

## Curriculum Vitae



Prof. Garima Mathur

Professor

Department of Electronics & Communication Engineering

Under the mentorship of Indian Institute of Space Science and Technology (IIST)

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Research Links:

1. Google Scholar: <https://scholar.google.com/citations?user=GCVOTwwAAAAJ&hl=en>
2. Scopus Author ID: 57213337960
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5. <https://www.linkedin.com/in/prof-garima-mathur-78770316b/>

### Career Profile:

Prof. Garima Mathur is currently serving as a Professor in the Department of Electronics and Communication Engineering (DoECE) at the *Central University of Jammu, Jammu (UT of J&K), India*, under the mentorship of IIST–ISRO. She obtained her M.Tech (2003) and Ph.D. (2015) with specialization in Wireless Sensor Networks from *Malaviya National Institute of Technology (MNIT), Jaipur, India*. She previously served as Professor and Head, Department of ECE at *Poornima College of Engineering, Jaipur* from January 16, 2016 to January 9, 2026. Prior to that, she worked as Associate Professor and Head, Department of Electronics and Communication Engineering at *Jaipur Engineering College, Jaipur, Rajasthan, India* from October 2000 to December 2015. She has over 25 years of experience in teaching and research. Prof. Mathur has been actively involved in research projects funded by agencies such as AICTE and TEQIP-CRS. She has successfully supervised seven Ph.D. scholars and is currently guiding two doctoral candidates in the area of ad hoc and sensor networks. In addition, she has

supervised more than 30 postgraduate research scholars. She has contributed extensively to academic development by organizing numerous Faculty Development Programs (FDPs), short-term courses, workshops, and conferences as a coordinator and organizing secretary. She has also served as an organizing committee member and session chair at various national and international academic events. Furthermore, she has delivered expert lectures in the domains of 5G networks and Artificial Intelligence. Her research interests include 6G communication systems, Information Theory, MIMO-OFDM, and Error Control Coding.

### **PROFILE SUMMARY**

Professor & Head of Department, Electronics and Communication Engineering, Poornima College of Engineering, Jaipur | July 2016 – January 2026

- Leading academic, administrative, and developmental activities of the department.
- Instrumental in achieving NBA accreditation for the ECE Department in 2016 and 2019, and NAAC accreditation for the institution in 2023.
- Successfully supervised and guided five Ph.D. scholars to completion.
- Mentored over 30 M.Tech. Students in project work at Poornima College of Engineering (PCE) and Jaipur Engineering College (JEC).
- Played a key role in establishing and upgrading departmental laboratories at both PCE and JEC, ensuring alignment with curriculum and accreditation requirements.
- Organized and coordinated Faculty Development Programs (FDPs), Short-Term Training Programs (STTPs), expert lecture series, webinars, and workshops.
- Actively served as Faculty Advisor to the Students' Council (Sept. 2020 – January 2026) and as a Member of PWWA-WISE (Aug. 2020 – January 2026).
- Delivered invited talks and chaired technical sessions in national and international conferences across India.

Former Head of Department, Electronics and Communication Engineering Jaipur Engineering College (JEC Group), Kukas | Oct. 2000 – Dec. 2015

- Provided visionary leadership in academics and administration for over 15 years.
- Successfully coordinated the M.Tech (Digital Communication) program (2007–2015).
- Established foundational infrastructure by setting up all ECE departmental laboratories at JEC.
- Held additional roles, including:
  - o Officiating Principal (May–Oct. 2008)
  - o Chief Warden
  - o Assistant Director – Student Affairs (2012–2015), overseeing student welfare, discipline, and engagement.
  - o Convener, Women Cell (2006–2015)
  - o Convener, Anti-Ragging Squad (2000–2015)

## EDUCATIONAL QUALIFICATIONS

S. No	Qualification	Department	Institute/University	Year
1	PhD	Electronics & Communication Engineering	MNIT, Jaipur	2015
2	M.Tech.	Electronics & Communication Engineering	MNIT, Jaipur	2003
3	B. E.	Electronics & Communication Engineering	Amravati University	1999

