

Curriculum vitae

SANJAY SINGH

Khasra no. 621, Raj Vihar colony, near Divine Light School,

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Career Objective:

To serve as a mentor, provide an engaging learning environment, and support a growing academic community to guide and motivate the next generation of academics.

Professional qualification:

Ph.D. (Thesis Submitted 2025) Electronics & Communication Engineering.

Gurukula Kangri (Deemed to be University), Haridwar, India

Thesis Title:	Design and Development of a Hybrid Fractal Antenna using Metamaterial Technologies for Wireless Applications
Supervisor:	Prof. Vipul Sharma (Registrar, Gurukula Kangri (Deemed to be) University), Haridwar.
Co-Supervisor:	Prof. Narinder Sharma (Dean), Amritsar College of Engineering & Technology, Amritsar Group of Colleges, Amritsar, Punjab.

M.Tech (ECE): -2017-2019 with **73.73%** from Uttarakhand Technical University, Dehradun.

B.Tech (ECE):-2007-2011 with **68.38%** from Uttarakhand Technical University, Dehradun.

12th (PCMB): -2006 with **62.00%** from Bal Mandir Sen Sec School (CBSE), Haridwar, Uttarakhand.

10th-2004 with **61.00%** from Army school, Lansdowne (CBSE), Pauri Garhwal, Uttarakhand.

GATE Score: -

2015 - Gate score- 459	2012 – Gate score- 374
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Area of Interest: Smart Antenna, Artificial Intelligence, Hybrid Fractal Antenna, Metamaterial Technologies.

Professional Experience:

A seasoned and dedicated academic professional with over **10 years of extensive experience in academia, research, and administration.** My expertise spans teaching, admissions, placements, and event management, reflecting a balanced contribution to both academic and institutional growth.

Currently, I am working as an **Assistant Professor** in the **Faculty of Engineering and Technology, Gurukula Kangri (Deemed to be) University, Haridwar**, where I teach in the Department of Computer Science Engineering and the Department of Electronics & Communication Engineering. My career is marked by a dynamic blend of academic proficiency and administrative acumen. I have played a pivotal role in the admission process, facilitating smooth enrollment operations and driving significant growth in

student intake. Through my engagement in placement activities, I have helped connect students with rewarding career opportunities, bridging the gap between academia and industry.

Beyond classroom teaching and research, I am deeply committed to student development and institutional enrichment. I have successfully organized and coordinated technical workshops, cultural programs, and faculty development activities, fostering a holistic learning environment that enhances both academic excellence and extracurricular growth. With a proven record of dedication, leadership, and innovation, I continue to contribute to the academic community with a vision to integrate teaching, research, and institutional development for greater impact.

Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand (Jan-2023 – Till Date)

Subject Taught: Embedded Systems, Computer Architecture and Organization, Digital Design Systems, Electronics Engineering, Microprocessor & its Applications, Electronic Devices & Circuits, and low-power devices.

Designation: Assistant Professor in the Electronics and Communication Engineering department.

Ramanand Institute of Pharmacy & Management, Haridwar. (May 2020 – Dec 2021)

Subject Taught: IoT, Computer Networks, Microprocessor, Digital Design, Electronics Engineering, Electronic System Design, Microprocessor & its Applications, Electronic Devices and Circuits, Electronics Engineering, Computational and Numerical Methods, Linear Control Systems, Basic Electrical and Electronics.

Designation: Assistant Professor in Electronics & Communication Engineering

Administrative member of the Admission Cell. During a short period of 2 Years, nearly 50+ admissions in various courses.

Cultural Committee Member: Organized various events as a coordinator.

