Tripuresh Joshi, Ph.D.

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Employment History (Experience: 14+ Years)

2023 – ···· 🔖 **Dean Projects & Consultancy, Associate Professor,** Department of Electronics & Communication Engineering, Tula's Institute, Dehradun, Uttarakhand, India.

2022 – 2023 🔖 **Visiting Professor,** Department of Electronics & Communication Engineering, Institute of Technology, Gopeshwar, Uttarakhand, India.

2021 – 2023 🔖 **Assistant Professor,** Department of Electronics & Communication Engineering, Tula's Institute, Dehradun, Uttarakhand, India.

2013 – 2020 🔖 **Assistant Professor,** Department of Electronics & Communication Engineering, G B Pant Institute of Engineering & Technology, Pauri-Garhwal, Uttarakhand, India.

2012 – 2013 🔖 **Teaching Personnel,** Department of Electronics & Communication Engineering, G B Pant University of Agriculture & Technology, Pantnagar, Uttarakhand, India.

2009 – 2010 🔖 **Network Engineer,** HCL Infosystems, Dehradun, Uttarakhand, India.

Professional Qualification

2014 – 2020 🔖 **Ph.D., Uttarakhand Technical University, Dehradun** in Electronics & Communication Engineering.
Thesis title: *Performance Improvement of TFETs for Switching and Analog/RF applications.*

2010 – 2012 🔖 **M.Tech. SHUATS, Allahabad** in Electronics & Communication Engineering. **(Honors with University Medal)**
Thesis title: *WDM PON's with Digital Broadcast Voice, Data and Voice Signals..*

2006 – 2009 🔖 **B.Tech. Kumaon University, Nainital** in Electronics & Communication Engineering.**(First Division)**
Project title: *World's First K-Map Solver for Handheld Devices using J2ME..*

2003 – 2006 🔖 **Diploma Uttarakhand Board of Technical Education, Roorkee** in Computer Science & Engineering.**(Honors with 2nd state ranking)**
Project title: *Student Management System.*

Research Grants & Publications

Funded Research & Grants

1 T. Joshi, *"organization of workshop on intellectual property rights", from uttarakhand state council for science & technology (ucost),* 2021.

2 T. Joshi and S. Semwal, *"iot based realtime water quality monitoring system", from ieee ap-s and ieee hac: Ap-s-relevant technology for local community challenges,* 2022.

3 T. Joshi, *"organization of ieee day 2022", from ieee up section-r10,* 2022.

4 T. Joshi, *"ieee collaborate up 2022", from ieee up section-r10,* 2022.

5 T. Joshi, *"ieee spax funded professional event", from ieee spax,* 2023.

6   T. Joshi, *"identification of villages under the uba program", from unnat bharat abhiyan, mhrd, india*, 2022.

7   T. Joshi, *"organization of workshop on intellectual property rights", from uttarakhand state council for science & technology (ucost)*, 2023.

8   T. Joshi, *"development of technological resource center at tulas institute dehradun for buxas scheduled tribe", from uttarakhand state council for science & technology (ucost)*, 2023.

9   T. Joshi, *"development of rain attenuation and measurement device for the dehradun region", from uttarakhand science education and research centre (userc)*, 2023.

Journal Articles

1   T. Joshi, B. Singh, and Y. Singh, "Dopingless extended source tfet for switching and analog/rf applications," *Transactions on Electrical and Electronic Materials*, May 4, 2024. DOI: `10.1007/s42341-024-00541-4`. [Online]. Available: `https://doi.org/10.1007/s42341-024-00541-4`.

2   T. Joshi, Y. Singh, and B. Singh, "Extended-source double-gate tunnel fet with improved dc and analog/rf performance," *IEEE Transactions on Electron Devices*, vol. 67, pp. 1873–1879, 4 Apr. 2020, ISSN: 15579646. DOI: `10.1109/TED.2020.2973353`.