## Project Grants Awarded (Government of India)

- AICTE MODROBS Scheme (2018–19)**
  - Received a **Grant-in-Aid of ₹14, 41,000** for the development of an **Advanced Microwave Engineering Laboratory** under the **Modernization and Removal of Obsolescence (MODROBS)** scheme, **AICTE, New Delhi**.
  - Duration: 2 years*
  - Principal Investigator: Dr. Garima Mathur*
- TEQIP-III / RTU (ATU) Collaborative Research Scheme (2019–20)**
  - Sanctioned a **Grant-in-Aid of ₹2, 40,000** for the project titled **“Blood Flow Detection and Monitoring Using Sensory Data”**.
  - Principal Investigator: Dr. Garima Mathur*
- AICTE-AQIS STTP Scheme (2020–21)**
  - Awarded a **Grant-in-Aid of ₹3, 81,667** for organizing a **Short-Term Training Programme (STTP)** under the **AICTE-AQIS** initiative.
  - Principal Coordinator: Dr. Garima Mathur*
- AICTE-ISTE Refresher Course Grant (2021–22)**
  - Received a **Grant-in-Aid of ₹93,000** for conducting a **Refresher Course** under the **AICTE-ISTE** scheme, **New Delhi**.
  - Principal Coordinator: Dr. Garima Mathur*
- AICTE-IDEA Lab Scheme (2024)**
  - Recently awarded **AICTE-IDEA Lab Grant** by **AICTE, New Delhi**
  - Co-Coordinator: Dr. Garima Mathur*

## CONFERENCES/ EVENTS ORGANIZED

- Organized National Conference on “Future aspect in Nano Technology” from Feb.13, 2008 to Feb.14, 2008 in Jaipur Engineering College Kukas.
- Organized National Symposium on “Advances on Microwave Devices and Application” with IEEE-MTTS Jaipur, IETE Jaipur and Jaipur Engineering College Kukas, Jaipur on Dec.12, 2009.
- Organized National Conference on “Advances on Materials and Devices for Renewable Energy Sources 2010 from Feb.25-27, 2010 in Jaipur Engineering College Kukas, Jaipur.

- Coordinator of “ISTE Workshop on Basic Electronics in Electronics & Communication Engineering” conducted by IIT Bombay from June 28-July 8, 2011.
- Organized Robotics (AUTOBITZ-AVR) Workshop with Technophilia Systems Pvt. Ltd. New Delhi from Nov. 23-24, 2012 in Jaipur Engineering College Kukas.
- Organized National Workshop on “Future Aspects in Wireless Communication” from Sept.15-16, 2013 in Jaipur Engineering College Kukas, Jaipur.
- Organized TI Innovation Challenge: India Analog Design Contest 2014 from Sept.2-28, 2013 in Jaipur Engineering College Kukas.
- Convener of Technical Fest (ROSTRUM) of the college from Feb 2001 to Feb 2015.
- Mentor of Alumni Committee of the college.
- Organized IEEE International Conference on Recent Advances and Innovations in Engineering - ICRAIE 2016, 2018, 2020 & 2021 in Poornima College of Engineering, Jaipur.
- Organized International Conference on Artificial Intelligence: Advances and Applications-ICAIAA-2019, 2021 & 2022 in Poornima College of Engineering, Jaipur.
- Organized 4-Online AICTE-AQIS-sponsored STTP-2020 on Artificial Intelligence & 5G Communication Technology in Poornima College of Engineering, Jaipur.
- Organized AICTE-ISTE-sponsored Refreshers Course on Artificial Intelligence on Noma 5G Technology in Poornima College of Engineering, Jaipur from December 21-27, 2021.
- Organized International Conference on Trends in Electronics and Health Informatics (TEHI 2024) in Poornima College of Engineering, Jaipur.
- Organized Aeromodelling “Flight-Quist” Show as Convener at Poornima College of Engineering, Jaipur, from February 21 to 24, 2025.

## List of Publications

### International Journal:

1. Mathur G., Dev S. and Purohit A., “Photo detection techniques for free space optical communication under dusty weather environment: a comparative study of SPD, APD and PIN”, Engineering Research Express, Vol. 7 (2), 2025. **DOI: 10.1088/2631-8695/adcc78 (Q2-ESCI)**
2. Mathur G., Mishra T., & Upadhyaya V., “Review and Analysis of Application of Conductive Polymer Composites in Power-Efficient RF Circuits for 5G PAPR Reduction”, Journal of Polymer & Composites, Vol. 13 (3), ISSN: 2321-2810, PP- 1-19, 2025. **(Q1-ESCI)**
3. Mathur G., Jain S. and Chand M., “Mathematical Modeling and Statistical Analysis of Novel Hybrid Deep Learning Models for Efficient Demarcation and Classification of Brain Tumors”, Pan-American Mathematical Journal, Vol. 35 (2), ISSN: 1064-9735, PP- 632-650, 2025. **DOI: 10.52783/pmj.v35.i2s.3009 (Q4-Scopus)**
4. Mathur G., Mishra T., & Upadhyaya V., “Waveform Optimization for Future Wireless Communication: Numerical Simulation under Mobile and Vehicular Scenarios in 5G and Beyond”, Engineering Research Express, Vol. 6 (3), 2024. **DOI: 10.1088/2631-8695/ad6bef (Q2-ESCI)**