Examination Coordinator for Internal and External Examination

Swami Darshanand Institute of Management and Technology, Gurukul Mahavidyalaya, Haridwar. (Jan 2012 – Aug 2017, Aug 2019- Mar 2020)

Subjects Taught: Digital Electronics, PLC, Power Electronics, Data Structure, Mathematics, Analog Electronics, Communication Engineering, Electrical Machines, Applied Mechanics, A.C. Machine, D.C Machine, Switchgear, Energy Management, Entrepreneurship Development and Management, C-Language, Biomedical Engineering, Industrial Electronics and Control of Drives, Measurement and Measuring Instrument, etc.

Designation: Lecturer with the additional load of TPO & Examination Controller.

Administrative member of the Admission Cell. 6+ years, nearly 150+ admissions in various courses

Cultural Committee Member: Organized various events with the coordination of the team.

Technical Committee Member: Organized various events such as Robotics fights and Jnanagni.

Examination Coordinator: Coordinated various internal & external examinations, state-level Entrance Exams such as UKSSC, UKPCS, etc.

Academic Experience:

- Organizer of Robotics & Aeromodelling Club, Faculty of engineering and technology, Gurukul kangri university, Haridwar.

- Organize a workshop on Artificial Intelligence at IBM LAB, Faculty of Engineering and Technology, Gurukul Kangri University, Haridwar.
- Worked as an Assistant Examination Controller in SDIMT College campus at UBTE Roorkee in December 2013
- Worked as a Training and Placement Officer during the period of (2014- 2017) at SDIMT college
- Worked as an Assistant Examination Controller in SDIMT College campus at UBTE Roorkee in May 2015
- Worked as an Assistant Examination Controller in SDIMT College campus at UTU, Dehradun, for the final examination of Uttarakhand Technical University in May 2016
- Successfully conducted various exams like UKSSC, UJVNL, UPCL, and UOU examinations in the capacity of center Superintendent at SDIMT, RIPMT, and FET(GKV).
- Project and research work in the field of various technologies, and other projects at the college level.
- An active member of the Conference on Research and Innovation in Engineering and Technology at Gurukula Kangri (deemed to be) University, Haridwar.
- Received Appreciation Award as “Best Teacher” on 5th Sept. 2015 at Swami Darshnanand Institute of Management and Technology, Gurukula Mahavidyalaya, Haridwar
- Core Team Member of Ramanand Institute of Pharmacy & Management and Technology, Haridwar (RIPMT), Haridwar, whose responsibility is to take care of Academics, New initiatives, Discipline, etc.

Research Publications:

Paper Published.

- **Sanjay Singh**, Vipul Sharma, Atul Varshney, Issa Tamer Elfergani, Chemseddine Zebiri, and Jonathan Rodriguez, "*A Compact off-Set Edge Fed Odd-Symmetric Hybrid Fractal Slotted Antenna for UWB and Space Applications*," **Progress in Electromagnetics Research B**, Vol. 102, 37-60, 2023. DOI:10.2528/PIERB23052306
- **Sanjay Singh**, Vipul Sharma, Narinder Sharma, and Atul Varshney. "*Lotus-Shaped Triple-Tuned Antenna with SRR Quadruplets for SDARS and Weather RADAR*." **Microwave Review** 30, no. 2, 23-35, 2024. DOI: 10.18485/mtts_mr.2024.30.2.3
- Sharma, Anuj Kumar, 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 (PIER C)**, 153, 33-43, 2025. DOI:10.2528/PIERC24110605.
- Sharma, Anuj Kumar, Vipul Sharma, and **Sanjay Singh**. "*A Comprehensive Examination of the Current State of the Art in Fractal Array Antennas*." **Advances in Systems Science & Applications (ASSA)**, 23.04, 104-118, 2023. DOI: <https://doi.org/10.25728/assa.2023.23.04.1384>

- Sharma, Anuj Kumar, 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 & Optical Technology (IJMOT)**, vol. 20, no. 1, 78-90, 2025.

Conferences.

