




KULBHUSHAN CHAND

Post Doctoral Fellow,
Technology Innovation Hub,
Indian Institute of Technology Mandi, HP, India – 175075

 Institute Email: kulbhushan@tih.iitmandi.ac.in
 Persistent Email: kulbhushan.chand@gmail.com
 Website: kulbhushanchand.github.io

Broadly my research areas overlap Human Computer Interaction (HCI), Indian Knowledge System (IKS) and mental healthcare. Specifically, I do research in developing biofeedback systems, validating alternate forms of medications (like biofeedback, music, meditation etc.) for mental stress management, and making biofeedback protocols more engaging through gamification.

EDUCATION

| | |
|---|--------------------|
| PhD National Institute of Technology Jalandhar Electronics and Communication Engineering CGPA: 9.0 | 2015 – 2022 |
| MTech Lovely Professional University Electronics and Communication Engineering Graduated with Hons. and University Topper, CGPA: 9.12 | 2011 – 2013 |
| BTech Guru Nanak Dev University Electronics and Communication Engineering Graduated with Hons., %Marks: 78.05 | 2006 – 2010 |

RESEARCH EXPERIENCE

| | |
|--|----------------------------|
| Post Doctoral Fellow Indian Institute of Technology Mandi Technology Innovation Hub Project: Multisensory Human Computer Interaction and Biofeedback; Advisor: Prof. Varun Dutt | Nov 2022 – Present |
| Pre Doctoral Fellow Indian Institute of Technology Mandi Technology Innovation Hub Project: Multisensory Human Computer Interaction and Biofeedback; Advisor: Prof. Varun Dutt | Jun 2022 – Nov 2022 |
| Project Team Member ISRO Space Technology Incubation Center (S-TIC), National Institute of Technology Jalandhar Project: Strengthening Ridge to Valley based NRM planning under Mission Water Conservation using Geospatially enabled Serious Gaming; Advisor: Prof. Varun Dutt | Apr 2020 – Mar 2024 |
| Doctoral Researcher National Institute of Technology Jalandhar Department of ECE Dissertation: Low cost multimodal biofeedback for mental relaxation; Advisor: Prof. Arun Khosla | Aug 2015 – Apr 2022 |
| MTech Researcher Lovely professional University Department of ECE Dissertation: A new approach for ECG signal denoising using Adaptive Filtering | Jul 2011 – Jun 2013 |

TEACHING EXPERIENCE

| | |
|--|----------------------------|
| Teaching Assistant National Institute of Technology Jalandhar Department of ECE | Aug 2015 – Jul 2020 |
| Assistant Professor Lovely Professional University Department of ECE | Jul 2013 – Jul 2015 |
| Teaching Assistant Lovely Professional University Department of ECE | Jan 2012 – Nov 2012 |
| Lecturer Lovely Professional University Department of ECE | Dec 2010 – May 2011 |

PUBLICATIONS (PEER-REVIEWED)

Journals

6. Kumar, Y., Garg, S., Agarwal, P., **Chand, K.**, Bhavsar, A., & Dutt, V. (2025). Affordable ECG Sensing: A Machine Learning-Enhanced Framework for Scalable Human-Machine Interaction in Telehealth. *IEEE Sensors Journal*, 1–1. (SCI, IF: 4.5)
5. **Chand, K.**, Chandra, S., & Dutt, V. (2024). Raga Bhairavi in virtual reality reduces stress-related psychophysiological markers. *Scientific Reports*, 14(1), 24816. (SCI, IF: 4.3)
4. **Chand, K.**, Chandra, S., & Dutt, V. (2024). A comprehensive evaluation of linear and non-linear HRV parameters between paced breathing and stressful mental state. *Heliyon*, 10(11). (SCI, IF: 3.9)
3. **Chand, K.**, & Khosla, A. (2022). BioNES: A plug-and-play MATLAB-based tool to use NES games for multimodal biofeedback. *SoftwareX*, 19, 101184. (SCI, IF: 3.1)
2. **Chand, K.**, & Khosla, A. (2022). Efficacy of Using Retro Games in Multimodal Biofeedback Systems for Mental Relaxation. *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*, 14(1), 1–23. (Scopus)
1. **Chand, K.**, & Khosla, A. (2022). MATLAB-Based Real-Time Data Acquisition Tool for Multimodal Biofeedback and Arduino-Based Instruments: Arduino Firmata Data Acquisition (AfDaq). *Journal of Information Technology Research (JITR)*, 15(1), 1–20.

