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Dr. Sudakar Singh Chauhan

Associate Professor

EDUCATIONAL QUALIFICATION:

- ✓ Ph.D. ----- Birla Institute of Technology (BIT), Mesra, Ranchi.
- ✓ M.Tech. ----- National Institute of Technology (NIT) Hamirpur, Himanchal Pradesh.

EXPERIENCE: Total 17+

S. No.	Organization	Post	Experience
1	Guru Ghasidas Vishwavidyalaya	Associate Professor	From 1 Feb 2023
2	National Institute of Technology (NIT) Kurukshetra	Assistant Professor	9 Years 5 Months
3	Graphic Era University, Dehradun	Assistant Professor	5 Years 9 Months

Area of Interest/Specialization:

- Low Power VLSI Devices
- Solar Cells
- MIMO Communication
- Physical Layer Security

RESEARCH PUBLICATIONS

- (1) **Sudakar Singh Chauhan** et. al., “Optimized dual absorber architecture for enhanced efficiency and stability in all-inorganic perovskite solar cells,” *Multiscale and Multidisciplinary Modeling, Experiments and Design*, 2025. <https://doi.org/10.1007/s41939-025-01024-6>. ISSN 2520-8179, **IF 1.9.**
- (2) **Sudakar Singh Chauhan** et. al., “Advancements in Tunnel Field Effect Transistor: Material Innovations, Emerging Applications and Future Perspectives,” *Silicon*, pp. 1-42, 2025. <https://doi.org/10.1007/s12633-025-03406-4>. ISSN: 1876-9918, **IF: 3.3.**
- (3) **Sudakar Singh Chauhan** et. al., “Performance analysis of SPR sensor based on Tin Di-selenide, silicon and lead titanate for malaria detection” *Wiley Advanced Theory & Simulations*, e00108, pp. 1-7, 2025. <https://doi.org/10.1002/adts.202500108>, ISSN:2513-0390, **IF 2.9.**
- (4) **Sudakar Singh Chauhan** et. al., “A comprehensive study on ETL and HTL layer optimization for the design and simulation of high-efficiency, stable lead-free CsSn_{0.5}Ge_{0.5}I₃ perovskite solar cells”, *Multiscale and Multidisciplinary Modeling, Experiments and Design*, vol. 8, no. 339, pp. 1-13, 2025. <https://doi.org/10.1007/s41939-025-00926-9>. ISSN 2520-8179, **IF 1.9.**
- (5) **Sudakar Singh Chauhan** et. al., “Design and analysis of surface plasmon resonance sensor utilizing silver nickel and black phosphorous for various cancer detection,” *Plasmonics*, 2025. doi.org/10.1007/s11468-025-02961-1. ISSN: 1543-186X, **IF 3.3.**
- (6) **Sudakar Singh Chauhan** et. al., “Sensitivity enhancement for SPR sensor with Si/Perovskite heterostructure for early detection of Malaria,” *Plasmonics*”, 2025. doi.org/10.1007/s11468-025-02823-w. ISSN: 1543-186X, **IF 3.3.**
- (7) **Sudakar Singh Chauhan** et. al., “Numerical Investigation of RbGeI₃ based lead free perovskite solar cell with various Cu-based hole transport layer using SCAPS-1D,” *Journal of Electronics Materials*”, vol. 54, pp. 2747–2765, 2025. <https://doi.org/10.1007/s11664-025-11740-x>, ISSN: 1543-186X, **IF 2.2.**
- (8) Priyanka Singh, **Sudakar Singh Chauhan** and Gaurav Verma, “Optical performances of (Au, Sn, I) adsorbed phosphorene nanostructures with improved absorption in visible region: a comparative computational study” *Optical and Quantum Electronics*, vol. 478, pp. 1-13, 2024. doi.org/10.1007/s11082-023-06115-7, ISSN: 1572-817X, **IF 3.3.**
- (9) **Sudakar Singh Chauhan** and Sapna Singh, “A Paradigm Shift in Vertical Tunneling Double Gate TFET Performance: Unveiling the Implications of Spacer Drain Overlap” *Silicon*, vol. 16, pp.1785-1793, 2023. doi.org/10.1007/s12633-023-02790-z, ISSN: 1876-990X, **IF 2.8.**
- (10) **Rajiv Kumar & Sudakar Singh Chauhan**, “Physical Layer Security for Multi-user Multi eavesdropper multi-input multi-output (MIMO) system in the Presence of Imperfect feedback,”

International Journal of Communication Systems, vol. 23, issue 17, pp. 1-8, 2020.
<https://doi.org/10.1002/dac.4604>, ISSN: 1099-1131, **IF 2.349**

- (11) Rajiv Kumar & **Sudakar Singh Chauhan**, “Physical layer security for space–time-block-coded MIMO system in Rician fading in the presence of imperfect feedback,” *Wireless Network*, vol. 26, pp. 4239–4247, 2020. **IF 2.701**
- (12) Seema and **Sudakar Singh Chauhan**, “Linearity performance analysis of double gate (DG) VTFET using HDB for RF applications,” *Silicon*, vol. 13, pp. 1121-1125, 2020. **IF 2.8.**
- (13) **Sudakar Singh Chauhan** & Sanjay Kumar, “Performance analysis of maximal ratio transmission with receiver antenna selection over correlated Nakagami-m fading channels,” *Wireless Network*, vol.26, pp. 751-758, 2019. **IF 2.701**
- (14) N. Paras & **Sudakar Singh Chauhan**, “A novel vertical tunneling based Ge-source TFET with enhanced DC and RF characteristics for prospect low power applications,” *Microelectronic Engineering*, vol. 217, 111103 (pp.1-9), 2019. **IF 2.6**
- (15) N. Paras & **Sudakar Singh Chauhan**, “Insights into the DC, RF/Analog and linearity performance of vertical tunneling based TFET for low-power applications,” *Microelectronic Engineering*, vol. 216, pp. 1-8, 2019. **IF 2.622**
- (16) Seema and **Sudakar Singh Chauhan**, “Performance investigation of electrode work-function engineered hetero-dielectric buried oxide vertical TFET,” *IET Circuits Devices & Systems*, Vol. 13, pp. 1027-1031, 2019. **IF 1.290**
- (17) N. Paras & **Sudakar Singh Chauhan**, “Temperature sensitivity analysis of vertical tunneling based dual metal gate TFET on analog/RF FOMs,” *Applied Physics A*, vol. 125, pp. 316 (1-8), 2019. **IF 2.983**
- (18) Abhishek Ananda, **Sudakar Singh Chauhan** & Amit Prakash, “Comment on An Analytical Model for Tunnel Barrier Modulation in Triple Metal Double Gate TFET,” *IEEE Transaction on Electron Devices*, vol. 66, no. 2, pp.1123-1124, 2019. **IF 3.221**
- (19) Seema and **Sudakar Singh Chauhan**, “Investigation of RF and Linearity Performance of electrode work-function engineered HDB Vertical TFET,” *IET Micro & Nano Letters*, vol. 14, no.1, pp. 17-21, 2019. **IF: 0.975.**
- (20) Rajiv Kumar and **Sudakar Singh Chauhan**, “Secrecy analysis of Alamouti scheme using feedback-rate efficient transmit antenna selection with robust error performance in the presence of feedback errors,” *International Journal Electronics & Communication (AEU)*, vol. 96, pp. 40-47, 2018. **IF: 3.169**

