

Research Profile

Name of the Candidate: Dr. HARVENDRA SINGH BHADAURIA

Designation: **Professor & Head**
Computer Science & Engineering Department,
G. B. Pant Institute of Engineering & Technology
(An Autonomous institute of Government of Uttarakhand)
Pauri (Garhwal) Uttarakhand-246194

Qualifications: **B.Tech** Aligarh Muslim University (AMU)
M.Tech Aligarh Muslim University (AMU)
PhD Indian Institute of Technology, Roorkee (IITR)

Ph.D Title: **Denosing and Segmentation of Hemorrhagic Brain CT Images.**

Experience: 22 years

Research Profile

Patents:	05	<p>Title: A Centrifugal Cannon based Sprinkler (CCS) system mounted on a deployment helicopter and methods thereof.</p> <p>Title: Glider assisted system for precise and efficient deployment of sensor nodes in wireless sensor networks.</p> <p>Title: A System of Vision Based Deep Multi-Model using Evolutionary Algorithm for hearing impaired Persons.</p> <p>Title: A Sign Language Recognition System for Hearing Impaired in Variable Resolution, Lighting and Background Conditions.</p> <p>Title: A method for preparation of binder for interlocking paver blocks by utilization of polyethylene terephthalate and composition thereof.</p>
Ph.D. Supervised/awarded	06	<p>Title: Open Area Sensor Network Deployment Policies and Models (Awarded), 2018.</p> <p>Title: Analysis and Classification of Breast Density Using Mammographic Images(Awarded), 2019.</p> <p>Title: Analysis and classification of Hematological disorders using Microscopic Blood image (Awarded), 2020.</p> <p>Title: Fault tolerant and energy efficient model for bodu area network: Algorithms and protocols (Awarded), 2021.</p>

Title: Segmentation and classification of dental X-ray images (**Awarded**) **2022**.

Title: Analysis of ECG signal for detection of cardiac arrhythmias (**Awarded**), **2022**.

Completed MHRD Sponsored Research Projects	02	<ul style="list-style-type: none">• Hemorrhage Volume detection from Brain CT Images• Intrusion Detection System for Self-Configurable Networks
M.Tech Thesis Guided	28	
Paper published in SCI Index Journals:	26	List Enclosed
Paper Published in International Conference:	42	
Book	01	Title: Deep Learning for Chest Radiographs (Computer-Aided Classification)
Book Chapters:	03	Title: Classification Framework for Breast Density Using Laws Texture Descriptors”, Book Chapter in Soft Computing based Medical image analysis, Elsevier, 2017. Title: Optimization of ROI Size for Development of Computer Assisted Framework for Breast Tissue Pattern Characterization Using Digitized Screen Film Mammograms” Machine Learning in Bio-Signal Analysis and Diagnostic Imaging, Elsevier, 2018. Title: Detection of hate speech and offensive language in twitter data using LSTM model” Book chapter in Recent Trends in Image and Signal Processing in Computer Vision of Algorithms for Intelligent Systems (AIS), 2019.
International Conference Organized		Conference Chair of International conference on “Smart Machine Intelligence and Real-Time Computing (SMART COM-2020)”, 26-27 June 2020.
Refresher Courses Organized:	03	One week FDP on “Information Technology and its Impact on Society- A New Horizon of energy efficiency and E-waste Management”, 26-30 Aug, 2013. One week FDP on “Digital Image Processing and Its

applications”, 20-24 Dec, 2017.

TEQIP sponsored One week STC on “Digital Signal and Image Processing”, 22-26 Jun 2018.

Two week FDP on “Bioinformatics, Big Data and Drug Discovery- Prospects & challenges” 14-24 Sep 2020.

AICTE sponsored one week STC on “Artificial Intelligence and Machine Learning using Python” Aug31-Sep 04, 2020.

TEQIP sponsored One week FDP on “Deep learning & computational Intelligence in internet Era”, 27-31 July 2020.