Conferences - research papers/abstracts (*)

5. Soni, S., **Chand, K.**, & Chowdhury, S. R. (2025). Development of a Wearable fNIRS System for Non-invasive Cerebral Oxygenation Monitoring. 6th International Conference on Frontiers in Computing and Systems (COMSYS 2025), Warsaw University of Technology, Poland. [In Press]
4. **Chand, K.**, Khosla, A., & Dutt, V. (2025). Towards Affordable Biofeedback System for Mental Relaxation. *Mind, Brain, and Consciousness Conference (MBCC 2025)*, IIT Mandi, India. [In Press]
3. **Chand, K.**, Chandra, S., & Dutt, V. (2023). Effects of Relaxed and Stressful Mental States on the Heart Rate Variability Parameters. *Mind, Brain, and Consciousness Conference (MBCC 2023)*, India. *
2. Chandra, S., **Chand, K.**, & Dutt, V. (2023). Impact of Indian Classical Raga in Immersive Environments on Human Psycho-physiological Parameters. *Proceedings of the 16th International Conference on Pervasive Technologies Related to Assistive Environments. PETRA '23*, Corfu, Greece.
1. Rao, A. K., Fatma, Z., Menon, V. K., Bhavsar, A., Chowdhury, S. R., Chandra, S., Dutt, V., & **Chand, K.** (2023). Prediction of decision-making performance post-longitudinal tDCS administration via EEG features and machine learning. *Proceedings of the 16th International Conference on Pervasive Technologies Related to Assistive Environments. PETRA '23*, Corfu, Greece.

Book Chapters

4. Jain, B., Khosla, A., **Chand, K.**, & Ahuja, K. (2019). The Pursuit of Zero Food Waste: A Gamified Approach Promoting Avoidance of Dormitory Mess Food Wastage in Educational Institutions. In *Global Initiatives for Waste Reduction and Cutting Food Loss* (pp. 243–267). IGI Global.
3. Mukherjee, A., Goyal, P., Singh, A., Khosla, A. K., Ahuja, K., & **Chand, K.** (2019). Pursuit of Research: A Gamified Approach Promoting Research Engagement Among Undergraduate Students. In *Fostering Multiple Levels of Engagement in Higher Education Environments* (pp. 132–155). IGI Global.
2. Padmakar, G. S. V., Khosla, A., & **Chand, K.** (2019). LearnEasy-Android Application as a Technological Intervention for Children With Dyslexia. In *Emerging Trends in the Diagnosis and Intervention of Neurodevelopmental Disorders* (pp. 236–248). IGI Global.
1. Setia, D., Singh, R., Sharma, A., Khosla, A., Ahuja, K., & **Chand, K.** (2019). Enhancing Tourism and Cultural Experience Through Gamification. In *Positioning and Branding Tourism Destinations for Global Competitiveness* (pp. 152–171). IGI Global.

Manuscripts in Review (*) or Preparation (#)

5. **Chand, K.**, Khosla, A., & Dutt, V. (2025). Novelty and familiarity in biofeedback games. *
4. **Chand, K.**, Khosla, A., & Dutt, V. (2025). Self-Regulation of Mental Stress in External Stressful Environment. #
3. **Chand, K.**, Chandra, S., & Dutt, V. (2025). Heart coherence under different mental states. #
2. **Chand, K.**, Chandra, S., & Dutt, V. (2025). Effects of listening to Raga Bhairavi on heart coherence. #
1. **Chand, K.**, & Dutt, V. (2025). Affordable HRV based biofeedback device. #

CONFERENCE PRESENTATIONS (PEER-REVIEWED)

| | |
|--|----------|
| Towards Affordable Biofeedback System for Mental Relaxation <i>Mind, Brain, and Consciousness Conference (MBCC) - 2025</i> <i>Indian Institute of Technology Mandi</i> | Jun 2025 |
| Effects of Relaxed and Stressful Mental States on the Heart Rate Variability Parameters <i>Mind, Brain, and Consciousness Conference (MBCC) - 2023</i> | Dec 2023 |