- (21) Seema and **Sudakar Singh Chauhan**, "A new design approach to improve DC, analog/RF and linearity metrics of Vertical TFET for RFIC design," *Superlattices & Microstructures*, vol. 122, pp. 286-295, 2018. **IF: 2.658**
- (22) Neha Paras and **Sudakar Singh Chauhan**, "Vertical Tunneling Based TFET with Workfunction Engineered Hetero-gate to Enhance DC Characteristics," *Journal of Nanoelectronics and Optoelectronics*, vol. 14, no. 1, pp. 50-53, 2018. **IF 1.069**
- (23) Seema and **Sudakar Singh Chauhan**, "Design of double gate vertical tunnel field effect transistor using HDB and its performance estimation," *Superlattices & Microstructures*, vol. 117, pp. 1-8, 2018. **IF: 2.658**
- (24) **Sudakar Singh Chauhan** and Neeraj Sharma, "Impact of spacer-gate engineered work function on the performance of dopingless TFET," *Journal of Nanoelectronics and Optoelectronics*, vol. 13, pp. 1200-1203, 2018. **IF 1.069**
- (25) Rajiv Kumar and **Sudakar Singh Chauhan**, "Secrecy Analysis of MRT/RAS System under Nakagami-m Fading Channels in the Presence of Imperfect Channel State Information," *International Journal Electronics & Communication (AEU)*, vol. 85, pp. 68-73, 2018. **IF: 3.169**
- (26) **Sudakar Singh Chauhan** and Neha Sharma, "Enhancing analog performance and suppression of subthreshold swing using hetero-junctionless double gate TFETs," *Superlattices and Microstructures*, vol. 112, pp. 257-261, 2017. **IF: 2.658**
- (27) N. Sharma and **Sudakar Singh Chauhan**, "Dual metal drain Ge-source dopingless TFET with enhanced turn-ON steep subthreshold swing and high ON-current," *Electronics Letters*, vol. 53, no. 14, pp. 960-962, 2017. **IF 1.316**
- (28) **Sudakar Singh Chauhan** and Arun Sunny, "Enhancement mode GaN MOSFET for high power applications using AlGaIn/GaN heterostructure," *International Journal for Light and Electron Optics*, vol. 135, pp. 298-304, 2017. **IF:2.84**
- (29) **Sudakar Singh Chauhan**, M. Mathur, and M. Agarwal, "Secrecy Performance Analysis of TAS/MRC system in the presence of channel estimation error," *International Journal for Light and Electron Optics*, vol. 135, pp. 160-168, 2017. **IF:2.84**
- (30) **Sudakar Singh Chauhan** and Sanjay Kumar, "Channel Capacity and Outage Probability Analysis of Multiuser Diversity MIMO MRC Systems with Antenna Selection in the Presence of Delayed Feedback," *Telecommunication Systems*, vol. 64, no. 3, pp 559–567, March 2017. **IF: 2.336**
- (31) **Sudakar Singh Chauhan** and Sanjay Kumar, "Performance analysis of multiuser diversity on OSTBC MIMO systems with antenna selection in the presence of feedback delay CSI," *Wireless Personal Communication*, vol. 92, no. 2, pp 695–710, 2017. **IF:2.017**

- (32) **Sudakar Singh Chauhan**, P. Verma, M. Mathur, M. Agarwal, and T. Gupta, "Physical layer security of MIMO STBC over Rayleigh Fading Channels in the Presence of Channel Estimation Error," *International Journal for Light and Electron Optics*, vol. 127, pp. 7625-7630, 2016. **IF:2.84**
- (33) **Sudakar Singh Chauhan** and Sanjay Kumar, "Achievable performance analysis of multiuser scheduling for different MIMO systems over Rayleigh fading channels," *International Journal for Light and Electron Optics*, vol. 127, pp. 6884-6893, 2016. **IF:2.84**
- (34) **Sudakar Singh Chauhan**, V. Agrawal, S. Kamboj, and S. Narayan, "Secrecy capacity and outage probability of multiuser MIMO systems with zero forcing receivers," *International Journal for Light and Electron Optics*, vol. 127, pp. 6390-6394, 2016. **IF:2.84**
- (35) **Sudakar Singh Chauhan** and Sanjay Kumar, "Channel Capacity of TAS/MRC System with Adaptive Transmission and Channel Estimation Errors," *Telecommunication Systems*, vol. 63 no. 3, pp. 347-355, 2015. **IF: 2.336**
- (36) **Sudakar Singh Chauhan** and Sanjay Kumar, "Unified Symbol Error Probability Analysis of Multiuser Diversity in TAS/OSTBC Systems," *Telecommunication Systems*, vol. 62, pp. 603-609, 2015. **IF: 2.336**
- (37) **Sudakar Singh Chauhan** and Sanjay Kumar, "Adaptive-transmission channel capacity of maximal ratio combining with antenna selection in Nakagami-m fading channels," *Wireless Personal Communication*, vol. 85, no. 4, pp. 2233-2243, 2015. **IF:2.017**
- (38) **Sudakar Singh Chauhan** and Sanjay Kumar, "Capacity of orthogonal space-time block codes in spatially correlated MIMO Weibull fading channel under various adaptive transmission techniques," *Telecommunication Systems*, vol. 62, pp. 101-110, 2015. **IF: 2.336**
- (39) **Sudakar Singh Chauhan** and Sanjay Kumar, "Achievable performance of orthogonal space-time block codes with antenna selection over correlated Nakagami-m fading channels," *Wireless Personal Communication*, vol. 84, no.1, pp. 463-473, 2015. **IF: 2.017**
- (40) **Sudakar Singh Chauhan** and Sanjay Kumar, "Capacity analysis of adaptive transmission with space-time block codes in spatially correlated MIMO Nakagami-m fading channels," *Wireless Personal Communication*, vol. 79, no.2, pp. 1211-1222, 2014. **IF:2.017**
- (41) Vijay Sharma, Gulista Khan, Neeraj Kaushik, and **Sudakar Singh Chauhan**, "Novel Design of EXOR Gate and its Application for Circuits using QCA Nanotechnology", *Micro and Nanosystems*, 2024. ISSN: 1876-4037. DOI: 10.2174/0118764029349996241115095107.
- (42) **Sudakar Singh Chauhan**, Ruchi Devlal, Rajiv Kumar and Seema, "Unified intercept probability analysis of multi-user multi-relay aided decode-and-forward wireless systems" *International*