5. Mathur G., Dadhich S., Upadhyaya V. & Dwivedi A. ,“Fabrication Compact Device Modeling of 4H–21DNTT Organic Thin Film Transistor”, Engineering Research Express, Vol. 6 (4), 2024. **DOI:10.1088/2631-8695/ad8721 (Q2-ESCI)**
6. Mathur G., Dadhich S., Upadhyaya V. & Dwivedi A., “Numerical Simulation Electrostatic and Physical Compact Modeling of C8-BTBT-C8 Organic Thin Film Transistor”, International Journal of Nano electronics and Materials (IJNEAM), Vol. 17 (2), ISSN: 1985-5761, PP- 222-236, 2024. **DOI: 10.58915/ijneam.v17i2.693 (Q2-ESCI)**
7. Mathur G., Dadhich S., & Upadhyaya V.,“ Fabrication, Numerical Simulation and Compact Modeling of Ph-BTBT-C10 Organic Thin Film Transistor”, Journal of Polymer & Composites, Vol. 12 (5), ISSN: 2321-2810, PP- 1-19, 2024. **(Q1-ESCI)**
8. Mathur G., Jain A. and Jain S., “Design and Performance Assessment of Improved Evolutionary Computing Based LEACH Protocol for Energy Efficient and Lifetime Extension of Wireless Sensor Network”, Engineering Research Express, Vol. 6 (2), 2024. **DOI:10.1088/2631-8695/ad4aeb (Q2-ESCI)**
9. Mathur G., Jain A. and Jain S., “Optimizing Wireless Sensor Network Routing with Q-learning: Enhancing Energy Efficiency and Network Longevity”, Engineering Research Express, Vol. 6 (4), 2024. **DOI: 10.1088/2631-8695/ad9138 (Q2-ESCI)**
10. Mathur G. & Chandra V., “Numerical Simulation and Optimization of Inorganic Perovskite Solar Cell Based on CsPbBr<sub>3</sub>” Rivista Italiana di Filosofia Analitica Junior, Vol. 14 (1), ISSN No- 2037-4445, PP- 33-46, 2023. **(Q4- Scopus)**
11. Mathur G. & Chandra V., “Thin Film Solar Cell Modeling, Numerical Simulation and Performance Optimization Based on CdS with CdTe/CdxZn1-xTe Solar Cell as a Function of Cell Thickness” Rivista Italiana di Filosofia Analitica Junior, Vol. 14 (1), ISSN No- 2037-4445, PP- 25-32, 2023. **(Q4- Scopus)**
12. Mathur G. & Sagar M., “A Review on Detection and Correction of Artifacts from EEG Data”, International Journal of Recent Technology and Engineering, (IJRTE), ISSN: 2277-3878 (Online), Volume-11 (6), 2023. **DOI: 10.35940/ijrte.F7497.0311623**
13. Mathur G., Chandra V. & Sinha N., “Modeling Numerical Simulation and Performance Optimization of P3HT:PC70BM Based Bulk Hetero Junction Organic Solar Cells”, Journal of Nano-electronics and Optoelectronics, Vol. 17, pp. 579–587, ISSN No., 2022.3242, 2022. **DOI:10.1166/JNO.2022.3242 (Q1-SCIE)**
14. Mathur G. & Sagar M., “An Experimental Analysis on EMG Artifact Removal Methods from EEG Signal Records Mathematical Statistician and Engineering Applications”, Mathematical Statistician and Engineering Applications (MSEA), ISSN- 2326-9865, PP- 72 – 78, 2022.
15. Mathur G. & Sagar M., “Eye Blink Artifact Removal from Cognitive EEG Data using ICA (Independent Component Analysis), Mathematical Statistician and Engineering Applications, ISSN- 2326-9865, PP- 86 – 93, 2022.
16. Mathur G, Mishra T., Kumari D. & Jain A., "Nanotechnology For Cancer Treatment", International Journal of Emerging Technologies and Innovative Research, ISSN:2349-5162, Vol.6, Issue 5, page no.189-192, May-2019 **DOI: 10.1729/Journal.23860**
17. Mathur G., Kumawat M. & Kumar D. ,“ IOT Based Smart Cities”, Published in International Journal of Trend in Scientific Research and Development (IJTSRD),

Volume 3, Issue 3, ISSN: 2456 - 6470, PP- 1433-1437, 2019.