INTELLECTUAL PROPERTY RIGHTS

Copyrights

| | |
|---|----------|
| Biofeedback Nintendo Entertainment System (BioNES) <i>Registration No.: SW-2025021242 Copyright Office, Government of India</i> <i>Description: MATLAB-based framework for integrating NES games into multimodal biofeedback systems for mental wellness research.</i> | Aug 2025 |
| Realtime arduino based HRV biofeedback system for mental stress assessment <i>Registration No.: SW-2025021178 Copyright Office, Government of India</i> <i>Description: Arduino code for a low-cost HRV-based mental stress assessment device with real-time IBI acquisition, artifact correction, HR, RMSSD, SDNN, and stress percentage estimation.</i> | Aug 2025 |
| Arduino Firmata Data Acquisition (AfDaq) <i>Registration No.: SW-2025021174 Copyright Office, Government of India</i> <i>Description: Open-source MATLAB tool for real-time multichannel data acquisition and visualization from Arduino boards, used in biofeedback systems and device control.</i> | Aug 2025 |
| MCP4251 <i>Registration No.: SW-2025021177 Copyright Office, Government of India</i> <i>Description: Lightweight Arduino library for interfacing with MCP4251 digital potentiometer.</i> | Aug 2025 |

INVITED TALKS / WORKSHOPS / LECTURES

Invited Talks

| | |
|---|----------|
| Human Motivation and Engagement Analysis using Octalysis Gamification Framework <i>5th Winter School on Cognitive Modeling - 2023</i> <i>Indian Institute of Technology Mandi</i> | Oct 2023 |
| Human Motivation and Engagement Analysis using Octalysis Gamification Framework <i>Winter School on Cognitive Modeling - 2022</i> <i>Indian Institute of Technology Mandi</i> | Oct 2022 |
| Arduino and Open-Source Technologies <i>DAV Institute of Engineering and Technology</i> | Jun 2019 |
| Octalysis <i>AICTE ATAL Sponsored Online Faculty Development Program on Gamification</i> <i>National Institute of Technology Jalandhar</i> | Nov 2020 |

Lectures

| | |
|--|----------|
| Octalysis Gamification Framework <i>Guest Lecture for undergraduate course Gamification (ECOE-496)</i> <i>National Institute of Technology Jalandhar</i> | Feb 2023 |
| Octalysis Gamification Framework <i>Guest Lecture for undergraduate course Gamification (ECX-488)</i> <i>National Institute of Technology Jalandhar</i> | Sep 2022 |

Workshops

| | |
|---|----------|
| Arduino workshop for kids <i>Jalandhar</i> | Nov 2017 |
|---|----------|

GRANTS (*PI, #Co-PI)

| | |
|--|------|
| Nagarro-NITJ Technology Centre of Excellence for Autism Research, Nagarro, CSR Grant # <i>Status: Under review</i> | 2024 |
| AI-Driven Multimodal Fusion Framework for Emotion Recognition of Individuals with Autism in – Unconstrained Environments, Futures First, CSR Grant # <i>Status: Under review</i> | 2024 |
| Low-Cost Smartwatch for Autism with AI-Enabled Technologies, NXP Semiconductors, CSR Grant # <i>Status: Under review</i> | 2024 |

HONORS AND AWARDS

| | |
|--|-------------|
| Post Doctoral Fellowship <i>Indian Institute of Technology Mandi</i> | 2022 – 2025 |
| Pre Doctoral Fellowship <i>Indian Institute of Technology Mandi</i> | 2022 |
| Doctoral Fellowship <i>National Institute of Technology Jalandhar</i> | 2015 – 2022 |
| UGC NET Qualified with JRF | 2013 |

| | |
|--|-------------|
| University Grants Commission | |
| GATE – 2013 Qualified | 2013 |
| Ministry of Education | |
| University Academic Honor | 2013 |
| Lovely Professional University | |
| Academic Scholarship | 2011 – 2013 |
| Lovely Professional University | |
| GATE – 2011 Qualified | 2011 |
| Ministry of Education | |
| University Academic Honor | 2010 |
| Guru Nanak Dev University | |
| Tech Hunt – 2007, Debugging (3 rd Position) | Oct 2007 |
| Guru Nanak Dev University | |
| Academic Scholarship | 2006 – 2010 |
| Guru Nanak Dev University | |

