) 5G Applications", in the 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. Dr. Atul Varshney presented a paper titled "Dual-band inset-fed CSRR loaded rounded corner rectangular patch antenna for sub-6 GHz 5G applications in-band applications interference minimization", in the 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. Dr. Shiv Kumar Singh presented a paper titled "High-gain miniaturized wearable narrowband hexagonal-shaped antenna for ISM band applications", in the International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.

10. Dr. Atul Varshney presented a paper titled "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.

11. Dr. Atul Varshney presented a paper titled “SSR-loaded mutually-coupled wideband antenna for sub-6 GHz 5G applications”, in the International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.

12. Dr. Sanjay Singh, Vipul Sharma, Atul Varshney, Anuj Sharma, Narinder Sharma, presented a paper titled “Dual-tuned decagon antenna for V2V and ISM band applications”, in the International Conference for Automation for Sustainable Future (INCAFS-2025), FET, Gurukula Kangri (Deemed to be university), Haridwar, Uttarakhand, India, 2025, 7-8 March 2025.

13. Dr. Atul Varshney presented a paper titled “SRR Loaded CPW Fed Split Octagon Antenna with Isolated 5G Sub-6 GHz n77/78 and n79 Bands,” in the 3rd NIELIT's International Conference on Communication, Electronics and Digital Technologies (NICEDT-2025), NIELIT Ropar, India, 2025,14-15 February 2025.

14. Dr. Atul Varshney presented a paper titled “Dual-Band CSRR Loaded Ring Antenna for ISM, Wi-Fi, and Sub-7 GHz Wireless Applications without In-band Applications Interference,” in the 3rd NIELIT's International Conference on Communication, Electronics and Digital Technologies (NICEDT-2025), NIELIT Ropar, India, 2025, 14-15 February 2025.

15. Dr. Atul Varshney presented a paper titled “Analysis and Investigation of CPW Fed Parasitically Loaded Rectangular Patch Antenna for Wi-Fi5 in 5G and 6G Applications”, in the 3rd NIELIT's International Conference on Communication, Electronics and Digital Technologies (NICEDT-2025), NIELIT Ropar, India, 2025, 14-15 February 2025.

16. Dr. Atul Varshney presented a paper titled “Design and Analysis of DGS MIMO Antenna for Satellite Communication Applications,” in the 1st International Conference on Advances in Communication and Computational Devices (ICACCD-2024), 4-5, Oct.,2024, Bangalore, India.

17. Dr. Atul Varshney presented a paper titled “Experimental Comparative Study of Rectangular, Circular, and Triangular Microstrip Antennas at 2.45GHz,” in the 1st International Conference on Advances in Communication and Computational Devices (ICACCD-2024), 4-5, Oct.,2024, Bangalore, India.

18. Dr. Atul Varshney presented a paper in the 2nd International Conference on Robotics, Automation and Intelligent Systems (ICRAINS-24), organized by the Division of Robotics Engineering, Karunya Institute of Technology and Sciences, Coimbatore, on 17th April 2024.

19. Dr. Atul Varshney presented a paper titled “Design of a Compact UWB SISO Antenna for Enhanced Wireless Communication Systems,” in the IEEE 2024 International Conference on Advances in Electrical and Communication Technologies (ICAECOT-2024), 1-3, Oct.,2024, Sétif, Algeria.

20. Dr. Atul Varshney presented a paper titled “Design of Biomedical Wearable Patch Antenna miniaturized with Low SAR Content Communication Technologies,” in the IEEE 2024 International Conference on Advances in Electrical and Communication Technologies (ICAECT-2024), 1-3, Oct.,2024, Sétif, Algeria.

21. Dr. Tanuj Garg presented a paper titled “ Multi-Band Leaky Wave Antenna Using SIW for Continuous Beam Scanning” in the International Conference on "*Automation for*

Sustainable Future" organised by the Faculty of Engineering & Technology, Gurukul Kangri Deemed to be University, Haridwar. 7-8 March, 2025.

22. Mr. Amrish presented a paper titled "A novel Hybrid Multi-Population GTO-BWO Method for PN Junction Diode Parameter Estimation" in the International Conference on "*Automation for Sustainable Future*" organised by the Faculty of Engineering & Technology, Gurukul Kangri Deemed to be University, Haridwar. 7-8 March, 2025.

Annexure-4

Event 1

REPORT ON WORKSHOP: "ADVANCED EMBEDDED SYSTEM DESIGN"

The **ECE Department,** in collaboration with **Sofcon India Pvt. Ltd.**, successfully organized a **workshop on "Advanced Embedded System Design"** on **September 9, 2024**. The event was held in the **Old Seminar Hall** from **11:00 AM to 2:00 PM** and saw active participation from students eager to enhance their knowledge of embedded systems.

The workshop focused on the practical aspects of **embedded hardware used in industries**, including **Arduino, Raspberry Pi, AVR microcontrollers**, and other industry-standard tools. Experts from **Sofcon India Pvt. Ltd.** demonstrated real-world applications of these technologies and provided insights into their role in modern automation and embedded system design.