18. Mathur G., Kumawat M. & Choudhary N., "Space Robotics", Published in Iconic Research and Engineering Journal (IRE), Paper ID: 1700655, Volume 1, Issue 10, ISSN: 2456-8880, PP- 169-171, April 2018.
19. Mathur G., Kumawat M. & Susan N., "Blue Eye Technology", Published in Iconic Research and Engineering Journal (IRE), Paper ID: 1700654, Volume 1, Issue 10 ISSN: 2456-8880, Page No.164-168, April 2018.
20. Goyal V., Mathur G. and Yadav R.P., "Improved channel matrix in sphere decoder for MIMO wireless systems," Published in International Journal of Engineering and Technical Research (IJETR), ISSN: 2321-0869, vol. 3, Issue1, pp. 124-127, Jan. 2015.
21. Mathur G., Salim M. and Yadav R. P., "A Novel Approach for Sphere Decoder MIMO System", Published in British Journal of Mathematics & Computer Science, ISSN: 2231-0851, vol. 4, issue 1, pp.22-32, Jan-Mar, 2014 (online).
22. Mathur G., Gothania B. and Yadav R.P., "Accelerated Artificial Bee Colony Algorithm for Parameter Estimation of Frequency-modulated Sound Waves", Published in International Journal of Electronics and Communication Engineering., ISSN 0974-2166, Volume 7, Number 1, pp. 63–74, 2014 (online).
23. Mathur G., Sharma G. and R. P. Yadav "Reduced SER for Maximum Likelihood Decoding of the Golden Code Using Modified Golden Ratio", International Journal of Advanced Research in Electronics and Communication Engineering, vol.3 / 4-9 / 2014 ISBN: 2278-909X (online).
24. Mathur G., Boolchandani S. & Kalra G., "Space Time Block Codes: An overview" Published in International Journal in Advances in Computer Networks and Security, , pp. 107-112, 2014.
25. Yadav R.P., Mathur G., Boolchandani S. and Sikarwar S., "STBC-SM based relative estimation of golden and DSTTD codes", Published in International Journal of Modern Electronics & Communication Engineering (IJMECE), ISSN: International Conference on Smart Computing and Communications2321-2152, pp. 13-21, March 2013(online).
26. Mathur G., Achra N. and Yadav R.P., "Performance analysis of MIMO-OFDM system for different modulation schemes under various fading channels", Published in International Journal of Advanced Research in Computer and Communication Engineering, ISSN (Print): 2319-5940, vol. 2 (5), pp. 2098-2103, May 2013(online).
27. Mathur G, Bakliwal S. and Yadav R.P "Comparison of Phase Only Correlation and Neural Network for Iris Recognition", International Journal of Science and Research Volume: 2 / 141-145 / 2013 ISBN: 2319-7064 (International Journal of Science and Research) (online).
28. Sharma A., Mathur G., Salim M. and Yadav R.P., "Selection design of initial radius and performance evaluation of reduced complexity in sphere decoder for MIMO system", Published in International Journal of Electronics and Communication Technology (IJECT), ISSN: 2230-7109 (Online), ISSN:2230-9543(Print), vol. 4, issue 3, pp. 67-70, July-Sept., 2013(online).
29. Mathur G., Achra N. and Kumar M., "A Matlab Based High Speed Face Recognition System Using Som Neural Networks", Published in International Journal of Engineering Research and Applications (IJERA), ISSN (Print): 2248-9622, vol. 3 (4),

- pp. - 785-790, August 2013(online).
30. Mathur G., Achra N. and Kumar M., "Face Recognition using SOM Neural Network with Different Facial Feature Extraction Techniques", Published in International Journal of Computer Applications, ISSN (Print): 0975 – 8887, vol. 76 (3), pp.- 7- 11, August 2013(online).
  31. Mathur G., Agarwal S. and Yadav R.P., "Improved code for Alamouti space time code and space time trellis code in different fading environments", Published in International Journal of Electronics, Computer and Communications Technologies, Print ISSN:2180-3536 Online ISSN:2180-3706, vol.4, issue1, pp. 11-15, 2013(online).
  32. Mathur G, and Sharma L., "Triple Frequency Operated Microstrip Patch Antenna for Communication in Multibands", Published in International Journal of Modern Communication Technologies & Research (IJMCTR), Print ISSN: 2321-0850, vol. 1, issue1, pp. 9-11, 2013(online).
  33. Mathur G., Mrinalee S., Vijay R. and Yadav R.P., "Comparison between viterbi algorithm soft and hard decision decoding", Published in Journal of Information Systems and Communication ISSN: 0976-8742 & E-ISSN: 0976-8750, Volume 3, Issue 1, 2012, pp.-193-198 (online).
  34. Mathur G. and Yadav R.P., "A high performance architecture for symbol detection in MIMO channel by using V-BLAST/ZF/LLSE algorithm", Published in International Journal of wireless Network and communication, ISSN-0975-6507, vol. 3, no. 1, pp. 45-54, 2011(online).