ACADEMIC SERVICE

| | |
|--|----------|
| Mind, Brain, and Consciousness Conference (MBCC 2023) | Dec 2023 |
| Indian Institute of Technology Mandi, Role: Workshop Organizer | |
| Hackathon 2022 | Jul 2022 |
| Indian Institute of Technology Mandi, Role: Jury member | |
| Toycathon 2021 | Jan 2021 |
| Ministry of Education, Role: Primary Evaluator | |
| ATAL Online FDP on Gamification | Nov 2020 |
| National Institute of Technology Jalandhar, Role: Assisted in conduction | |
| GIAN Course on Autism and Assisted Technologies | Dec 2018 |
| National Institute of Technology Jalandhar, Role: Assisted in conduction | |
| Sports Meet – 2008 | Sep 2008 |
| Guru Nanak Dev University, Role: Event Coordinator (Volleyball) | |

MEDIA COVERAGE

| | |
|--|----------|
| Raga Bhairavi can lower stress levels: Study explores impact of Indian classical music | Nov 2024 |
| The Telegraph India, Print and online newspaper | |
| Young minds dwell on e-concepts | Nov 2017 |
| The Tribune India, Print and online newspaper | |

PROFESSIONAL DEVELOPMENT

Conference (Attended)

| | |
|---|----------|
| Mind, Brain, and Consciousness Conference (MBCC 2025) | Jun 2025 |
| Indian Institute of Technology Mandi | |
| CHI 2025 | Apr 2025 |
| Yokohama, Japan | |
| Mind, Brain, and Consciousness Conference (MBCC 2023) | Dec 2023 |
| Indian Institute of Technology Mandi | |

Short Term Courses/Workshops/Webinars (Attended)

| | |
|---|----------|
| Evaluating Impact Through Simulation & Games | Aug 2025 |
| Shri Vaishnav Vidyapeeth Vishwavidyalaya | |
| Learning from Simulations and Games: Guidance from Theory, Concept and Practice | Nov 2024 |
| Shri Vaishnav Vidyapeeth Vishwavidyalaya | |
| The Impact of AI on Gamification and Serious Games | Sep 2024 |
| Shri Vaishnav Vidyapeeth Vishwavidyalaya | |
| Development of Simulation Game, “Project PAL” using the SECI Model and Collaborative Learning Methods | Jul 2024 |
| Shri Vaishnav Vidyapeeth Vishwavidyalaya | |
| Hands on Training and Showcasing: High Density EEG Devices | Mar 2024 |
| Indian Institute of Technology Mandi | |
| Simulation Games: A Bridge between Knowledge and Behaviour | Jan 2024 |
| Shri Vaishnav Vidyapeeth Vishwavidyalaya | |
| Machine-Learning advances in Human-Computer Interaction | Jul 2022 |
| Indian Institute of Technology Mandi | |

| | |
|--|-----------|
| Innovation, IPR and Start-ups <i>National Institute of Technology Jalandhar</i> | Jul 2022 |
| LaTeX for Technical Writing <i>Indian Institute of Technology Mandi</i> | June 2022 |
| The Education Factory <i>National Institute of Technology Jalandhar</i> | Sep 2020 |
| Machine Learning Using Python <i>National Institute of Technology Jalandhar</i> | Sep 2020 |
| Computational Cardiac Engineering - Predictive Modelling and Innovative Sensing Systems <i>Rajasthan Technical University</i> | Sep 2020 |
| IP Commercialization & Technology Transfer <i>National Institute of Technology Jalandhar</i> | Feb 2020 |
| Recent Trends in Biomedical Signal Processing and VLSI Design <i>National Institute of Technology Jalandhar</i> | May 2019 |
| Data Science <i>National Institute of Technology Jalandhar</i> | May 2019 |
| Current Avenues of Research in Electronics and Communication Engineering <i>National Institute of Technology Jalandhar</i> | Mar 2019 |
| Autism and Assisted Technologies (Gian Course) <i>National Institute of Technology Jalandhar</i> | Dec 2018 |
| Brain Science & Technology: Tools and Techniques to understand the Human Brain <i>Indian Institute of Technology Delhi</i> | Dec 2016 |
| How to be your Child's Occupational therapist <i>SOCH Educational Society</i> | Sep 2016 |
| Biology for Engineers <i>Indian Institute of Technology Bombay</i> | Jun 2016 |

Certifications

| | |
|---|----------|
| The Recreational UAS Safety Test (TRUST) <i>Academy of Model Aeronautics</i> | Nov 2022 |
| The Octalysis Framework - Level 1 <i>The Octalysis Group</i> | Dec 2017 |