3   T. Joshi, Y. Singh, and B. Singh, "Dual-channel trench-gate tunnel fet for improved on-current and subthreshold swing," *Electronics Letters*, vol. 55, pp. 1152–1155, 21 Oct. 2019, ISSN: 00135194. DOI: `10.1049/el.2019.2219`. [Online]. Available: `https://onlinelibrary.wiley.com/doi/10.1049/el.2019.2219`.

4   T. Joshi, B. Singh, and Y. Singh, "Controlling the ambipolar current in ultrathin soi tunnel fets using the back-bias effect," *Journal of Computational Electronics*, vol. 19, pp. 658–667, 2 Jun. 2020, ISSN: 1569-8025. DOI: `10.1007/s10825-020-01484-8`. [Online]. Available: `http://link.springer.com/10.1007/s10825-020-01484-8`.

5   A. Sharma and T. Joshi, "Big data for central banks: Exploring applications in monetary policy, financial stability monitoring and bank supervision," *Journal of Computational Social Dynamics*, vol. 7, no. 4, pp. 1–10, Oct. 2022. [Online]. Available: `https://vectoral.org/index.php/JCSD/article/view/41`.

6   P. Gupta and T. Joshi, "Towards a secure and ethical framework for big data privacy in the internet of things (iot) landscape," *International Journal of Applied Health Care Analytics*, vol. 8, no. 8, pp. 54–71, Aug. 2023. [Online]. Available: `https://norislab.com/index.php/IJAHA/article/view/37`.

7   R. Tiwari, A. K. Gupta, T. Joshi, and S. Semwal, "Performance analysis of 16-bit qalu using reversible logic gates with qca for quantum processors," *Journal of Survey in Fisheries Sciences*, vol. 10, 1 2023. [Online]. Available: `http://www.sifisheriessciences.com/index.php/journal/article/view/462`.

8   S. S. Rawat, D. D. Pal, D. S. Semwal, P. Dhuliya, P. Dhuliya, and T. Joshi, "Optimum placement and sizing of dgs using optimization techniques and distribution system reconfiguration," *Webology*, vol. 18, pp. 735–746, 6 2021, ISSN: 1735-188X. [Online]. Available: `https://www.webology.org/abstract.php?id=2370`.

9   Renu, R. N. Shukla, and T. Joshi, "Mass transfer during osmotic dehydration of banana slices," *International Journal of Scientific and Research Publications (IJSRP)*, vol. 2, 7 2012, ISSN: 2250-3153. [Online]. Available: `https://www.ijsrp.org/research_paper_jul2012/rp42.html`.

10   M. Kumar, A. Kumar, S. Tripathi, T. Joshi, and C. S. Shukla, "Performance analysis of digital audio broadcasting system through awgn and rayleigh channels," *International Journal of Scientific and Research Publications*, vol. 2, 7 2012. [Online]. Available: `https://www.ijsrp.org/research-paper-publishing-jul-2012.php`.

11   L. K. Tyagi, A. K. Jaiswal, M. Kumar, and T. Joshi, "Performance analysis of four wave mixing based wavelength conversion in commercial optical fibers," *International Journal of Scientific and Research Publications*, vol. 2, 7 2012. [Online]. Available: `https://www.ijsrp.org/print-journal/ijsrp-july-2012-print.pdf`.

12 T. Joshi, A. K. Jaiswal, and M. Kumar, "Performance analysis & optimization of wdm-epon for metropolitan area networking," *International Journal of Scientific and Research Publications*, vol. 2, 6 2012. 🔗 [Online]. Available: `https://www.ijsrp.org/research_paper_jun2012/ijsrp-June-2012-19.pdf`.

Conference Proceedings

1 T. Joshi, S. Semwal, and A. Rawat, "Assessing quality of service in cellular networks: Effects of altitude and weather conditions in dehradun, uttarakhand," in *2024 International Conference On Advances In Computing, Communication and Materials (ICACCM)*, 2025.