#### **International Conference:**

1. Mathur G., Dak R., Shrivastava K. and Yadav R. P., "Performance comparison of various channel estimation technique in MC-DS-CDMA systems," Published in 2008 International Conference on Recent Advances in Microwave Theory and Applications, Department of Physic, UOR, M.N.I.T, LNMIIT Jaipur & SSJPGC Jaipur, Nov 21-24, 2008. **DOI:10.1109/AMTA.2008.4763232**
2. Mathur G., Khandelwal D. and Yadav R. P., "An introduction to space time coding using MIMO technology," Proceeding of International conference on VLSI, Communication and Networks, Institute of Engineering & Technology, Alwar, Dec 24-25, 2011.
3. Mathur G., Mrinalee S. and Yadav R. P., "Recent development in cellular systems-3GPP/LTE systems," Proceeding of International conference on Computational Electronics & Nanotechnology (ICOCENT-2012) Amity University, Jaipur, Rajasthan, March 1-2 2012.
4. Mathur G., Sharma L and Bhoyima Y., "Stacked Arrangement of Microstrip Patch Antenna for Improved Performance," Proceeding Of International Conference on Recent Trends in Applied Physics And Material Science: RAM 2013, 1–2 February 2013, Bikaner, Rajasthan, India. DOI: 10.1063/1.4810703
5. Mathur G., Priya H., Mrinalee S. and Yadav R.P., "Improved radius selection in sphere decoder for MIMO system," International Conference on Sustainable Computing (ICSC-2014), IEEE Delhi Section, Indiacom-14, BIVCM, New-Delhi, March 5-7, 2014. DOI:10.1109/Indiacom.2014.6828121
6. Mathur G., Tiwari S., Saini P. and Yadav R.P., "Adaptive radius sphere detection in

- MIMO OFDM systems,” Published in 2nd International Conference Computing for Sustainable Global Development (INDIACom-2015), IEEE Delhi Section, BIVCM, New-Delhi, pp.528-530, 11-13 March 2015.
7. Mathur G., Prasad J., Kumar M., and Yadav RP , "Fuzzy Type Image Fusion Using Hybrid DCT-FFT Based Laplacian Pyramid Transform" Published in IEEE ICCSP 2015 by IEEE at Tamilnadu /1049 - 105/ 2015.DOI: 10.1109/ICCSP.2015.7322661
  8. Mathur G., Prasad J., Kumar M., and Yadav RP, "Robust Digital Image Watermarking Using DCT Based Pyramid Transform via Image Compression" Published in IEEE ICCSP 2015 by IEEE at Melmaruvathur/1059 - 106/ 2015. **DOI: 10.1109/ICCSP.2015.7322663**
  9. Mathur G., Chaudhary P. and Kumawat B, “Time Synchronization in Wireless Sensor Networks using Optimally Powered Overheard Nodes,” 4<sup>th</sup> International Conference Computing for Sustainable Global Development (INDIA Com-2017), IEEE Delhi Section, BIVCM, New-Delhi, pp. 839- 842, 1-3 March, 2017.
  10. Mathur G., Sinha S., Vyas S. and Kumar R, “Performance Evaluation of Transcendence of Artificial Intelligence,” 3<sup>rd</sup> International Conference on VLSI, Communication & Network (VCAN-2017), IET Alwar, pp. 36-41, 10-11March 2017.
  11. Mathur G., Acharya R. and Kumar D., “Study of Electromagnetic Radiation Effects on Human Body and Reduction Techniques,” International Conference on Optical and Wireless Technologies (OWT2017), MNIT Jaipur, March 18-19, 2017.**DOI: 10.1007/978-981-10-7395-3 56**
  12. Mathur G., Acharya R. and Kumar D.,“An Overview of Smart Identity Cards for Educational Institutions” Published in 2nd International Conference on Optical & Wireless Technologies 2018- (OWT 2018), pp-293-300, MNIT Jaipur. **DOI:10.1007/978-981-13-6159-3 31**
  13. Mathur G., Yadav S., Jain A. and Mishra T., “Monitoring and Detection of Blood Flow based on Internet of Things”, Published in 2020 5th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE), PCE Jaipur, December 1-3, 2020. **DOI: 10.1109/ICRAIE51050.2020.9358280**
  14. Mathur G., Shah P., Jain A. and Mishra T., “IoT-Based Big Data Storage Systems in Cloud Computing”, Published in Proceedings of Second International Conference on Smart Energy and Communication, pp. 323-333, Jaipur, 2020. **DOI: 10.1007/978-981-15-6707-0 30**
  15. Mathur G., Beniwal V., Jain A. and Mishra T., “Bluetooth-Based Smart Sensor Networks”, Published in Proceedings of Second International Conference on Smart Energy and Communication, pp. 349-355, Jaipur, 2020. **DOI: 10.1007/978-981-15-6707-0 33**
  16. Mathur G., Mishra T., & Jain A., “Modified Rectangular Patch Antenna for WLAN and Wi-MAX Application”, 2021 Proceedings of International Conference on Communication and Computational Technologies. Algorithms for Intelligent Systems. Springer, Singapore. **DOI: 10.1007/978-981-16-3246-4 53**
  17. Mathur G., Dadhich S. and Dwividi A., “Surface Charge Based Modeling of TIPS-Pentacene TFT”, Published in 2021 8th International Conference on Smart Computing and Communications (ICSCC), Kochi, Kerala, India, 1-3 July 2021. **DOI:**