MOOC Courses (with certificates)

| | |
|--|----------|
| IITM – Finland – Certificate course on Mastering VR : Fundamentals to Practice <i>Indian Institute of Technology Madras</i> | Oct 2024 |
| DRONE01x: Drones for Agriculture: Prepare and Design Your Drone (UAV) Mission <i>Wageningen University & Research</i> | Sep 2022 |
| Statistics in Medicine <i>Stanford University</i> | Mar 2020 |
| Computer Science 101 <i>Stanford University</i> | Mar 2020 |
| Introduction to CAD: Learn Fusion 360 in 90 minutes <i>Autodesk</i> | Sep 2019 |
| Vital Signs: Understanding What the Body Is Telling Us <i>University of Pennsylvania</i> | May 2018 |
| Advanced MATLAB for Scientific Computing <i>Stanford University</i> | Dec 2017 |
| Introduction to Game Development <i>Michigan State University</i> | Mar 2017 |
| Calculus One <i>The Ohio State University</i> | May 2013 |
| Image and video processing <i>Duke University</i> | Mar 2013 |

PROFESSIONAL MEMBERSHIP

| | |
|---|---------------------|
| Association for Computing Machinery (ACM) <i>Professional Member</i> | Aug 2023 – Jul 2024 |
|---|---------------------|

EDITORIAL AND PEER REVIEW ROLES

Editorial Review Board

IGI Global: *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*; *International Journal of Game-Based Learning (IJGBL)*; *International Journal of Distance Education Technologies (IJDET)*

Ad-Hoc Reviewer

Springer Nature: *Discover Psychology*; *Signal, Image and Video Processing*

Cell Press: *iScience*; *Heliyon*

Elsevier: *SoftwareX*; *HardwareX*; *Biomedical Signal Processing and Control*

Mary Ann Liebert, Inc.: *Games for Health Journal*

IGI Global: *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*; *International Journal of Game-Based Learning (IJGBL)*; *International Journal of Distance Education Technologies (IJDET)*

INDUSTRY EXPERIENCE

| | |
|---|----------------------------|
| T4A Labs Pvt Ltd., Incubated in NITJ Technology Business Incubator <i>Role: Co-Founder, Works on technologies for autistic kids and autism.</i> | Apr 2022 – Present |
| JCT Limited, Filament Unit, Hoshiarpur (Punjab) <i>Role: Industrial Trainee</i> | Jan 2010 – Jun 2010 |
| JCT Limited, Filament Unit, Hoshiarpur (Punjab) <i>Role: Industrial Trainee</i> | Jun 2008 – Jul 2008 |

SKILLS

Programming: Assembly, C, C++, R, Lua, MATLAB, Python, Visual Basic, Pure Data

Applications: NI Multisim, KiCad, Unity3D, RStudio, JASP, Jamovi, Autodesk Fusion 360

Operating Systems: Windows, Ubuntu

Others: Octalysis-Level1 Gamification Expert, Heart Rate Variability (HRV) Analysis

PROJECTS

Curricular Projects and Teaching Tools

| | |
|---|------|
| Arduino Workshop for Kids E-Book <i>National Institute of Technology Jalandhar</i> | 2022 |
| Gamification (ECX-488) Course E-Book, 3 Credits <i>National Institute of Technology Jalandhar</i> | 2021 |
| Classroom Gamification, Software Tool, 3 Credits <i>National Institute of Technology Jalandhar</i> | 2018 |
| Gamification (ECX-488), Course, 3 Credits <i>National Institute of Technology Jalandhar</i> | 2016 |

Open-Source Tools and Software

| | |
|---|------|
| AfDaq: A plug and play MATLAB based tool for biofeedback and arduino based instruments https://github.com/kulbhushanchand/AfDaq | 2021 |
| BioNES: A plug-and-play MATLAB based tool to use NES games for multimodal biofeedback https://github.com/kulbhushanchand/BioNES | 2021 |
| MCP4251: Arduino library for MCP4251 Digital Potentiometer https://github.com/kulbhushanchand/MCP4251 | 2021 |
| classroom-gamification: Tool to gamify your classroom with an online leaderboard https://github.com/kulbhushanchand/classroom-gamification | 2018 |