Journal of Information Technology,” *International Journal of Information Technology*, 2024.
ISSN: 2511-2104, SJR 0.44

- (43) **Sudakar Singh Chauhan**, Gaurav Verma, Anshul Singh, Sandeep Singh, and Avinash Singh, “Average secrecy rate and probability of non-zero secrecy capacity of wiretap Generalized Gamma fading channels,” *International Journal of Wireless and Mobile Computing*, vol. 18, no.4, pp. 403-409, 2020. SJR 0.17
- (44) **Sudakar Singh Chauhan** and Sanjay Kumar, “Unified Performance Analysis of Maximal-Ratio Combining with Antenna Selection in Rayleigh Fading channels,” *International Journal on Electrical Engineering and Informatics*, vol. 7, no.4, pp. 605-612, 2015. SJR: 0.219
- (45) **Sudakar Singh Chauhan** and Sanjay Kumar, “Outage probability and symbol error rate analysis of MIMO-MRC with estimation error, feedback delay and co-channel interference,” *WSEAS Trans. on Commun.*, vol. 14, pp. 506-511, 2016. SJR: 0.12
- (46) **Sudakar Singh Chauhan**, S. Manabala, S. C. Bose, and R. Chandel, “A new approach to design low power CMOS flash A/D converter,” *International Journal of VLSI Design & Communication Systems (VLSICS)* vol. 2, no. 2, pp. 100-108, June 2011.

International Conferences :

- 1) **Sudakar Singh Chauhan** et. al., “A comprehensive review of Sn based perovskite solar cell-structure, optical properties, design and stability,” 3rd IEEE International Conference on Device Intelligence, Computing & Communication Technologies (DICCT-25), Graphic Era University, Dehradun. DOI 10.1109/DICCT64131.2025.10986711
- 2) **Sudakar Singh Chauhan** et. al., “A comprehensive overview of HEMT structure and fabrication techniques, 3rd IEEE International Conference on Device Intelligence, Computing & Communication Technologies (DICCT-25), Graphic Era University, Dehradun. DOI 10.1109/DICCT64131.2025.10986711
- 3) Iptesam Aaliya Qureshi, Anil Kumar Soni, and **Sudakar Singh Chauhan**, “Thin metal-free THz absorbers: broadband sensing solutions”, 2nd International Conference on Computational and Characterization Techniques in Engineering and Sciences (CCTES-24), Integral University, Lucknow. DOI: 10.1109/IC3TES62412.2024.10877430.
- 4) Arghya Biswas, **Sudakar Singh Chauhan**, and Antara Borwankar, “Smart Home Equipment Control System with Raspberry Pi and Yocto” *IEEE World Conference on Smart Trends in System, Security & Sustainability (WS4-2020)* held on July 27-28, 2020, pp. 553-558, at London, United Kingdom.

- 5) Ankit Kesarwani, **Sudakar Singh Chauhan**, and Anil Ramachandran Nair, "Fake news detection on social media using K nearest neighbor Classifier" *6th IEEE International Conference on Advances in Computing & Communication Engineering (ICACCE-2020)* organized at Las Vegas, NV, USA, June 22-24, 2020.
- 6) Gaurav Verma, Sonal Shukla, and **Sudakar Singh Chauhan**, "Analysis of Time Bandwidth Product in cooperative spectrum sensing in Cognitive radio network" *6th IEEE International Conference on Advances in Computing & Communication Engineering (ICACCE-2020)* organized at Las Vegas, NV, USA, June 22-24, 2020.
- 7) **Sudakar Singh Chauhan**, "Exact and asymptotic secrecy outage probability of MIMO system with hybrid diversity combining techniques", *2nd International Conference on Sensors, Signal & image Processing (SSIP- 2019)*, October 8–10, 2019, Prague, Czech Republic indexed by EiCompendex and Scopus.
- 8) Neha Paras and **Sudakar Singh Chauhan**, "Optimization of Design Parameter for Vertical tunneling based dual metal dual gate TFET" *5th IEEE International Conference on Advances in Computing & Communication Engineering (ICACCE-2019)* organized at Bannari Amman Institute of Technology, April 4-6, 2019.
- 9) Gaurav Verma, Vinayak Dhage, and **Sudakar Singh Chauhan**, "Analysis of combined data-decision fusion scheme for cognitive radio networks", *2nd IEEE International Conference on Inventive Systems and Control (ICISC 2018)*, Jan. 19-20, pp. 1324-1327, Coimbatore, India.
- 10) M. Vinay and **Sudakar Singh Chauhan**, "Object following system depends upon the color and supported the segmentation rule by victimization advanced live image process," *IEEE International Conference on Emerging Trends in Computing and Communication Technologies (RIEECS 2017)*, Graphic Era Hill University, Dehradun, India, Nov. 17-18, 2017.
- 11) Raja Naik, **Sudakar Singh Chauhan**, and Gaurav Verma, "TCAD simulations of dual gate N⁺ pocket-based doping less TFET," *2nd IEEE International Conference on Recent Trends in Electronics Information & Communication Technology (RTEICT-2017)*, May 19-20, 2017, pp. 1592-1595, Bengaluru.
- 12) Rupali Nirala, **Sudakar Singh Chauhan**, and Gaurav Verma, "Improving physical layer security in full duplex relaying system," *2nd IEEE International Conference on Recent Trends in Electronics Information & Communication Technology (RTEICT-2017)*, May 19-20, pp. 997-1001, 2017.
- 13) Raja Naik, **Sudakar Singh Chauhan**, and Gaurav Verma "TCAD Simulations of Dual Gate Dopingless Tunnel Field Effect Transistor with Spacer," *2nd IEEE International Conference on Recent Trends in Electronics Information & Communication Technology (RTEICT-2017)*, May 19-20, 2017, pp. 364-367, Bengaluru.