**10.1109/ICSCC51209.2021.9528257**

18. Mathur G., Dadhich S. and Dwividi A., “Mobile Charge Carrier Based Modeling of 4H–21 DNTT and Structure Analysis of OTFT”, Published in 2021 IEEE 2nd International Conference on Technology, Engineering, Management for Societal impact using Marketing, Entrepreneurship and Talent (TEMSMET) Pune, India, 02-03 December 2021. **DOI: 10.1109/TEMSMET53515.2021.9768714**
19. Mathur G., Dadhich S. and Dwividi A., “Numerical Simulation and Analytical Modelling of C8-BTBT-C8 Organic Transistor and Analysis of Semiconductor Thickness,” Published in Intelligent Computing Techniques for Smart Energy Systems: Proceedings of ICTSES 2021, Manipal University Jaipur, 1-3 July 2021. **DOI: 10.1007/978-981-19-0252-9 60**

**BOOK CHAPTER DETAILS**

1. Mathur G., Mishra T., & Jain A., “Smart Antenna Technologies: Future Systems Implementation”, Planar Antenna: Design, Fabrication, Testing, and Application, NOVA Science Publisher, ISBN No. 978-1-53619-898-0, PP 233- 249, 2021.
2. Mathur G. & Sagar M., “Analysis of Big Data in Electroencephalography (EEG)”, Healthcare Monitoring and Data Analysis Using IoT Technologies and Applications, The Institution of Engineering and Technology, United Kingdom, ISBN No.-978-1-83953-437-9, PP 37- 57, 2022. **DOI: 10.1049/PBHE038E**
3. Mathur G. & Mukesh C., “Internet of Things Enabled Antennas for Biomedical Devices and Systems”, Developing an Effective Antenna for IoT Applications in 5G, Springer-Springer Tracts in Electrical and Electronics Engineering, ISBN No.- 978-981-99-0212-5, PP 259–265, 2023.
4. Mathur G., Jamwal P. & Mukesh C., “Integrating the Vertical and Horizontal Dimension of Medical and Technology for Brain Tumour Segmentation in Medical Image Processing”, Taylor & Francis- 5G-Based Smart Hospitals and Healthcare Systems, E Book ISBN No.- 9781003403678, 2023. **DOI: 10.1201/9781003403678**
5. Mathur G., Jamwal P. & Jain A., “Analysis of Routing Protocols for Wireless Sensor Network for Remote Healthcare System”, Taylor & Francis- 5G-Based Smart Hospitals and Healthcare Systems, E Book ISBN No.- 9781003403678, 2023. **DOI: 10.1201/9781003403678**
6. Mathur G., & Sagar M., “Recent advances in Removal of Artifacts from EEG Signal Records”, Artificial Intelligence in Biomedical and Modern Healthcare Informatics, PP.-135- 144, 2025. **DOI: 10.1016/B978-0-443-21870-5.00013-3**

**Paper Present in National conference**

1. Mathur G., Vyas K. and Yadav R.P., “Near ML detection for MIMO channel for space time codes,” Proceeding of National conference on Recent Advancements in Microwave Technique & Application, Department of Physic, UOR, M.N.I.T, LNMIT Jaipur, ACEIT & SSJPGC Jaipur, on Oct. 06-08 2006.
2. Mathur G., Shrivastava K. and Yadav R.P., “Performance comparison of different