1. **10th International Conference on Advancements in Engineering and Technology (ICAET-2022) at Bhai Gurudas Institute of Engineering and Technology, SANGRUR, Punjab, on 11-12 November 2022, on the topic “Low-Cost slitted Hybrid Fed Monopole Miniaturized Antenna for Dual Band PCS and ISM Band Applications”.**
2. **2nd National Conference on Recent Advances in Communicative Electronics NCRACE 2023, SRM TRP Engineering College, Tamil Nadu, 9th - 10th March 2023 on the topic “An Offset Fed Double Symmetric Koch Fractal Antenna for Sub-6GHz and S-Band Applications”.**
3. **3rd International Multi-Disciplinary Conference (IMDC-IST 2023) on 25-27 Sep. 2023 - Yola, Nigeria, on the topic “An Anti-Symmetric Half Koch-Minkowski Offset Fed Hybrid Fractal Antenna for Sub-6GHz and S-band”.**
4. **National Conference on Knowledge, Cultural Traditions & Practices of India by the Ministry of Culture ON 23 March 2023, at Gurukula Kangri University, Haridwar, on the topic “The Vedic Tradition of Engineering”.**
5. **International conference at Gurukula Kangri University, Haridwar, "Veda-Vijnana & Sanskriti Mahakumbh" from 23 - 25 December 2023 on the topic “Solfeggio frequency from Indian classical and spiritual devices for healing and healthy well-being despite modern scientific standpoint”.**
6. **International conference at Gurukula Kangri University, Haridwar, "Veda-Vijnana & Sanskriti Mahakumbh" from 23 - 25 December 2023 on the topic “journey of Saptarishi Mandal to modern scientific compass for direction evaluation and various symbols in modern engineering using astronomy”.**
7. **Rakuten Product Conference (RPC) is a premier product conference by Rakuten India held on May 21 and 22, 2024, for discussions on “Enterprise SaaS and Artificial Intelligence”.**
8. **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”.**

9. **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”*

Books.

Book / Book Chapters

1. Mr. Anuj Kumar Sharma, Dr. Vipul Sharma, **Mr. Sanjay Singh** communicated a book chapter **“Design and Performance Analysis of High Gain Dual Band Rectangular Microstrip Patch Antenna Array for IoT application”** Handbook of Smart Manufacturing Technologies: Industrial Engineering in the Digital Age, ICEMSMCI conference book chapter publication CRC Press, Taylor & Francis **ISBN:978-1-032- 81979-2.**
2. Mr. Anuj Kumar Sharma, Dr. Vipul Sharma, and **Mr. Sanjay Singh** communicated a book chapter, **“Evolution of Communication in Advancing the Healthcare”**, Revolutionary Impact of 5G on Advancement of Technology in Healthcare. **ISBN: 978-17-7964-002-4.**
3. **Sanjay Singh, Sunil Sharma**, Environmental science and energy management (2022), Sarthak Press, Jai Prakash Nath Publication.

Granted/Published Patents

1. **Sanjay Singh**, Anuj Kumar Sharma, V. Sharma, M. Singh, A.K. Gupta, the novelty resides in the shape and configuration of “Wave Antenna”. The Patent Office Journal (IPO), Published, Design No.: 410451-001, CBR Number: 204217, Serial No.: 168170, Date: 13/03/2024.

Communicated Papers in Refereed Journals

1. **Sanjay Singh**, Anuj Kumar Sharma, Atul Varshney, Vipul Sharma, and Narinder Sharma. “Comparative analysis of Hybrid fractal design and metamaterial technology in microstrip patch antenna,” Communicated (2025), International Journal of Electronics (IJE)
2. Sharma, Anuj Kumar, Vipul Sharma, and **Sanjay Singh**. “Design and Fabrication of Small Size Patch Antenna used in C-Band with Improved Bandwidth using CGS Technique for IoT Devices. ” Communicated (2025), International **Research Journal of Multidisciplinary Technovation (IRJMT).**
3. **Sharma, Anuj Kumar**, Vipul Sharma, and Sanjay Singh. " Design and Fabrication of SRR Loaded Cantor Fractal-Based Antenna Array with Mutually Coupled Fed Technique for Satellite Communication." Communicated (2025), **Microwave Review.**
4. **Sharma, Anuj Kumar**, Vipul Sharma, and Sanjay Singh. “Design and Fabrication of Quarter Wave Transformer Fed, UWB, DGS Antenna for Microwave C-Band and Sub-6 GHz