2 R. Garg, N. Joshi, R. K. Gondekar, T. Joshi, N. Varshney, and K. C. Das, "Voltage profile enhancement and harmonic reduction in power system network using fuzzy logic controller," in *2024 IEEE International Conference on Communication, Computing and Signal Processing (IICCCS)*, 2024, pp. 1–6. 🔗 DOI: `10.1109/IICCCS61609.2024.10763706`.

3 R. Garg, A. Deogaonkar, P. Garia, I. Ahamad, P. S. Kharayat, and T. Joshi, "Prediction of user behaviour of electric vehicles utilizing ensembled machine learning technique," in *2024 IEEE International Conference on Communication, Computing and Signal Processing (IICCCS)*, 2024, pp. 1–6. 🔗 DOI: `10.1109/IICCCS61609.2024.10763696`.

4 R. Garg, C. Manral, T. Joshi, M. Bisht, K. S. Bharath, and P. S. Kharayat, "An examination of the function of artificial-intelligence in the diagnosis of autism-spectrum-disorder," in *2024 2nd International Conference on Self Sustainable Artificial Intelligence Systems (ICSSAS)*, 2024, pp. 79–84. 🔗 DOI: `10.1109/ICSSAS64001.2024.10760519`.

5 T. Joshi, M. M. Sati, P. Kumar, A. Singh, A. Gupta, and S. Goyal, "Implementation of fuzzy logic controller for the charge controlling of electric vehicle battery," in *2024 Asia Pacific Conference on Innovation in Technology (APCIT)*, 2024, pp. 1–6. 🔗 DOI: `10.1109/APCIT62007.2024.10673595`.

6 S. Semwal, S. Kant, A. Kaur, T. Joshi, Charu, and S. Goyal, "Dc-dc converter based dc motor controlling for the charging of electric vehicle using anfis," in *2024 5th International Conference on Electronics and Sustainable Communication Systems (ICESC)*, 2024, pp. 69–74. 🔗 DOI: `10.1109/ICESC60852.2024.10689921`.

7 S. Semwal, M. Manu, K. Bandyopadhyay, P. Kumar, T. Joshi, and P. S. Kharayat, "An optimal controlling of covid-19 preventive measures variable for environmental sustainable solution using genetic algorithm," in *2024 5th International Conference on Smart Electronics and Communication (ICOSEC)*, 2024, pp. 1–6. 🔗 DOI: `10.1109/ICOSEC61587.2024.10722630`.

8 Priyanka, P. Dhuliya, S. S. Kathait, S. Semwal, T. Joshi, and M. Pathela, "Electric vehicles (ev's): A brief review," in *2022 International Conference on Advances in Computing, Communication & Materials (ICACCM)*, 2022. 🔗 DOI: `10.1109/ICACCM56405.2022.10009125`.

9 N. Mathur, S. Kumar, T. Joshi, and P. Dhuliya, "Analyzing consumer behavior predictions: A review of machine learning techniques," in *2022 International Conference on Advances in Computing, Communication & Materials (ICACCM)*, 2022. 🔗 DOI: `10.1109/ICACCM56405.2022.10009209`.

10 D. K. Sharma, R. Joshi, T. Joshi, and P. Dhuliya, "A simulation study of si/sige dual insulator double gate heterostructure junctionless fet (di-dg-hjl-fet) for rf applications," in *2022 International Conference on Advances in Computing, Communication & Materials (ICACCM)*, 2022. 🔗 DOI: `10.1109/ICACCM56405.2022.10009572`.

11 S. Kumar, R. Joshi, T. Joshi, and S. Semwal, "Switching and analog/rf performance improvement of graded channel double gate junctionless fet: A simulation study," in *2022 International Conference on Advances in Computing, Communication & Materials (ICACCM)*, 2022. 🔗 DOI: `10.1109/ICACCM56405.2022.10009312`.

12 N. Sachin, D. Vibhuti, and J. Tripuresh, "A novel virtual power protection system with control and automatic self-healing," in *Advances in Computing and Communication Engineering*, 2014. 🔗 [Online]. Available: `https://reapp.coolcog.in/phl`.

