

**UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY
PANJAB UNIVERSITY, CHANDIGARH - 160014**

FACULTY PROFILE

1. Name and Designation : Dr. Garima Joshi, Assistant Professor (ECE)
 2. Date of Birth : 23/08/1981
 3. Highest Qualification : PhD
 4. Specialization : VLSI Design, Image Processing, Pattern Recognition
 5. Date of joining in this Department : 01/08/2009
 6. Academic Performance (Descending Order)

| S. No | Degree | University/ Institution | Year of Pass | % of Marks | Class |
|-------|--------------|--|-----------------|---------------|-------------|
| 1. | PhD | UIET, Punjab University, Chandigarh | 2019 | --- | ---- |
| 2. | M.E (ECE) | UIET, Punjab University, Chandigarh | 2008 | 74.2% | I Class |
| 3. | B.Tech (ECE) | Himachal Pradesh University, Shimla | 2002 | 76.7 % | with Honors |

5. Total Years of teaching/ industry experience before joining this college (in the descending order)

| S. No. | Period | | Organization / Institution | Position Held |
|--------|-------------|-----------|--|--|
| | From | To | | |
| 1. | Aug 2009 | Till date | UIET, Panjab University | Assistant Professor (ECE) |
| 2. | Nov 2007 | June 2009 | UIET, Panjab University | Project Associate in DST sponsored project |
| 3. | Oct 2004 | Aug 2006 | National Hydroelectric Power Corporation (NHPC), Parbati 800 MW Hydro Electric Project - II, Distt. Kullu (Himachal Pradesh) | Engineer (E&C) |
| 4. | August 2003 | Oct 2004 | Institute of Engineering and Emerging Technologies (IEET), Baddi, Himachal Pradesh Department of Electronics and Communication Engineering | Lecturer |

6. Publications: (Total: 32)

| <i>S. No.</i> | <i>Research work</i> | <i>Particulars</i> |
|---------------|--------------------------|--|
| 1. | List of papers published | <ul style="list-style-type: none">• SCI Journal: 04• SCOPUS Journal: 05• International Conference: 15• Book Chapters: 03• Refereed Journals:05 |
| 2. | Projects guided | <ul style="list-style-type: none">• Various hardware and Software based BE projects• Around 12 M.E (ECE) and M.Tech (Microelectronics) Thesis Co-Guided (2009 onwards) |

List of Research Publications in SCI Journals:

1. Garima Joshi, RenuVig, Sukhwinder Singh, DCA-based unimodal feature-level fusion of orthogonal moments for Indian sign language dataset, IET Computer Vision, 12 (5), 570-577, 2018.[SCI, IF=1.132]
2. Ankit Garg, Garima Joshi, Gate diffusion input based 4-bit Vedic multiplier design, IET Circuits, Devices & Systems, 12 (6), 764-770, 2018.[SCI, IF=1.395]
3. Bineet Kaur, Garima Joshi, RenuVig, Indian sign language recognition using Krawtchouk moment-based local features, The Imaging Science Journal, 65 (3), 171-179, 2017.[SCI, IF=0.45]
4. Bineet Kaur, Garima Joshi, RenuVig, Identification of ISL alphabets using discrete orthogonal moments, Wireless Personal Communications, 95 (4), 4823-4845, 2017.[SCI, IF=0.951]

List of Publications in SCOPUS Journals

5. Bineet Kaur, Garima Joshi, Lower order Krawtchouk moment-based feature-set for hand gesture recognition, Advances in Human-Computer Interaction,Hindawi,vol. 2016, 1-10, 2016. [SCOPUS]

6. Garima Joshi and Amit Choudhary, "Analysis of Short Channel Effects in Nanoscale MOSFETs", International Journal of Nanoscience, vol.10, no.1, pp. 275-279, 2010. [SCOPUS]
7. Amit Chaudhry, J.N. Roy and Garima Joshi, "Nanoscale Strained-Si MOSFET Physics and Modeling Approaches: A Review", International Chinese Journal of Semiconductors, vol.31, no.10, pp. 400-1 to 400-6, 2010. [SCOPUS]
8. Garima Joshi, Manjinderpal Singh, and Monica Chauhan, "Analysis of gate tunneling currents in nanoscale metal-oxide-semiconductor field effect transistors (MOSFETs) with SiO₂ and high-K gate dielectrics" Proc. IMechE Vol. 223 Part N: J. Nanoengineering and Nanosystems, vol.223, no.1, pp. 19-24, 2010.(IF=0.6)[SCOPUS]
9. Amit Chaudhry, Garima Joshi, J. N. Roy, and D.N. Singh, "Strained Silicon MOSFET Structures for Nanoscale Applications: A Review", Acta Technica Napocensis, vol.51, no.1, pp. 15-21, 2010. [SCOPUS]

Book Chapters

10. Garima Joshi, Anu Gaur, Sheenu, Interpretation of Indian Sign Language Using Optimal HOG Feature Vector, ICACDS 2018: Advances in Computing and Data Sciences, Communications in Computer and Information Science book series (CCIS), 905, pp 65-73, 2018.
11. Ravneet Kaur, Garima Joshi, Maninder Kaur Saggu, Vishal Sharma, Performance Analysis of Conventional SRAM with Higher Order SRAM Topologies, Lecture Notes in Electrical Engineering book series, Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017) pp 659-675 (LNEE, volume 476) pp 659-675, 2018.
12. Garima Joshi, Renu Vig, Sukhwinder Singh, Analysis of Zernike Moment-Based Features for Sign Language Recognition, Intelligent Communication, Control and Devices, Advances in Intelligent Systems and Computing book series, 624, 1335-1343, 2018.