- equalizers in MIMO systems,” Proceeding of National Symposium on Recent Advances in Broadband System, IETE Headquarter New Delhi & IETE Jaipur Centre, April 12-13 2008.
3. Mathur G. and Yadav R.P., “By using MLD decoding improvement of BER in space time trellis code for rayleigh flat fading channel,” Proceeding of National Symposium on Microwave Materials, Devices and Applications, JEC, Kukas, Dec 12 2009.
  4. Mathur G. and Yadav R. P., “Modified algorithm for lattice-based sphere decoder,” Proceeding of National Conference on Advances in Microwave Communication, Devices & Applications, R.I.E.T Jaipur, Feb.16-17 2010.
  5. Mathur G., Sharma P. and Yadav R.P., “Current advancement in MIMO-OFDM wireless broadband technology,” Proceeding of National Conference on Advances in Microwave tubes, Devices & Communication system-2011, JNIT, Jaipur, March 4-5 2011.
  6. Mathur G., Mrinallee S. and Yadav R. P., “4G technologies, generations of cellular wireless communication services,” Proceeding of National Conference on Advances in wireless cellular Telecommunication, Technologies & Services, Institution of Communication Engineers & Information Technologists in collaboration with Indian Institute of Information Technology & Management, Gwalior & CDT Foundation, New Delhi, April 14-15 2011.
  7. Mathur G. and Yadav R. P., “Wireless security: past, present and future,” Proceeding of National Conference on Advances in Recent Technologies in Communication & Computing, Marudhar Engineering College, Bikaner, Rajasthan, Sept. 10 2011.
  8. Mathur G. and Yadav R. P., “Broadband accessed communication, ”Proceeding of National Conference on Recent Trends in Microwave Technologies and Applications, S.S. Jain Subodh P. G. College, Jaipur, July 30-August 1 2012.
  9. Mathur G., Goyal V. and Yadav R.P., “Performance analysis of MIMO system based on the improved radius search in sphere decoder,” Proceeding of National Conference on Recent Developments in Electronics (NCRDE-2013) University of Delhi, South Campus, New Delhi, January 18-20 2013.
  10. Mathur G., Sharma G. and Yadav R. P., “Reduced complexity maximum likelihood-decoding of the golden gate,” Proceeding of National Conference on Innovations in Electronics and communication Engineering NIECE-2013, ACEIT, Jaipur, February 22-23 2013.
  11. Mathur G., Gupta S. and Yadav R.P., “Sphere decoding in MIMO-OFDM systems,” Proceeding of National Conference on Emerging Trends in Wireless, Optical & Nano-Technologies, KIT Jaipur, February 23 2013.

#### **CONFERENCE/ SEMINARS/ WORKSHOPS/ TRAINING PROGRAMS ATTENDED**

- Participated in the seminar on “Power Systems, Recent Advances & Prospectus in 21<sup>st</sup> Century” on Feb.17, 2001 organized by department of Electrical Engineering Malviya Regional Engineering College, Jaipur.
- Participated in the Three weeks ISTE-AICTE Sponsored short term training program on “Modern Trends in Power Electronics & Industrial Drives” from June 18-30, 2001,

organized by Malviya Regional Engineering College, Jaipur.

- Participated in the 2 day workshop on “Software Quality Assurance” from Dec.24, 2001 to Jan.04, 2002 organized by Malviya Regional Engineering College, Jaipur.
- Participated in the 2 day Workshop on “VLSI Design for Embedded System” from Jan.4-5, 2003, organized by Malviya Regional Engineering College, Jaipur.
- Participating in the workshop on “Challenges in Soc Design & Verification” from Dec.11-22, 2006 organized by Malviya National Institute of Technology, Jaipur.
- Participating in the workshop on “Emerging Trends in Broadband Communication” from April 8-9, 2006, organized by The Institution of Electronics and Telecommunication Engineering Jaipur and Malviya National Institute of Technology, Jaipur.
- Participating in the MHRD/AICTE summer school on “Recent Advances in Microwaves & Wireless Communication” from July 7-18, 2008 organized by Deptt. Of Electronics and Communication Engineering, Malviya National Institute of Technology, Jaipur.
- Participating in the National Workshop on “Recent trends in Microwave Communication System” Oct.23,2009 organized by IEEE-MTTS India council in association with GIT, Jaipur & IETE, Jaipur.
- Participating in the 10 day Faculty Development Program on “Advances in Digital & Optical Communication” from June 20-30, 2007, organized by Department of Electronics and Communication Engineering Malviya National Institute of Technology, Jaipur.
- Attended National conference on “Role of Electronics & Instrumentation Engineering for Rural Development” held in JNIT, Jaipur, Rajasthan from Feb 27-28, 2012.
- Attended Short Term Training Program on “Recent Advances in Signal Processing and Communications” held during 1<sup>st</sup>-5<sup>th</sup> Sept. 2012 at MNIT, Jaipur.
- Attended National Conference on “Innovations in Micro-Electronics, Signal Processing and Communication Technologies (V-IMPACT 2013)” held in VIT Jaipur from Feb.20-21, 2013.
- Attended TEQIP RTU (ATU) Sponsored one week FDP on “Advanced In power System & Power Electronics” Organized by RTU, Kota & PCE, Jaipur on 30th April to 4th May 2018.
- Attended TEQIP-III RTU Sponsored Three days FDP on “Internet of Things” Organized by RTU, Kota & PIET, Jaipur on 31st August to 2nd September 2018.
- Attended a DST Sponsored National Workshop “Recent Advancements in Soft & Optimization Techniques for Smart Engineering Systems” Organized by Department of Electrical Engineering , Poornima College of Engineering, Jaipur on 24th to 26th Feb, 2020.