13   T. Joshi, S. Kumar, and Y. Singh, "Design and properties of low noise silicon avalanche photodiode," in *Futuristic Trends in Electronics and Renewable Energy*, 2015. 🔗 [Online]. Available: `https://reapp.coolcog.in/i02`.

14   T. Joshi, Y. Singh, and B. Singh, "A simulation study of double channel trenched gate tunnel fet for analog and rf applications," in *2020 International Conference on Advances in Computing, Communication & Materials (ICACCM)*, 2020, pp. 19–22. 🔗 DOI: `10.1109/ICACCM50413.2020.9212964`.

15   R. Joshi, T. Joshi, and S. Kumar, "Simulation and analysis of graded-channel dual-insulator double-gate junction-less fet," in *Proceedings of Integrated Intelligence Enable Networks and Computing*, 2021, pp. 589–594, ISBN: 9789813363076. 🔗 DOI: `10.1007/978-981-33-6307-6_59`. 🔗 [Online]. Available: `https://link.springer.com/10.1007/978-981-33-6307-6_59`.

Books and Chapters

1   S. Semwal and T. Joshi, "2022 international conference on advances in computing, communication and materials (icaccm)," in IEEE Xplore, 2022, ISBN: 978-1-6654-7439-9. 🔗 DOI: `10.1109/ICACCM56405.2022.10009342`. 🔗 [Online]. Available: `https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=%5C&arnumber=10009342`.

2   D. T. Joshi, M. M. Katta, P. M. R, and M. S. P. D, "Nanoscience and nanotechnology," in Scientific International Publishing House, 2022. 🔗 [Online]. Available: `https://www.flipkart.com/nanoscience-and-nanotechnology/p/itm7cf3e25973c5a`.

3   M. C. Seepanaand, D. M. Malijeddi, D. S. BB, and D. T. Joshi, "Vlsi design," in Scientific International Publishing House, 2022. 🔗 [Online]. Available: `https://www.flipkart.com/vlsi-design/p/itm40e24e54974a5`.

4   Y. S. Song, S. B. Rahi, C. K. Pandey, *et al.*, "Memory designing using low-power fets for future technology nodes," in *Emerging Low-Power Semiconductor Devices*, CRC Press, 2022, pp. 26–32, ISBN: 9781003240778. 🔗 DOI: `10.1201/9781003240778-10`. 🔗 [Online]. Available: `https://www.taylorfrancis.com/chapters/edit/10.1201/9781003240778-10/memory-designing-using-low-power-fets-future-technology-nodes-young-suh-song-shiromani-balmukund-rahi-chandan-kumar-pandey-shubham-tayal-yunho-choi-bijo-joseph-tripuresh-joshi-daryoosh-dideban-suman-lata-tripathi`.

Patents

1   A. Chauhan, R. K. Mandal, Y. Pant, T. Joshi, S. Semwal, and N. Saxena, *High-tech waste segregator*, Patent No: 202411029451, IP India, 2024.

2   R. K. Mandal, A. Chauhan, A. Karn, T. Joshi, S. Semwal, and N. Saxena, *Multi-chamber filtration system*, Patent No: 202411069671, IP India, 2024.

3   T. Joshi and S. Semwal, *Flexible tap design through elastomeric sealing rings pipes connector*, Patent No: 202311019678, IP India, 2023.

4   P. Prabhat, S. Semwal, T. Joshi, S. Sharma, and A. Kumar, *Management system for image processing*, Patent No: 202211059466, IP India, 2022.

5   T. Joshi, *Performance analysis of doping-less extended source tfet (dles-tfet)*, Patent No: 202211045572, IP India, 2022.

6   S. Semwal, P. Dhuliya, and T. Joshi, *Courier management system*, Patent No: 202211021398, IP India, 2022.

Miscellaneous Experience

Awards, Affiliations and Achievements

2023-2028   🔖   **Member**, Optica (Optical Society of America).