Administrative Responsibilities

Head Computer Science & Engineering Deptt, GBPIET

Chairman BOS, Uttarakhand Technical University

Member, Research Committee, Uttarakhand Technical University

Officiating Registrar GBPIET

TEQIP Coordinator, Uttarakhand Technical University (UTU).

(Dr.Harvendra Singh Bhadauria)

List of paper published in SCI Indexed Journals

- [1]. Noor Mohd, H S Bhadauria and Annapurna Singh and M. Wazid, “An efficient node placement scheme to mitigate routing attacks in Internet of Battlefield Things” Journal of Computers & Electrical Engineering (**Elsevier**), **2022**.
- [2]. Anuj Kumar, H. S. Bhadauria, and Annapurna. Singh, “Descriptive analysis of dental X-ray images using various practical methods: A review,” PeerJ Computer Science, vol. 7, p. e620, 2021. <https://doi.org/10.7717/peerj-cs.620>, (**2021**).
- [3]. Noor Mohd, H S Bhadauria and Annapurna Singh “Intrusion Detection System Based on Hybrid Hierarchical Classifiers”. Wireless Personal Communication, (**Springer**) (2021).<https://doi.org/10.1007/s11277-021-08655-1>.
- [4]. Jogendra Singh, Annapurna Singh and H S Bhadauria “Link discontinuity and optimal route data delivery for random waypoint model” Journal of Ambient Intelligence and Humanized Computing, (**Springer**) 2021.
- [5]. Noor Mohd, H S Bhadauria and Annapurna Singh, “A Novel SVM Based IDS for Distributed Denial of Sleep Strike in Wireless Sensor Networks”, Wireless Personal Communication, **Springer**, **2020**.(**IF-1.2**)
- [6]. Reema Goyal, H. S. Bhadauria, R B Patel and Devendra Prashad, “An Energy Efficient QoS Supported Optimized Transmission Rate Technique in WBANs”, Wireless Personal Communication, **Springer**, **2020**.(**IF-1.2**)
- [7]. Reema Goyal, H. S. Bhadauria, R B Patel and Devendra Prashad, “An Efficient Data Delivery Scheme in WBAN to deal with Shadow Effect due to Postural Mobility”, Wireless Personal Communication, **Springer**, **2019**.(**IF-1.2**)
- [8]. Anuj Kumar, H. S. Bhadauria, and Annapurna Singh, “Semi-Supervised OTSU Based Hyperbolic Tangent Gaussian Kernel Fuzzy C-mean Clustering for Dental Radiographs Segmentation”, Journal of Multimedia tools and Applications, **Springer**, **2019**. (**IF-1.541**).
- [9]. Papendra Kumar, H S Bhadauria, A R Verma and Yatendra Kumar “Design Spline Adaptive Filter with Fraction Order Adaptive Technique for ECG Signal Enhancement” Journal of Augmented Human Research, **Springer Nature**, **2019**.
- [10]. Vikrant Sharma, H. S. Bhadauria, R B Patel and Devendra Prashad, “Glider assisted schemes to deploy sensor nodes in wireless sensor networks”, **Journal of Robotics and autonomous systems**, Vol. 100, no. 7, pp. 1-13, DOI: 10.1016/j.robot.2017.10.015, **Elsevier** ,2018. (**IF- 2.809**)
- [11]. Jyoty Rawat, Annapurna Singh, H. S. Bhadauria and J. Virmani, “Computer Assisted