- 14) **Sudakar Singh Chauhan**, Neha Sharma, and Raja Naik, "Impact of spacer-drain workfunction engineered on the characteristics of a Si-Ge dopingless tunnel field effect transistor with lower subthreshold swing," *2nd IEEE International Conference on Recent Trends in Electronics Information & Communication Technology (RTEICT-2017)*, May 19-20, 2017, pp. 389-391, Bengaluru.
- 15) Neeraj Sharma and **Sudakar Singh Chauhan**, "Steep subthreshold swing analysis of dual metal drain dopingless double gate tunnel FETs based on Ge-source with High-k for low power applications," *3rd IEEE International Conference on Computing Communication and Automation (ICCCA-2017)*, May 5-6, 2017, pp. 1445-1448, Galgotia University, UP, India.
- 16) Sapna Singh and **Sudakar Singh Chauhan**, "TCAD simulations of double gate junctionless tunnel field effect transistor with spacer," *3rd IEEE International Conference on Computing Communication and Automation (ICCCA-2017)*, May 5-6, 2017, pp. 1441-1444, Galgotia University, UP, India.
- 17) Rupali Nirala and **Sudakar Singh Chauhan**, "Physical layer security in half duplex multi-hop relaying system," *IEEE International conference on Engineering Trends in Communication Technologies (ICETCT-2016)*, Nov. 18-19, 2016, organized by GEU, Dehradun, Uttarakhand.
- 18) Ruchi Juyal and **Sudakar Singh Chauhan**, "TCAD simulation of Ge source dopingless Tunnel FET," *IEEE International Conference on Advances in Computing and Communication (ICACCE 2016)*, Apr. 8-9, 2016, Tula Institute, Dehradun.
- 19) Vinod Naik and **Sudakar Singh Chauhan**, "Si_{0.5}Ge_{0.5} Single and hetero-gate dielectric dopingless Tunnel FETs," *5th IEEE International Conference on Communication and Signal Processing (ICCSP'16)*, pp. 635-638, Apr. 6-8 2016, pp. 635-638, Melmaruvathur, Tamil Nadu, India.
- 20) Chebrolu Gopi and **Sudakar Singh Chauhan**, "Double-Gate Ge, InAs-based Tunnel FETs with enhanced ON-current," *5th IEEE International Conference on Communication and Signal Processing (ICCSP'16)*, pp. 639-641, Apr. 6-8 2016, pp. 639-641, Melmaruvathur, Tamil Nadu, India.
- 21) Ruchi Juyal and **Sudakar Singh Chauhan**, "TCAD Simulation of Ge-GaAs Hetrojunction Doping-less Tunnel Field Effect Transistor" *5th IEEE International Conference on Communication and Signal Processing (ICCSP'16)*, pp. 1434-1437, Apr. 6-8 2016, pp. 1434-1437, Melmaruvathur, Tamil Nadu, India.
- 22) Arun Sunny and **Sudakar Singh Chauhan**, "Thermal and Threshold Voltage Analysis of GaN MOSFET with AlGaIn/GaN Heterostructure" *5th IEEE International Conference on Communication and Signal Processing (ICCSP'16)*, pp. 1218-1221, Apr. 6-8 2016, pp. 1218-1221, Melmaruvathur, Tamil Nadu, India.

- 23) **Sudakar Singh Chauhan** and Sanjay Kumar, “Unified error probability analysis of maximal-ratio combining with antenna selection in Nakagami fading channels,” *2nd IEEE International Conference on Advances in Computing and Communication Engineering (ICACCE’15)*, pp. 324-327, May 1-2, 2015, Tula Institute of Technology, Dehradun, Uttarakhand.
- 24) A. R. Khan, S. C. Yadav, **S. S. Chauhan**, B. Kumar, B. K. Kaushik, Y. S. Negi, and S. S. K. Iyer, “Vertical organic thin film transistor to achieve sub ten-micron channel length devices,” *IEEE International Conference on Computer & Communication Technology (ICCCT)*, Sept. 15-17 2011, pp. 197-202, NIT Allahabad.

R & D PROJECTS

- (1) Research proposal entitled “*PLS Performance Analysis of MUS-MIMO Systems in the Presence of Imperfect Channel State Information*” has been approved under “**TEQIP Collaborative Research Scheme, NPIU** dated June 18, 2019. Amount Rs. **1110000/-**. **Completion report submitted 11 Aug 2021.**
- (2) Research proposal entitled “*Design of rain map using signal attenuation over Dehradun region of Uttarakhand*” has been approved under **TEQIP-III** dated Sept.30, 2019. Amount Rs. **1, 50,000/-**. **Completion report submitted in Sept. 2021.**
- (3) Research proposal entitled “*Physical Layer Security Performance Analysis of Cognitive Radio Systems in the Presence of Imperfect Channel State Information (CSI)*” has been approved under “**Uttarakhand State Council for Science & Technology (UCOST)** dated Feb.27, 2021. Amount Rs. **3,75,000/-**. **Completion report submitted in July 2022.**

PATENTS (=4, 3 Granted+1 Published)

- (1) **Granted** a patent titled “Ambipolarity free Vertical Tunnel Field Effect Transistor” in **Patent Office Journal No. 09/2020** dated January 3, 2024 under section 11A of the Indian Patents Act, 1970.
- (2) **Granted** a patent titled “Two-Dimensional In-Line Semiconductor Device” in **Patent Office Journal No. 27/2021** dated April 10, 2024 under section 11A of the Indian Patents Act, 1970.
- (3) **Granted** a patent titled “A Physical Unclonable Functions (PUF) based Lightweight Authentication System for Unmanned Aerial Vehicle (UAV) IOT Ground Network” dated February 28, 2024 in accordance with section 44 (1) of the Patents Act, No. 57 of 1978, Republic of South Africa.
- (4) **Published** a patent titled “Secrecy Performance Analysis of Heterogeneous Multi user MIMO system in the presence of outdated CSI over Rayleigh Fading Channel” in **Patent Office Journal** dated Sept. 29, 2022 under section 11A of the Indian Patents Act, 1970.

BOOK PUBLICATIONS (2)

- (1) Sudakar Singh Chauhan, “GATE Electronics & Communication Engineering (Edition: 1st-2012, 2nd-2013, 3rd-2015),” Khanna Publisher ISSN/ISBN No. 9381068879, pp. 1-518.
- (2) Sudakar Singh Chauhan, “Low Power CMOS Flash ADC (Edition-Sept.22, 2012),” LAP Lambert Academic ISBN-13-978-3659233852, pp. 1-101.