2013-2023   🔖   **Senior Member**, Institute of Electrical and Electronics Engineers (IEEE).

2021   🔖   **Young Scientist Award-2021** , from Global Education and Corporate Leadership Awards.

2012   🔖   **University Medal**, Awarded University Silver Medal for holding First position in M. Tech.

Administrative Experience

2023-2024   🔖   **Member Board of Studies (Electronics & Communication Engineering)** in VMSB Uttarakhand Technical University, Dehradun, Uttarakhand.

🔖   **VMSB-UTU Observer for Even End Semester Exam** in Maya Institute of Technology & Management, Dehradun, Uttarakhand.

2023-Present   🔖   **Member NBA Accreditation and Filing Process** in Tula's Institute, Dehradun, Uttarakhand.

🔖   **Institute Coordinator National Innovation and Start-up Policy (NISP)** in Tula's Institute, Dehradun, Uttarakhand.

🔖   **IIC Convener** in Tula's Institute, Dehradun, Uttarakhand.

2022-Present   🔖   **Unnat Bharat Abhiyan, Institute Project Coordinator** in UBA Cell, Tula's Institute, Dehradun, Uttarakhand.

2023-Present   🔖   **Advisor Tula's Optica Student Chapter** in Tula's Institute, Dehradun, Uttarakhand.

2022-2023   🔖   **VMSB-UTU Observer for Even End Semester Exam** in Nanhi Pari Seemant Engineering Institute, Pithoragarh, Uttarakhand.

🔖   **VMSB-UTU Observer for Odd End Semester Exam** in Baba Farid Institute of Technology, Dehradun, Uttarakhand.

2021-Present   🔖   **Manager Project & Consultancy** in Tula's Technology & Business Incubator Foundation (TTBIF), Dehradun, Uttarakhand.

🔖   **Member NAAC Accreditation and Filing Process** in Tula's Institute, Dehradun, Uttarakhand.

🔖   **Coordinator Research & Development** in Tula's Institute, Dehradun, Uttarakhand.

🔖   **Counselor Tula's IEEE Student Branch** in Tula's Institute, Dehradun, Uttarakhand.

2021-2023   🔖   **IIC Coordinator IPR & Innovation Activity** in Tula's Institute, Dehradun, Uttarakhand.

2021-2022   🔖   **VMSB-UTU Observer for Even End Semester Exam** in Dev Bhoomi Institute of Technology, Dehradun, Uttarakhand.

2019-2020   🔖   **Member Board of Studies (Electronics & Communication Engineering)** in G. B. Institute of Engineering & Technology, Pauri Garhwal, Uttarakhand.

2018-2020   🔖   **Officer-In-Charge (OiC) Microprocessor, VLSI & Solid State Devices Lab** in Department of Electronics & Communication Engineering, GBPIET Pauri-Garhwal, Uttarakhand.

2018-2019   🔖   **Member Board of Studies (Electronics & Communication Engineering)** in G. B. Institute of Engineering & Technology, Pauri Garhwal, Uttarakhand.

2016-2020   🔖   **Coordinator NBA** in Department of Electronics & Communication Engineering, G. B. Institute of Engineering & Technology, Pauri-Garhwal, Uttarakhand.

Miscellaneous Experience (continued)

2015-2020 🔖 **Officer-In-Charge (OiC) Time Table** in Department of Electronics & Communication Engineering, GBPIET Pauri-Garhwal, Uttarakhand.

2013-2020 🔖 **Course Counselor** in Department of Electronics & Communication Engineering, GBPIET Pauri-Garhwal, Uttarakhand.

Certification and Professional Courses

2022 🔖 **Innovation Ambassador (IA) Training 'Advanced Level'**. Awarded by MoE's Innovation Cell, India.

🔖 **Innovation Ambassador (IA) Training 'Foundation Level'**. Awarded by MoE's Innovation Cell & AICTE, India.