### **EXPERT LECTURE SESSION DELIVERED**

<b>S. No.</b>	<b>Title</b>	<b>Funding Agency</b>	<b>Date</b>	<b>Organization where it was Delivered</b>
1	Communication Systems	IEEE Rajasthan Subsection	8.10.2020	Govt. Women Engineering College, Ajmer
2	5 G Communication and Role of AI in 5 G	RTU (ATU) TEQIP-III	5.12. 2020	Sawai Madhopur College of Engineering & Technology
3	Compressive Sensing Techniques for mm-Wave Massive MIMO Channels	AICTE-AQIS Sponsored	25.6.2021	Department of Electronics Engineering, University Department, Rajasthan Technical University, Kota
4	Using Modern Pedagogical Tools to Improve Learning in Technological Contents	IEEE Rajasthan Subsection	8.9.2021	Govt. Women Engineering College, Ajmer
5	5G communication: vision, Potential Technologies and Challenges	College	26.11.2021	Regional College for Education Research and Technology, Jaipur
6	Compressive Sensing Techniques for mm-Wave Massive MIMO Channels	STTP on Recent Trends in Microwave and Wireless Technologies	12.6.2021	D. Y. Patil Deemed to be University, Navi Mumbai
7	Optimization of Image Processing in 5G Communications System & Beyond	AICTE-AQIS	11.06.2021	Department of Electronics Engineering, Rajasthan Technical University, Kota
8	Modulation Scheme for the Next Generation of Mobile Communications	College	15.11.2021	Engineers Success, Shanti Plaza GMS Road, Dehradun
9	Compressive Sensing Techniques for mm-Wave Massive MIMO Channels	AICTE ISTE Sponsored Induction/Refresher program on “Recent trends of Artificial Intelligence for 5G Communication	8.1.2022	Angadi Institute of Technology & Management Savagaon Road, Belgaum

10	Compressive Sensing Techniques for mm-Wave Massive MIMO Channels	VGST sponsored 5-days online FDP on "Software-Defined Radio (SDR) for Next Generation Wireless Communication Systems"	19.1.2022	School of Electronics & Communication Engineering KLE Technological University, Vidyanagar, Hubballi Karnataka
11	Millimeter Wave Communication in 5G	IEEE Mangalore Subsection	24.1.2023	Mangalore University
12	Role of Millimeter Wave in 5G Communication Systems	IETE-WEEC & IETE Jaipur	21.2.2024	Department of Electronics & Communication Engineering, SKIT Jaipur

### **AWARDS**

S. No.	Title of Fellowships/ Awards	Date of Award	Awarding Agency	Whether Level National/ State
1	Certificate of Appreciation, IETE Student Forum of Poornima College of Engineering, Jaipur	27-May-2016	IETE Jaipur	State
2	Certificate of Appreciation by DST Rajasthan, on the occasion of International Women's Day-2022 for commendable contribution in the field of Science & Technology-	15-Mar-22	Government-DST Rajasthan	State
3	Certificate of Appreciation, IETE Student Forum of Poornima College of Engineering, Jaipur	27-Mar-23	IETE Jaipur	State
4	Excellence in Academic Leadership Award, International EARG Award	March 19, 2024	Mathtech Thinking Foundation Fazika, Punjab, India	National

### **MEMEBERSHIPS**

1. Life Member of "Indian Society for Technical Education (ISTE)", New Delhi.
2. Life Member of "The Institution of Electronics and Telecommunication Engineering" New Delhi.
3. Life Member of Vigyan Parishad, Allahabad.

### **BOOKSPUBLISHED**

1. "IC Technology" Ashirwad Publishers, Jaipur
2. "CAD-VLSI Design", Ashirwad Publishers, Jaipur