BOOK CHAPTERS (6)

- (1) **Sudakar Singh Chauhan**, Gaurav Verma and Vinod Naik, “Characteristics analysis of Si_{0.5}Ge_{0.5} Doping-less PNP TFET” Springer Lecture Notes in Electrical Engineering (LNEE), vol. 475, pp. 198-203, 2017. ISSN: 1876-1100, ISBN: 978-981-10-8239-9.
- (2) G. Soumya, Gaurav Verma and **Sudakar Singh Chauhan**, “Improving the Utilization of Licensed Spectrum in Cognitive Radio” Springer Lecture Notes in Electrical Engineering (LNEE), vol. 475, pp. 280-287, 2017. ISSN: 1876-1100, ISBN: 978-981-10-8239-9.
- (3) Neha Paras and **Sudakar Singh Chauhan**, “Linearity analysis of line tunneling based TFET for High Performance RF applications” Springer Lecture Notes in Electrical Engineering (LNEE), pp. 957-966, 2020. ISBN: 978-981-15-5340-0.
- (4) Ankit Kesarwani, **Sudakar Singh Chauhan**, Anil Ramachandran Nair, and Gaurav Verma, “Supervised Machine Learning Algorithms for Fake News Detection” Springer Lecture Notes in Electrical Engineering (LNEE), pp. 767-778, 2020. ISBN: 978-981-15-5340-0.
- (5) Arghya Biswas and **Sudakar Singh Chauhan**, “Modem Functionality Diagnostic Tool with Graphical User Interface for Cellular Network”, Springer Advances in Intelligent System and Computing, vol.1, pp 44-53, 2020. ISBN: 978-981-15-8288-2.
- (6) **Sudakar Singh Chauhan** and Seema, “Performance Analysis of Hetero-Dielectric Buried Oxide Double Gate Vertical TFET”, Springer Lecture Notes in Networks and Systems, vol. 685, pp. 19-28, 2023. ISBN: 978-981-99-1911-6.

Ph.D. THESIS AWARDED/ONGOING

1. **Seema** 2K17/NITK/PHD/6170014 “Comprehensive Analysis of Band to Band Tunneling Based TFET for Low Power and High Frequency Application” **Awarded 24.08.2020**
2. **Neha Paras** 2K17/NITK/PHD/6170009 “Characterization of Vertical Tunneling based Tunnel Field Effect Transistor for Low Power Application” **Awarded 23.11.2020**

3. **Rajiv Kumar** 2K16/NITK/PHD/6160019 “Secure Transmission in Multiple-Input Multiple-Output Wireless Communication System” **Awarded 23.12.2020**
4. Priyanka Gupta **Ongoing.**
5. Rekha Sharma **Ongoing.**
6. Sandeep Sarwan **Ongoing.**
7. Akanksha Sarwan **Ongoing.**

M. TECH. THESIS AWARDED

Sr. No.	Year	Name of the Candidate	Thesis Title
25	2023-24	Iptesam Aaliya Qureshi 22031102 ECE	Study and Optimization of Terahertz Absorber
24	2021-22	Ankit Yadav 32018204 VLSI Design	Design and Static Verification of Power Intent
23		Ishita Singhal 32018104 Embedded System Design	DOR Timing Analysis using Prime Time
22	2020-21	Shilpi Kudaliya 31909106 ECE	Minimization of Peak to Average Power Ratio (PAPR) in Non-orthogonal Multiple Access (NOMA)
21		Anish 31911108 Embedded System Design	An FPGA based Convolution Neural Network (CNN) Accelerator
20		K. Maneesha 31911126 Embedded System Design	Physical Implementation of Hard Macro on a Lower Technology Node and the Power Delivery Network Analysis of IR Drop
19		K. Subhashini 31911123 Embedded System Design	Power Reduction Techniques on High Frequency Server Design
18		K. Fredy Sundar 31911107 Embedded System Design	Pre-Silicon and Post Silicon Validation of Integrated Low Speed Peripheral Controller Module
17		S. Ram Gopal 31911230 VLSI Design	MBIST Insertion into the Design and MBIST Validation
16	2019-20	Arghaya Biswas 31811102 Embedded System Design	Modem Functionality Diagnostic Tool and Home Equipment Control System with Yocto
15		Subramaniam 31811211 VLSI Design	GNERFET based Mixed Logic Line Decoder in 2 to 4 and 4 to16 mode with 22nm

			technology
14		Karan Sharma 31811214 VLSI Design	Optical and Electronic properties of WS ₂ /GaS Heterostructure
13	2018-19	Ankit Kesarwani 31711112 Embedded System Design	Fake News Detection Using Supervised Machine Learning Algorithms
12		Abhishek Ananda 3170901 VLSI Design	Design & Simulation of Dual Metal Dual Gate drain Pocket TFET
11	2017-18	M. Vinay Kumar 31611117 Embedded System Design	The Control and Monitoring of Smart Home Security System
10	2016-17	Neha Sharma 31511218 VLSI Design	Impact of Spacer and Drain Workfunction Engineered on the Analog Performance of Dopingless DGTFET
9		Sapna Singh 31511233 VLSI Design	Performance Analysis of Junctionless and Vertical DGTFET with Spacer
8		Neeraj Sharma 31511102 Embedded System Design	Characteristics Analysis of Dopingless DGTFET using Gate & Drain Engineered Workfunction with High Dielectric Material as a Spacer.
7		Eslavath Raja Naik 31511104 Embedded System Design	Performance Analysis of Spacer-N ⁺ Pocket based DGDL-TFET for Enhanced Analog Performance
6		Rupali Nirala 31505116 ECE	Enhancing Physical Layer Security in Relaying System
5	2015-16	Ruchi Juyal 3146501 VLSI Design	TCAD Simulation Based Study of Different Hetrostructure Dopingless Tunnel Field Effect Transistors
4		Chebrolu Gopi 3146608 VLSI Design	Sentaurus TCAD based simulation to enhance ON current in Tunnel FETs
3		Banoth Vinod Naik 3146619 VLSI Design	Sentaurus TCAD based comparative study of Si and Si _{0.5} Ge _{0.5} dopingless Tunnel FETs
2		Arun Sunny 3141511 Embedded System Design	Design and Analysis of GaN MOSFET based on AlGa _N /Ga _N Heterostructure using Sentaurus TCAD
1	2014-15	Kaushal Kumar 3132515 ECE	Physical Layer Security in Scalable Wireless Sensor Networks