List of International Conferences

13. Garima Joshi, Renu Vig, Sukhwinder Singh, "CFS-Infogain based Combined Shape Based Feature Vector for Signer Independent ISL Database", IAPR 6th International Conference on Pattern Recognition Applications and Methods, Portugal, pp. 541-548, 2017.
14. Garima Joshi, D.N. Singh, and Sharmelee Thangjam, "Effect of temperature variation on Gate Tunneling currents in nanoscale MOSFETs" Published in the proceedings 8th International Conference on nanotechnology IEEE NANO, Arlington Texas, US, pp. 37-41, August 2008.
15. Bineet Kaur, Garima Joshi, RenuVig, Analysis of shape recognition capability of Krawtchouk moments, International Conference on Computing, Communication & Automation, 1085-1090, 2015.
16. Sheenu, Garima Joshi, RenuVig "A multi-class hand gesture recognition in complex background using sequential minimal optimization", International Conference on Signal Processing, Computing and Control, 92-96, 2015.
17. Khushdeep Kaur, Preeti Singh, Garima Joshi, "Analysis of ternary multiplier using booth encoding technique", International Conference on Signal Processing and Integrated Networks (SPIN), 871-875, 2015.
18. Kalpana Sharma, Garima Joshi, Maitreyee Dutta, "Analysis of shape and orientation recognition capability of complex Zernike moments for signed gestures", International Conference on Signal Processing and Integrated Networks (SPIN), 730-735, 2015.
19. Prerna Gupta, Garima Joshi, Maitreyee Dutta, Comparative Analysis of Movement and Tracking Techniques for Indian Sign Language Recognition, Fifth International Conference on Advanced Computing & Communication Technologies, 90-95, 2015.
20. Sheenu Gupta, Garima Joshi and RenuVig, HOG Investigation for Static Hand Gestures, IEEE International Conference on Computing, Communication and Automation, 1100-1103, 2015.
21. G Khurana, Garima Joshi, J Kaur, Static hand gestures recognition system using shape based features, Recent Advances in Engineering and Computational Sciences, 1-4, 2014.

22. Prerna Gupta, Garima Joshi, Maitreyee Dutta, "Comparative Analysis of Movement and Tracking Techniques for Indian Sign Language Recognition" Fifth International Conference on Advanced Computing & Communication Technologies (ACCT), 90-95, 2015.
23. Kalpana Sharma, Garima Joshi, Maitreyee Dutta, "Analysis of Shape and Orientation Recognition Capability of Complex Zernike Moments for Signed Gestures" International Conference on Signal Processing and Integrated Networks (SPIN), 2015.
24. G Khurana, Garima Joshi, J Kaur, "Static hand gestures recognition system using shape based features" Engineering and Computational Sciences (RAECS), Recent Advances in, 1-4, 2014.
25. Jatinderpal Kaur, Garima Joshi, Rajneet Kaur, "Vision based Hand Gesture Recognition System for ISL", 3rd International Conference on Biomedical Engineering & Assistive Technologies, Chandigarh, 2014.
26. Garima Joshi, "Nanoscale MOSFETs: An Overview of Short Channel Effects and Novel Channel Material" ICSCI 2008, International Conference on Systemics, Cybernetics and Informatics, Hyderabad, pp. 1-5, August 2008.
27. Garima Joshi, Manjinderpal Singh, and Monica Chauhan, "Analysis of Gate Tunneling Current Density in Nanoscale MOS Structures" International Conference on Wireless Networks and Embedded Systems, 2008.

Refereed Journals

28. S. B. Rahi and Garima Joshi, "Analytical Model of Surface Potential and Threshold Voltage of Biaxial Strained Silicon NMOSFET Including QME", International Journal of Advances in Engineering & Technology, vol. 5, no. 1, pp.601-607, 2012.
29. Pragya Kushwaha, Amit Chaudhry and Garima Joshi, "Nanosimulator for Analysis of MOSFET at Nanoscale" International Journal of Simulation Systems, Science & Technology, Vol 12, no. 5, pp. 1-6, 2011.
30. S. B. Rahi, Garima Joshi, "A Physics Based Model Of Inversion Charge Sheet (ICS) For Nanoscale Biaxial Strained-Silicon NMOSFET Including Quantum Mechanical Effect (QME), International Journal of Advances in Engineering & Technology, vol. 5, no. 2, 2012.

31. Ishu Sharma, **Garima Joshi**, Vishal Sharma, Analysis and Implementation of CMOS based Analog Circuit of Cortical Neuron, International Journal of Advance Research in Science and Engineering, 6(8), 1773-1779, 2017.
32. Surbhi Gautam, **Garima Joshi**, Nidhi Garg, Classification of Indian Classical Dance Steps Using HOG Features, International Journal of Advance Research in Science and Engineering, 6(8), 1859-1865, 2017.