- Classification Framework for Prediction of Acute Lymphoblastic and Acute MyeloblasticLeukemia”, *Journal of Biocybernetics and Biomedical Engineering*, **Elsevier**, 2017. (IF- 1.432)
- [12]. JyotyRawat, Annapurna Singh, H. S. Bhadauria and J. Virmani, “Classification of Acute Lymphoblastic Leukemia using Hybrid Hierarchical Classifier”, *Journal of Multimedia tools and Applications*, **Springer**, DOI: 10.1007/s11042-017-4478-3, 2017. (IF- 1.541).
- [13]. Jyoti Rawat, Annapurna Singh, H.S Bhadauria, JitendraVirmani and J. S Devgan“Leukocyte Classification using Adaptive Neuro Fuzzy Inference System inMicroscopic Blood Images”, *Arabian Journal for Science and Engineering (AJSE)*, **Springer** 2017. (IF-1.09)
- [14]. Indrajeet Kumar, H. S Bhadauria, J. Virmani and S. Thakur, “A Hybrid Hierarchical Framework for Classification of Breast Density using Digitized Film Screen Mammograms, *Journal of Multimedia Tools & Applications*, **Springer**, DOI: 10.1007/s11042-016-4340-z, 2017. (IF- 1.541)
- [15]. Indrajeet Kumar, H. S Bhadauria, J. Virmani and S. Thakur, “A classification framework for prediction of breast density using an ensemble of neural network classifiers”, *Journal of Biocybernetics and Biomedical Engineering*, **Elsevier**, DOI: 10.1016/j.bbe.2017.01.001, 2016.(IF- 1.432)
- [16]. Vikrant Sharma, H. S. Bhadauria, R B Patel and DevendraPrashad, “ Policy for planned placement of sensor nodes in large scale wireless sensor network”, **KSII Transaction on internet and information systems**, Vol. 10, no. 7, pp. 3213-3230, DOI: 10.3837/tiis.2016.07.019, 2016. (IF-.611)
- [17]. Vikrant Sharma, H. S. Bhadauria, R B Patel and DevendraPrashad, “NADS: Neighbour assisted deployment scheme for optimal placement of sensor nodes to achieve blanket coverage in wireless sensor network”, *Wireless Personal Communication*, **Springer**, DOI: 10.1007/s11277-016-3430-6, 2016. (IF-1.2)
- [18]. Indrajeet Kumar, H. S Bhadauria, J. Virmani and S. Thakur, “Wavelet Packet Texture Descriptors based four class BIRADS Breast Tissue Density Classification”, *Procedia Computer Science*, **Elsevier**, 2015.
- [19]. JyotyRawat, Annapurna Singh, H. S. Bhadauria and J. Virmani, “Computer Aided Diagnostic System for Detection of Leukemia using Microscopic Images”, *Procedia Computer Science*, **Elsevier**, Vol. 70, pp. 48-56, 2015.
- [20]. Vikrant Sharma, H. S. Bhadauria, R B Patel and DevendraPrashad, “Deployment schemes in wireless sensor networkto achieve blanket coverage in large-scale open area: A review”, *Egyptian Informatics Journal*, **Elsevier**, DOI:

10.1016/j.eij.2015.08.003, 2015. (**IF-0.406**).

- [21]. H. S. Bhadauria and M. L. Dewal, “Analysis of effect of cycle spinning on wavelet and curvelet based denoising methods on brain CT images”, Journal of Chinese Institute of Engineers, **Taylor & Francis**, DOI: 10.1080/02533839.2014.912771, 2014. (**IF-0.359**)
- [22]. H. S. Bhadauria, Annapurna Singh and M. L. Dewal, “An integrated method for hemorrhage segmentation from brain CT imaging”, Journal of Computer and Electrical Engineering, **Elsevier**, Vol 39, pp. 1527-1536, 2013.(**IF- 1.57**)
- [23]. H. S. Bhadauria and M. L. Dewal, “Medical image denoising using adaptive fusion of curvelet transform and total variation”, Journal of Computers and Electrical Engineering, **Elsevier**, DOI: 10.1016/j.compeleceng.2012.04.003, Vol. 39, no 5, pp. 1451–1460, 2013. (**IF- 1.57**)
- [24]. H. S. Bhadauria and M. L. Dewal, “Intracranial hemorrhage detection using spatial fuzzy c-mean and region-based active contour on brain CT imaging”, Journal of Signal, Image and Video Processing, **Springer**, 2012. DOI: 10.1007/s11760-012-0298-0. (**IF-1.102**)
- [25]. H. S. Bhadauria and M. L. Dewal, “Efficient denoising technique for CT image to enhance brain hemorrhage segmentation”, Journal of Digital Imaging, **Springer**, 2012. DOI: 10.1007/s10278-012-9453-y. (**IF-1.47**).