CONFERENCE/SHORT TERM COURSE ORGANIZED

- 1) Serving as a **Technical Program Committee** member of International Conference on Advances in Computer Science, Information Technology and Communications (CSITC 2025)” held on Dalian, China from Sept. 19-21, 2025.
- 2) Served as a **Course Coordinator** in two-week Faculty Development Program on “Innovative Material for Future Semiconductors Devices: Trends, Challenges and Applications during April 21-30, 2025 ECE Deptt., Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.) in association with ECE Deptt. NIT Raipur (C.G.)
- 3) Served as a **Course Coordinator** in one-week Short Term Course on “Next-Generation Wireless Technologies: 5G and Its Impact on Smart Systems during April 7-12, 2025 at ECE Deptt., Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.).
- 4) Served as a **Technical Program Committee** member of 3rd International Conference on Device Intelligence, Computing and Communication Technologies (DICCT 2025)" organized by Graphic Era University during March 15 to 16, 2025.
- 5) Served as a **Reviewer** in 7th International Conference on Signal Processing, Computing and Control (ISPCC-2025)" organized by JUIT Waknaghat Solan during March 6-8, 2025.
- 6) Served as a **Technical Program Committee** member of 7th International Symposium on Computational and Business Intelligence (ISCBI 2025)" organized by Macau China during Feb. 14 to 16, 2025.
- 7) Serving as a **Technical Program Committee** member of 6th International Conference on Advances in Computer Technology, Information Science and Communications (CTISC 2024)” held on Sanya, China from April. 26-28, 2024.
- 8) Served as an **International Program Committee** member of 13th International Conference on Computer Technologies & Development (TechDev) " organized by Huddersfield UK during August 9-11, 2024.
- 9) Served as a **Reviewer** in 1st International Conference on Electronics, Communication and Signal Processing (ICECSP 2024)" organized by NIT Delhi during August 8-10, 2024.
- 10) Served as a **Technical Program Committee** member of 4th International Conference on Emerging Techniques in Computational Intelligence (ICETCI 2024)" organized by Mahindra University during August 22-24, 2024.
- 11) Served as a **Technical Program Committee** member of 2nd International Conference on Device Intelligence, Computing and Communication Technologies (DICCT 2024)" organized by Graphic Era University during March 15 to 16, 2024.
- 12) Served as a **Technical Program Committee** member of 5th International Conference on Deep Learning, Artificial Intelligence & Robotics (ICDLAIR 2023)" organized by NIT Kurukshetra during Dec. 7 to 9, 2023.
- 13) Served as a **Technical Program Committee** member of International Conference on Automation, Control and Electronics Engineering (CACEE 2023)" organized by Chongqing China on Oct. 20 to 22, 2023.

- 14) Served as a **Technical Program Committee** member of 3rd IEEE International Conference on Emerging Techniques in Computational Intelligence (ICETCI 2023)" organized by Mahindra University, Hyderabad, India on September 21 to 23, 2023.
- 15) Served as a **Technical Program Committee** member of 3rd IEEE International Conference on Electronic Technology, Communication and Information (ICETCI 2023)" held at Changchun, China, on May 26-28, 2023.
- 16) Served as a **Technical Program Committee** member of International Conference on Systems, Control and Automation (ICSCA-2023)" organized by NIT Kurukshetra, Haryana from May 12-13, 2023.
- 17) Served as a **Technical Program Committee** member of 2nd International Conference on "Advances in Data Computing, Communication and Security (I3CS 2023)" held on NIT Kurukshetra, Haryana from June 01-03, 2023.
- 18) Served as a **Technical Program Committee** member of IEEE 5th International Conference on "Advances in Computer Technology, Information Science and Communications (CTISC 2023)" held on Suzhou, China from April 21-23, 2023.
- 19) Served as a **Technical Program Committee** member of IEEE International Conference on "Device Intelligence, Computing and Communication Technologies (DICCT-2023)" organized by Graphic Era University, March 17-18, 2023.
- 20) Served as a **Reviewer** of IEEE International Conference on "Device Intelligence, Computing and Communication Technologies (DICCT-2023) organized by Graphic Era University, March 17-18, 2023.
- 21) Served as a **Technical Program Committee** member of IEEE 4th International Conference on Advances in Computer Technology, Information Science and Communications (CTISC 2022) held on Suzhou, China from April 22-24, 2022
- 22) Served as a **Technical Program Committee** member of International Conference on Electrical, Electronics and Computing Technology (CEECT 2021) held on Xiamen, China from March 26-28, 2021.
- 23) Served as a **Technical Program Committee** member of Springer International Conference on Advances and Applications of Artificial Intelligence and Machine Learning (ICAAAIML-2020) held on Sharda University Greater Noida Uttar Pradesh, October 29-30, 2020.
- 24) Served as a **Technical Committee member** of Springer Workshop on Machine learning, Deep learning and Computational Intelligence for Wireless Communication (MDCWC2020) held on National Institute of Technology Tiruchirappalli, India, October 22-24, 2020.
- 25) Served as a conference **Technical Committee member** of International Conference on Advances in Computing, Communication & Materials (ICACCM)-2020 jointly organized by Uttarakhand Technical University, Dehradun & Tula's Institute, Dehradun, Aug. 21-22, 2020.
- 26) Served as a conference **Technical Committee** of 3rd Springer International Conference on Sensors, Signal & Image Processing (SSIP-2020) held on October 9–11, 2020, Prague, Czech Republic.

- 27) Served as **Organizing Secretary** in 1st Springer International Conference on Advanced Communication & Computational Technology (ICACCT-2019) organizing at NIT Kurukshetra, Dec. 6-7, 2019.
- 28) Served as **Organizing Chair** in 4th IEEE International Conference on Computing, Communication & Security (ICCCS-2019) organizing at University of Cagliari, Italy, October 10-12, 2019.
- 29) Served as a **Course Coordinator** in one-week Short Term Course on Wireless Communication and Signal Processing with Hands-On in MATLAB organized at NIT Kurukshetra, April 8-13, 2019.
- 30) Served as **Organizing Chair** in 5th IEEE International Conference on Advances in Computing & Communication Engineering (ICACCE-2019) organized at Bannari Amman Institute of Technology, Tamil Nadu April 4-6, 2019
- 31) Served as a **Course Coordinator** in one-week Short Term Course on “Emerging Trends in Wireless Communication & Signal Processing during Jan. 7-12, 2019 at ECE Deptt., NIT Kurukshetra.
- 32) Served as **Technical Program Committee** in International Conference on Manufacturing, Advance Computing, Renewable Energy and Communication (MARC-2018) organized at HMR Institute of Technology and Management (HMRITM), July 19-20, 2018.
- 33) Served as **General Co-Chair** in International Conference on New Technological Opportunities in Networking & Sciences (Newtons-2018) organized at Seemant Institute of Technology, Pithoragarh Uttarakhand, June 8-10, 2018.
- 34) Served as a **Programme Committee** member in IEEE international conference on Engineering Trends in Communication Technologys (ICETCT-2016) organized by GEU, Dehradun, Uttarakhand Nov. 18-19, 2016.
- 35) Served as **Publicity Committee** in International Conference on Computing, Communication and Security (ICCCS-2015), Dec. 4-6, 2015, at Le Meridien, Mauritius.
<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7374116>

INVITED TALK & SESSION CHAIR

- 1) Served as a **Session Chair** in 1st International Conference on Recent Advances in Smart Energy Systems & Intelligent Automation (RASESIA-2024) organized at NIT Kurukshetra during June 14-15, 2024.
- 2) Delivered an **Expert Lecture** on Energy Efficient Low Power VLSI Devices for 5G & 6G Technology in one-week STC on 5G/6G Wireless Technologies (WT-2024) organized by NIT Kurukshetra, 17 April- 21 April 2024. (18 April 2024)
- 3) Served as a **Session Chair** in 5th International Conference on Deep Learning, Artificial Intelligence & Robotics (ICDLAIR 2023)" organized at NIT Kurukshetra during Dec. 7 to 9, 2023.