🔖 **IP Awareness/ Training Program**. Awarded by Intellectual Property Office and MoE's Innovation Cell & AICTE, India.

2021 🔖 **Recent Trends in Optoelectronics & Optical Communications**. Awarded by AICTE ATAL Academy.

🔖 **Devices & Circuits for next generation computing architecture**. Awarded by AICTE ATAL Academy.

2020 🔖 **Webinar on Innovation: What, Why and How?**. Awarded by IEEE INDIA Council.

🔖 **Webinar on Personal Branding**. Awarded by IEEE INDIA Council & IEEE Youngprofessionals.

🔖 **Webinar on Post COVID-19 Role of Science and Technology towards a self Reliant India**. Awarded by IEEE INDIA Council.

🔖 **Webinar on Social Media, Democracy and Online Hate**. Awarded by IEEE Computer Society.

🔖 **Blockchain and It's Applications**. Awarded by GBPIET, Pauri Garhwal.

2019 🔖 **Recent Trends in Renewable Energy Systems**. Awarded by GBPIET, Pauri Garhwal.

🔖 **FPGA and Mentor Graphics Tools**. Awarded by GBPIET, Pauri Garhwal.

2018 🔖 **Advances in Materials & Manufacturing**. Awarded by GBPIET, Pauri Garhwal.

2017 🔖 **Certified Virtual Labs Practitioner**. Awarded by Virtual Labs, IIT Roorkee & GBPIET, Pauri Garhwal.

🔖 **Recent Trends in Electronic Devices and Signal Processing**. Awarded by GBPIET, Pauri Garhwal.

2014 🔖 **Certified Academic Management for Achieving Excellence in Engineering Education Practitioner**. Awarded by Engineering Staff College of India (ESCI).

🔖 **Advancement in Cloud Computing**. Awarded by GBPIET, Pauri Garhwal.

Courses & Events Organized

2023 🔖 Organized **Development of Startup Eco-System in Uttarakhand**. Funded by DevBhoomi International Chamber of Commerce (DICC), Dehradun.

2022 🔖 Organized IEEE Conference **International Conference on Advances in Computing, Communication & Material (ICACCM 2022)**. Sponsored by IEEE USA, AICTE & DEAL-DRDO.

🔖 Organized **Uttarakhand Startup Aspirant Meet - 2022**. Funded by Department of Industries & Startup Uttarakhand, Dehradun.

🔖 Organized workshop on **Industrial Robotics Design and Implementation**. Funded by Tula's Institute, Dehradun.

Miscellaneous Experience (continued)

- Organized workshop on **Fabrication of Voice controlled robot**. Funded by AICTE SPICES Scheme.
- Organized workshop on **Intellectual Property Rights and Patent Drafting Techniques**. Funded by UCOST Dehradun.

2021
- Organized IEEE Conference **8th IEEE UP Section International Conference on Electrical, Electronics & Computer Engineering (UPCON-2021)**. Sponsored by IEEE UP Section R-10.
- Organized One week Short Term course on **Internet of Things**. Funded by AICTE SPICES scheme.

2019
- Organized One week Short Term course on **Antenna: Design, Fabrication & Measurement Techniques**. Funded by TEQIP III.

2018
- Organized One week Short Term course on **Modeling and Simulation of advanced semiconductor devices & VLSI circuits**. Funded by TEQIP III.

Skills

Languages	Strong reading, writing and speaking competencies for Hindi, English.
Coding	C/C++, Python, LaTeX
Simulation	Silvaco TCAD, MATLAB, Cadance Virtuoso, scilab, LT-Spice.
Web Dev	Html, css, JavaScript, Wordpress, Wix.
Misc.	Academic research, teaching, training, consultation, LaTeX typesetting and publishing.

Declaration

I affirm that the details presented in this curriculum vitae are accurate and complete to the best of my knowledge and belief. I am fully accountable for the integrity and authenticity of the information provided herein.

Date:29/11/2024   **Dr Tripuresh Joshi**
Place: Dehradun.