Workshops / FDPs / Certifications

Programme / Workshop	Organizer	Duration
One-week Faculty Development Program on <i>“Next-Generation Semiconductor Technology Advancement, Research and Applications”</i>	Electronics and ICT Academy, NIT Patna, under MeitY Scheme	23rd – 27th June, 2025
AICTE-Approved Faculty Development Programmes on Quantum Computing: • QT-05: Quantum Computation (11th July – 2nd August, 2025, 40 hours, 3-credit equivalent) • QT-07: Quantum Sensing (26th September – 17th October, 2025, 40 hours, 20-day online FDP)	Electronics and ICT Academies / MNIT Jaipur under EICT Academy initiative; funded by MeitY; endorsed/approved by AICTE, DST, DST NQM & IBM	11th July – 2nd August, 2025 26th September – 17th October, 2025
IEEE Quantum Lecture Series – 2025	Dept. of ECE, Dept. of AIML & R&D Cell, HKBK College of Engineering; IEEE Bangalore Section	1st – 5th September, 2025

Candidates completed M.Tech. Thesis under supervision

S.No.	Name	Thesis (Title/Topic)	Status
1	Akanksha Singh	Design of RF Rectenna for the generation of electric current in upcoming smart cities for energy harvesting.	Pursuing (@ Roorkee Institute of Technology, Roorkee)

<u>Key Skills</u>	
Engineering / Automotive Diagnostic Machines	Artificial Intelligence Embedded Systems. Computer Architecture and Organization, Computer network, Digital Circuit Design, Data Structure, Microprocessor and Microcontroller, Electronics Engineering, Communication Engineering.
Computer/IT Skills	HFSS Software, NI Multisim software, Electronics Circuit Android Software.

Project Experience:

- ❖ Designing of antenna for various applications such as Yagi-Uda antenna, smart antenna, microstrip patch antenna, Coplaner antenna,
- ❖ Data Logger Analysis for Wireless Communication Using Zigbee (802.15.4) Applications

- ❖ Mobile-Based Navigation System
- ❖ Solar tracking system, Solar Car, Solar chargers
- ❖ Microcontroller - Arduino-based projects
- ❖ Electronics Security Systems
- ❖ Automatic trafficking system

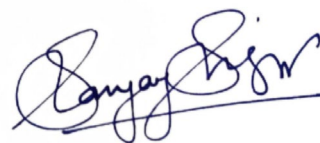
Personal Details

- ❖ Father's name: Mr. Ram Singh
- ❖ Date of Birth: 01 April. 1989
- ❖ Marital status: Married
- ❖ Nationality: Indian
- ❖ Languages are known: English(R &W), Hindi(R &W), and Garhwali (only understand).

Reference:

<p>Prof. Vipul Sharma Registrar Gurukula Kangri (Deemed to be) University, Haridwar Faculty of Engineering & Technology, Department of Electronics and Communication Engineering, Gurukula Kangri (Deemed to be) University, Haridwar Uttarakhand, India Email: Vipul.s@gkv.ac.in Mob.: +91-9760758291.</p>	<p>Prof. Mayank Aggarwal Head & Dean Department of Computer Science and Engineering, Faculty of Engineering & Technology, Gurukula Kangri (Deemed to be) University, Haridwar Uttarakhand, India Email: mayankgkv@gkv.ac.in Mob.: +91-9719004462.</p>
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I hereby declare that the information furnished by me in my curriculum vitae is true and correct to the Best of my knowledge & belief, and nothing has been concealed consciously.



Date:

Sanjay Singh