- 4) Served as a **Session Chair** in 5th International Conference on Deep Learning, Artificial Intelligence & Robotics (ICDLAIR 2023)" organized at NIT Kurukshetra during Dec. 7 to 9, 2023.
- 5) Served as a **Session Chair** in International Conference on Systems, Control and Automation (ICSCA-2023)" organized at NIT Kurukshetra, Haryana from May 12-13, 2023.
- 6) Served as a **Session Chair** in Springer 7thInternational Conference on Intelligent Technologies (ICIT 2022) organized by University of Pembangunan Jaya Jakarta, Dec. 16-18, 2022.
- 7) Delivered an **Expert Lecture** on Low Power VLSI Device (TFET) in two-week FDP on Low Power VLSI Design organized at NIT Warangal, 28 March- 7 April 2022. (29 March 2022)
- 8) Delivered an **Expert Lecture** on Tunnel Field Effect Transistor in two-week FDP on Introduction to Low Power VLSI Design & Application organized at NIT Warangal, 23 Dec 2021-03 Jan 2022. (27 Dec. 2021)
- 9) Delivered an **Expert Lecture** on IOT Communication & Application Protocols in one week Induction/Refresher Program on Internet of Things & Smart Technologies organized at MIET Jammu, Dec. 13-18, 2021. (14 Dec. 2021)
- 10) Served as a **Session Chair** in Springer International workshop on Machine Learning, Deep Learning and Computational Intelligence for Wireless Communication (MDCWC 2020) organized by NIT Trichy, Oct. 22-24, 2020.
- 11) Served as a **Session Chair** in International Conference on Advances in Computing, Communication & Materials (ICACCM)-2020 jointly organized by Uttarakhand Technical University, Dehradun & Tula's Institute, Dehradun, Aug.21-22 2020.
- 12) Delivered an **Expert Lecture** on MIMO Systems in one-week Short Term Course on Wireless Communication and Signal Processing with Hands-On in MATLAB organized at NIT Kurukshetra, April 8-13, 2019.
- 13) Served as **Session Chair** in 5th IEEE International Conference on Advances in Computing & Communication Engineering (ICACCE-2019) organized at Bannari Amman Institute of Technology, Tamil Nadu April 4-6, 2019
- 14) Delivered an **Invited Lecture** on "Fundamental of Wireless Communication & MIMO Communication" in short term course on Emerging Trends in Wireless Communication & Signal Processing during Jan. 7-12, 2019 at ECE Deptt., NIT Kurukshetra.
- 15) Delivered an **Invited Lecture** on "Signals & Systems" on Sept. 17, 2018 at ECE Department, SATI Vidhisa.
- 16) Served as a **Session Chair** in IEEE International Conference on Engineering Trends in Communication Technology (ICETCT-2016) organized by GEU, Dehradun, Uttarakhand Nov 18-19, 2016.
- 17) Served as a **Session Chair** in IEEE international conference on Advances in Computing and Communication Engineering (ICACCE) organized by BTKIT, Dwarahat, Uttarakhand, Feb. 22-23, 2014.

- 18) Delivered an **Invited Lecture** on “Wireless communication channel model” in short term training program of Modeling and Simulation of Wireless Communication System organized by Department of Electronics & Communication Engineering organized by National Institute of Technology, Kurukshetra, June 20-24, 2016,
- 19) Delivered an **Invited Talk** on “4G Wireless Communication” in IEEE International Conference on Advances in Computing and Communication Engineering organized by BTKIT, Dwarahat, Uttarakhand, Feb. 22-23, 2014.

HONORS AND AWARDS:

1. Full time MHRD sponsored research scholar at NIT Hamirpur.
2. Best Paper Award in ICACCT-2019.
3. Editorial Board Member of the International Journal of Science, Technology and Society (ISSN Online: 2330-7420, ISSN Print: 2330-7412) from 19 Feb 2024 to 18 Feb 2027.
4. Reviewer of the following SCI and Scopus Indexed Journals:
 - IEEE Transaction on Wireless communication
 - IEEE Transaction on Vehicular Technology
 - IEEE Transactions on Cognitive Communications and Networking
 - IEEE Communication Letter
 - IET Communication
 - IET Electronics Letter
 - WILEY International Journal of Communication Systems.
 - WILEY Transactions on Emerging Telecommunications Technologies
 - SPRINGER Telecommunication Systems
 - SPRINGER Journal of Computational Electronics
 - SPRINGER Wireless Personal Communication
 - SPRINGER Frontiers of Information Technology & Electronic Engineering
 - SPRINGER Silicon
 - SPRINGER Plus
 - SPRINGER Mobile Network and Application
 - ELSEVIER Microelectronics Journal
 - ELSEVIER Adhoc Network
 - ELSEVIER AEU International Journal of Electronics & Communication
 - ELSEVIER Physical Communication
 - ELSEVIER Heliyon
 - CAMBRIDGE CORE Journal of Material Research
 - ECTI Transaction on Electrical Engineering, Electronics & Communications
 - AIMS Electronics & Electrical Engineering
 - Journal of Nanoelectronics and Optoelectronics
 - Turkish Journal of Computer and Electrical

- KSII Transactions on Internet and Information Systems
- Journal of Information Processing Systems (JIPS)
- Inder science International Journal of Wireless and Mobile Computing (IJWMC).
- ICTACT Journal on Communication Technology.

4. Reviewer of the following Conferences:

- 5th International Conference on Deep Learning, Artificial Intelligence & Robotics (ICDLAIR 2023)" NIT Kurukshetra during Dec. 7 to 9, 2023.
- International Conference on Automation, Control and Electronics Engineering (CACEE 2023)" Chongqing China, on Oct. 20 to 22, 2023.
- 3rd IEEE International Conference on Emerging Techniques in Computational Intelligence (ICETCI 2023).
- 3rd IEEE International Conference on Electronic Technology, Communication and Information (ICETCI 2023)" Changchun, China, on May 26-28, 2023.
- International Conference on Systems, Control and Automation (ICSCA-2023)" NIT Kurukshetra, Haryana from May 12-13, 2023.
- IEEE 5th International Conference on Advances in Computer Technology, Information Science and Communications (CTISC 2023) Suzhou, China from April 21-23, 2023.
- IEEE 5th International Conference on Advances in Computer Technology, Information Science and Communications (CTISC 2023) Suzhou, China from April 21-23, 2023.
- 2nd International Conference on "Advances in Data Computing, Communication and Security (I3CS 2023)" NIT Kurukshetra, Haryana from June 01-03, 2023.
- IEEE International Conference on “Device Intelligence, Computing and Communication Technologies (DICCT-2023)” organized by Graphic Era University, March 17-18, 2023.
- IEEE 4th International Conference on Advances in Computer Technology, Information Science and Communications (CTISC 2022) Suzhou, China from April 22-24, 2022.
- International Conference on Electrical, Electronics and Computing Technology (CEEET 2021) held on Xiamen, China from March 26-28, 2021.
- Springer Workshop on Machine learning, Deep learning and Computational Intelligence for Wireless Communication (MDCWC2020) held on National Institute of Technology Tiruchirappalli, India, Oct. 22-24, 2020.
- International Conference on Advances in Computing, Communication & Materials (ICACCM)-2020 jointly organized by Uttarakhand Technical University, Dehradun & Tula's Institute, Dehradun, Aug. 21-22, 2020.
- International Conference on Manufacturing, Advance Computing, Renewable Energy and Communication (MARC-2018) organized at HMR Institute of Technology and Management (HMRITM), July 19-20, 2018.
- 6th International Conference on Smart Computing & Communications (ICSCC 2017), organized by NIT Kurukshetra Dec. 7-8, 2017