With a participation of approximately **100 students**, the session was highly interactive, featuring live demonstrations and discussions on embedded technology trends. The students gained hands-on exposure to hardware components and their implementation in real-world scenarios.

The event was coordinated by **Dr. Tanuj Garg** and **Mr. Anuj Kumar Sharma**, who ensured the smooth execution of the workshop. Their efforts, along with the collaboration of Sofcon India Pvt. Ltd., made the event a valuable learning experience for all attendees.

The workshop concluded with a Q&A session, where students engaged with experts to clarify doubts and explore further opportunities in embedded systems. Overall, the event was **a great success**, equipping students with essential industry knowledge and practical exposure to cutting-edge embedded technologies.

The following is a glimpse of the event:

Event 2:

Report on Trailblaze Rover Race Competition

On October 18, 2024, the R&A Club of the Department of Electronics and Communication Engineering at the Faculty of Engineering and Technology (FET) successfully organized the "Trailblaze Rover Race Competition." The event witnessed enthusiastic participation from 11 teams, showcasing their technical expertise, creativity, and teamwork.

After a series of challenging rounds, Team Pushpak emerged as the champion of the competition, displaying exceptional design and performance capabilities. Team Bolt Brawlers

secured the runner-up position, demonstrating impressive skills and innovation in rover design and navigation.

The competition was conducted under the esteemed guidance of Dr. Vipul Sharma, Dean of FET, whose leadership and support were instrumental in the event's success. Additionally, faculty members Dr. Tanuj Garg, Mr. Anuj Kumar Sharma, and Mr. Sanjay Singh served as teacher coordinators, providing valuable mentorship and oversight throughout the competition.

Student coordinators Mr. Subrat Mandal and Mr. Rahul played a pivotal role in ensuring the smooth execution of the event. Their dedication and meticulous planning contributed significantly to the seamless management of the competition, fostering an environment of enthusiasm and healthy competition among the participants.

The Trailblaze Rover Race Competition served as a platform for students to apply their engineering knowledge in a practical setting, promoting innovation and technical excellence. The event concluded on a high note, with participants and attendees expressing appreciation for the engaging and well-organized competition.

Overall, the event was a resounding success, reinforcing the commitment of the R&A Club and the Department of Electronics and Communication Engineering at FET, GKV (DU) towards fostering a culture of technical innovation and experiential learning.

The following is a glimpse of the event:


EVENT ORGANISER
GPS Map Camera
Haridwar, Uttarakhand, India
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EVENT ORGANISER
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EVENT ORGANISER
GPS Map Camera
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Event 3:

Report on Workshop on Embedded Systems and Robotics

On 23rd October 2024, the Robotics and Aeromodelling Club of the Department of ECE, Faculty of Engineering and Technology, organized a comprehensive workshop on Embedded Systems and Robotics. The event was designed to provide students with hands-on experience and theoretical knowledge in this rapidly advancing field.

The workshop was conducted by the esteemed alumnus, Himanshu Shiva, who shared his vast expertise on various technical topics. His sessions covered essential subjects such as Sensor Design, Motor Drivers, Motors, STM32 Microcontroller, PCB Design, and many more. Through detailed explanations and practical demonstrations, the students gained valuable insights into the intricacies of embedded systems and robotics.

The event was honored by the presence of distinguished faculty members, including Dean Dr. Vipul Sharma, Head of the Department of Computer Science Dr. Mayank Agarwal, and faculty coordinators Dr. Anuj Sharma and Sanjay Singh. Their support and encouragement added immense value to the occasion. Additionally, the student coordinators, Subrat Kumar Mandal and Rahul Khator, played a crucial role in ensuring the smooth execution of the workshop, demonstrating their organizational and leadership skills.

The workshop provided an excellent platform for students to enhance their understanding of embedded systems, robotics, and related technologies. It not only enriched their technical knowledge but also inspired them to explore and innovate within this domain. The interactive sessions enabled participants to engage with complex concepts, making learning both enjoyable and impactful.

Overall, the workshop was a resounding success, leaving participants with a solid foundation in embedded systems and robotics. The enthusiasm and curiosity generated through this event are expected to motivate students to apply their learning to future projects and contribute meaningfully to advancements in this field.

The following is a glimpse of the event:


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Event 4:

Report on the Lecture on the Importance of Yoga in Life Under Skill Enhancement Workshop Organized by ECE, FET on 24th January 2025

The **ECE Department, FET, GK(DU) Haridwar,** organized a **Skill Enhancement Workshop** on **24th January 2025**, focusing on the importance of yoga in life. As part of this initiative, a special lecture on the significance of yoga was conducted, attracting a large number of students, faculty members, and staff.

Objective of the Lecture

The primary aim of the lecture was to **highlight the benefits of yoga** and encourage individuals to incorporate it into their daily routines. The session emphasized how yoga enhances physical health, mental well-being, and overall productivity, especially in academic and professional life.