SUBJECTS TAUGHT

| | |
|--|--------------------|
| Teaching Assistant (PhD Student) <i>National Institute of Technology Jalandhar</i> | 2015 – 2020 |
| Gamification, ECX-488 | Spring 2020 |
| Scientific Computing Lab, ECPC-351 | Spring 2020 |
| Gamification, ECX-488 | Fall 2019 |
| Scientific Computing Lab, ECPC-351 | Fall 2019 |
| Gamification, ECX-488 | Spring 2019 |
| Electronics for Chemists Lab, CY-592 | Spring 2019 |
| Gamification, ECX-488 | Fall 2018 |

| | |
|--|--------------------|
| Analysis and Synthesis of Networks Lab, ECX-211 | Fall 2018 |
| Gamification, ECX-488 | Spring 2018 |
| Electronics for Chemists Lab, EC-636 | Spring 2018 |
| Gamification, ECX-488 | Fall 2018 |
| Analysis and Synthesis of Networks, ECX-201 | Fall 2018 |
| Analysis and Synthesis of Networks Lab, ECX-211 | Fall 2018 |
| Gamification, ECX-488 | Spring 2017 |
| Basic Electronics Lab, ECX-102 | Spring 2017 |
| Gamification, ECX-488 | Fall 2016 |
| Analysis and Synthesis of Networks Lab, ECX-211 | Fall 2016 |
| Gamification, ECX-488 | Spring 2016 |
| Basic Electronics Lab, ECX-102 | Spring 2016 |
| Basic Electronics Lab, ECX-102 | Fall 2015 |
| <u>Assistant Professor</u> | 2013 – 2015 |
| <i>Lovely Professional University</i> | |
| Digital Signal Processing, ECE300 | Spring 2015 |
| Digital Signal Processing Laboratory, ECE324 | Spring 2015 |
| Analytical Skills-II, PEA302 | Spring 2015 |
| Adaptive Signal Processing, ECE531 | Fall 2014 |
| Signal and Systems, ECE220 | Fall 2014 |
| Basic Simulation Laboratory, CSE222 | Fall 2014 |
| Electronic Devices and Circuits, ECE206 | Summer 2014 |
| Digital Signal Processing, ECE300 | Spring 2014 |
| Probability and Stochastic Processes, ECE256 | Spring 2014 |
| Digital Signal Processing Laboratory, ECE324 | Spring 2014 |
| Electronic Devices and Circuits, ECE206 | Fall 2013 |
| Basic Electrical Engineering, ECE133 | Fall 2013 |
| Analog and Linear Integrated Circuits Laboratory, ECE317 | Fall 2013 |
| Basic Electrical Engineering Laboratory, ECE134 | Fall 2013 |
| <u>Teaching Assistant (MTech student)</u> | 2011 – |
| 2013 | |
| <i>Lovely Professional University</i> | |
| Introduction to Practical Electronics, ECE100 | Fall 2012 |
| Electrical and Electronics Workshop, ECE130 | Spring 2012 |
| <u>Lecturer</u> | 2010 – 2011 |
| <i>Lovely Professional University</i> | |
| Microcontroller and Applications, ECE310 | Spring 2010 |
| Introduction to Practical Electronics, ECE100 | Spring 2010 |
| Unified Electronics Laboratory – II, ECE208 | Spring 2010 |

SPORTS ACTIVITIES

| | |
|--|------|
| Annual Faculty Sports Meet, 100 mt. (Gold), 200 mt. (Gold) | 2015 |
| <i>Lovely Professional University</i> | |
| Annual Faculty Sports Meet, 200 mt. (Bronze), 400 mt. (Silver) | 2014 |
| <i>Lovely Professional University</i> | |
| Annual Faculty Sports Meet, 100 mt. (Gold) | 2011 |
| <i>Lovely Professional University</i> | |

LANGUAGES

English – Proficient (Speak, Read, Write, Listen)

Hindi – Native-equivalent (Speak, Read, Write, Listen)

Punjabi – Native (Speak, Read, Write, Listen)

REFERENCES

Prof. Varun Dutt

Professor, School of Computing and Electrical Engineering, Indian Institute of Technology Mandi, Mandi, Himachal Pradesh, India – 175075

varun@iitmandi.ac.in

Professional Engagement: Post Doctoral Supervisor

Prof. Arun Khosla

Professor, Department of ECE, Dr B R Ambedkar National Institute of Technology, Jalandhar, India – 144011

khoslaak@nitj.ac.in

Professional Engagement: PhD Supervisor

Prof. Mamta Khosla

Professor, Department of ECE, Dr B R Ambedkar National Institute of Technology, Jalandhar, India – 144011

khoslam@nitj.ac.in

Professional Engagement: Former Head of Department

Gaganpreet Singh

Senior Software Developer, Microsoft India

gagsin@microsoft.com

Professional Engagement: Former coworker