- National Conference on “Recent Advances in Mechanical Engineering (NCRAME-2017)” organized by NIT Kurukshetra June 2-3 2017.
- IEEE International conference on Engineering Trends in Communication Technologys (ICCCE-2017) organized by NIT Jaipur, Rajasthan, India July 18-19, 2016
- IEEE International conference on Engineering Trends in Communication Technologys (ICETCT-2016) organized by GEU, Dehradun, Uttarakhand Nov. 18-19, 2016
- 2nd IEEE International Conf. on Advances in Computing and Communication Engg. (ICACCE’15), May 1-2, 2015, Dehradun, Uttarakhand.
- IEEE International Conference on Computing, Communication and Security (ICCCS) Dec. 4-5, 2015 Le Meridien Pointe aux Piments, Pamplemousses, Mauritius.

CONTRIBUTIONS:

Academic / Administrative Contributions at Department / Institute Level

- 1) NEP Co Coordinator GGV Bilaspur 02.04.25 onwards
- 2) Member of BOS (Subject External Expert) of ECE HNB Garhwal University from 16.01.2025 onwards for two years.
- 3) Chairman DAC of ECE GGV Bilaspur from 30.12.2024 onwards.
- 4) Chairman BOS of ECE GGV Bilaspur from 30.12.2024 onwards.
- 5) Chairman DRC of ECE GGV Bilaspur from 30.12.2024 onwards.
- 6) Head, Department of ECE GGV Bilaspur from 30.12.2024 onwards.
- 7) Member of Academic Council, Guru Ghasidas Vishwavidyalaya, Bilaspur Dec. 2024 onwards.
- 8) Administrative Warden of Saheed Veer Narayan Hostel GGV from 24.10.2024-29.12.2024.
- 9) Administrative Warden of Dr. B. R. Ambedkar Hostel GGV from 02.07.2024 –23.10.2024.
- 10) Member DRC of ECE GGV Bilaspur from 15.04.2024 onwards.
- 11) Member of NTA recruitment committee, GGV Bilaspur from March 2024 onwards.
- 12) Member of GGV QS world, QS Asia, THE world, THE subject from Jan 2024 onwards.
- 13) Coordinator Fitness & Wellness Centre, Guru Ghasidas Vishwavidyalaya, Jan. 2024 onwards.
- 14) Member (Dean’s Nominee) of scrutiny & admission committee M.Tech/Ph.D. Deptt. of ECE, GGV (2023-2025).
- 15) Member of Board of Studies, ECE Department, Guru Ghasidas Vishwavidyalaya, Dec. 2023 onwards.
- 16) Convener biodiversity management, Guru Ghasidas Vishwavidyalaya, May 2023 onwards.
- 17) Member of School Board for School of Studies of Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Sept. 2023 onwards.
- 18) Teacher representative for the admission of B.Tech Program, Guru Ghasidas Vishwavidyalaya 2023.
- 19) ISRO startup coordinator Department of ECE, Guru Ghasidas Vishwavidyalaya 2023.
- 20) NBA Coordinator, Department of ECE, Guru Ghasidas Vishwavidyalaya 2023 onwards.
- 21) NAAC Coordinator, Department of ECE, Guru Ghasidas Vishwavidyalaya 2023 onwards.

- 22) Member of BOS, Department of ECE, Guru Ghasidas Vishwavidyalaya 2023 onwards.
- 23) Member of curriculum & syllabus revision committee, Department of ECE, Guru Ghasidas Vishwavidyalaya 2023 onwards.
- 24) Member of NBA Accreditation, ECE Department NIT Kurukshetra (2014-2017) and only ECE Department received 6 years Accreditation.
- 25) Member of PG NBA Accreditation, ECE Department NIT Kurukshetra (2016-2021) and ECE Department received 3 years Accreditation.
- 26) Member of Board of Studies, ECE Department NIT Kurukshetra from 2016-2019.
- 27) Coordinator and paper setter of various subjects in ECE Department NIT Kurukshetra (2013-2020).
- 28) Member of thesis/project evaluation committee.
- 29) Incharge Stock Verification, CCN department (2016), Physics & Humanities Department (2018)& Hostel No 7 (2022).
- 30) Member of Budget requirement committee for the financial year of 2017-18.
- 31) Member of syllabus revision committees for B. Tech & M. Tech courses (2016), (2019).
- 32) Paper setter of many other Universities/Institutions from 2010 onwards.
- 33) Conducted Ph.D. comprehensive exams, M.Tech thesis evaluations and B.Tech practical exams of other Universities/Institutions.
- 34) Faculty-in-charge Kabaddi (2017).
- 35) Member of updation of Departmental information on the website (2017) & (2020-2023).
- 36) Worked as a counselor in UG and PG Admission.
- 37) Worked as a member of discipline committee in various programme.
- 38) Faculty-in-charge Cricket & Kabaddi (2018).
- 39) Warden of Hostel No.1, NIT Kurukshetra (2018-2019).
- 40) Warden of Hostel No.2, NIT Kurukshetra (2022-2023).
- 41) Professor-in-charge Time Table ECE Department from 2017-2020.
- 42) Professor-in-charge Microprocessor and VLSI Lab from 2017-2019.
- 43) Professor-in-charge Advanced Electronics Lab from 2019-2023.
- 44) Member of Department Purchase Committee (DPC) from 2019-2023.
- 45) Professor-in-charge Practical Training/Internship ECE Department from 2017 to 2019.
- 46) Served as a Deputy Superintendent of Exam in NIT Kurukshetra (Nov/Dec 2017).
- 47) Member of thesis/project evolution committee.
- 48) Presiding Officer, Election Commission of India (2014).
- 49) Micro Observer, Election Commission of India (2019).