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Gurukula Kangri (Deemed to be) University, Haridwar
Skill Enhancement Workshop
on
"Importance of Yoga in Life"

Annexure-5

1. Book Chapter Published: -

1. Prateek Agarwal, Dr. Tanuj Garg published a book chapter titled "Low-power embedded system design applications using FPGAs." In Embedded Device and Internet of Things. CRC Press, 2024. ISBN: 9781003510420.
2. Atul Varshney, Vipul Sharma published a book chapter titled "Table lamp inspired miniaturized fractal antenna for 5G enabled green communications in smart cities." In 5G Green Communication Networks for Smart Cities. CRC Press, Taylor & Francis, 2024, pp. 149–166.
3. Atul Varshney, Vipul Sharma published a book chapter titled "A tri-band meander line fed alpha-numeric antenna for military band, WiFi, and 5G wireless green communications." In 5G Green Communication Networks for Smart Cities. CRC Press, Taylor & Francis, 2024, pp. 167–186.

2. List of Patents

1. Dr. Atul Varshney published an Indian Patent titled "**Low-loss four-element enhanced patch mm-wave antenna with gain control tunability and reconfigurable features**" on 30 Oct, 2024, Patent No: 202411083100.

3. FDP/STC/Refresher course attended by the faculty

1. Mr. Anuj Kumar Sharma attended a FDP on "Innovative Technologies for Smart Cities: IoT, AI and Blockchain" Organized by EICT, IIT Roorkee, from 23/12/2024 to 28/12/2024.
2. Mr. Anuj Kumar Sharma attended a FDP on "Cyber Security in AI-based Engineering System" Organized by EICT, IIT Roorkee, from 16/12/2024 to 21/12/2024.
3. Dr. Ashish Nainwal attended a STC on "Electric Vehicles: Issues and Challenges" organized by GBPIET, Pauri, from 2/06/2025 to 6/06/2025.
4. Mr. Amrish attended a STC on "Electric Vehicles: Issues and Challenges" organized by GBPIET, Pauri from 2/06/2025 to 6/06/2025.
5. Dr. Gorav Kumar Malik attended a STC on "Electric Vehicles: Issues and Challenges" organized by GBPIET, Pauri from 2/06/2025 to 6/06/2025.
6. Mr. Amrish attended a ATAL FDP on "Machine Learning for Wireless Networks and Computer Vision with Hands on Experience" organized by DTU from 11/11/06/2024 to 23/11/2025.

1. Conference full-length paper published

1. Anuj Kumar Sharma, Vipul Sharma, and Sanjay Singh. "Design and performance analysis of CSRR-loaded high-gain multiband rectangular microstrip patch antenna array (1×2) for IoT and wireless applications." *2024 IEEE 3rd World Conference on Applied Intelligence and Computing (AIC)*. IEEE, 2024, pp. 1185–1191.

2. Atul Varshney, et al. "Miniaturized biomedical wearable patch antenna design with low SAR content." *2024 International Conference on Advances in Electrical and Communication Technologies (ICAECOT)*, Setif, Algeria. IEEE, 2024, pp. 1–6. doi:10.1109/ICAECOT62402.2024.10828726.

3. Atul Varshney, et al. "Miniaturized biomedical wearable patch antenna design with low SAR content." *2024 International Conference on Advances in Electrical and Communication Technologies (ICAECOT)*, Setif, Algeria. IEEE, 2024, pp. 1–6. doi:10.1109/ICAECOT62402.2024.10828726.

4. Atul Varshney, et al. "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. IEEE, 2024, pp. 1–4. doi:10.1109/ICAECOT62402.2024.10829165.

5. Atul Varshney, et al. "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. IEEE, 2025, pp. 1–4. doi:10.1109/ICAECOT62402.2024.10829165.

6. Atul Varshney, et al. "Study and analysis of a circular patch antenna for biomedical applications." *Proceedings of the 3rd International Multi-Disciplinary Conference on Integrated Sciences and Technologies (IMDC-IST 2023)*, Yola, Nigeria. EAI, 2024. doi:10.4108/eai.25-10-2023.2348742.

7. Atul Varshney, Sanjay Singh, Atul Varshney, et al. "An anti-symmetric half Koch-Minkowski offset fed hybrid fractal antenna for Sub-6 GHz and S-band." *Proceedings of the 3rd International Multi-Disciplinary Conference on Integrated Sciences and Technologies (IMDC-IST 2023)*, Yola, Nigeria. EAI, 2024. doi:10.4108/eai.25-10-2023.2348732.

8. Prateek Agarwal and Tanuj Garg. "Low power estimation for multibit memory writing and reading in hardware chip design." *2024 IEEE International Conference on Smart Devices (ICSD)*. IEEE, 2024. ISBN: 979-8-3503-9441-2.

2. Invited lecture given by the Faculties

1. Dr. Atul Varshney, 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.