

# DR.DHERAJ KUMAR AGRAWAL

Email: [dheerajagrawal@manit.ac.in](mailto:dheerajagrawal@manit.ac.in) | Mobile: +91-7869301930



## Objective

To work as a significant element of an organization with continuous learning, research and growth opportunities. I am passionate about disseminating my research findings to the greater scientific community. I hope that my work will inspire, guide, and cultivate the next generation of researchers.

## Teaching & Research Experience (Teaching: 23 Years, Research: 19 Years)

Dec 2018 –Till Date: Associate Professor (Pay Level 13A2)

Department of Electronics and Communication Engineering, MANIT Bhopal (M.P.)

July 2010 - Dec 2018: Assistant Professor (PB-3, AGP-7000)

Department of Electronics and Communication Engineering, MANIT Bhopal (M.P.)

July 2013 – Dec 2017: Assistant Professor (PB-3, AGP- 6000)

Department of Electronics and Communication Engineering, MANIT Bhopal (M.P.)

Jan 2004 – July 2004: Lecturer (8000-275-12000)

Department of Electronics and Communication Engineering, SRMSET Bareilly (U.P.)

Aug 2001 – Oct 2004: Lecturer (8000-275-12000)

Department of Electronics and Communication Engineering, RKDFIST Bhopal (M.P.)

## Administrative Experience

- Head of Department ( ECE) from 05.11.2025
- Prof In-charge Examination for IIIT Bhopal from Nov 2017 to Oct 2023.
- Prof In-Charge Academics for IIIT Bhopal from June 2017 to May 2022
- Prof In-Charge Admission for IIIT Bhopal from June 2017 to May 2022
- Prof I/c Telephone Section, from 2010 -2017
- Liaison Officer for IIIT Bhopal 2017 – Nov 2021
- First Appellant Authority, RTI for IIIT Bhopal, Jan 2023 to Jan 2024
- Member Institute Board of Governor 2016-2018
- Member Institute Building works committee 2016-2018
- Member Institute Finance Committee 2016-2018
- Member UG admission committee through JEE for the year 2013-2015
- Member UG admission committee through AIEEE for the year 2010-2012
- Member Convocation committee for the year 2011-2014
- Warden of Hostels 2009-2011
- Assistant Proctor, 2008- 2011
- Member of various purchase committees 2006 - 2015
- Member, Stock Verification Committee, 2009 - 2015

- Industrial Level Activities committee member for National Level project exhibition SAVISKAR:IFAST 2015 (11-12-2014 to 26-02-2015)
- Member, Anti – Ragging Committee
- Coordinator TPO Cell, Dec 2009
- Pay fixation committee member of 6th pay commission, Aug 2009
- Member MANIT-TIDE cell from 21-03-2014

## Education

2011: Ph.D. in Electronics and Communication Engineering, MANIT Bhopal

Thesis Title: “An Efficient Multi Focus Image Fusion Algorithm Using Modified PCNN for Improved Image Quality”

2005: M.Tech in Digital Communication, MANIT Bhopal

Thesis Title: “100 MHz 32 Bit Floating point arithmetic unit design using VHDL”

2001: B.E. in Electronics and Communication Engineering, RGPV, Bhopal

## Sponsored Projects and Consultancies

1. “Development of Artificially Intelligent tool for analysis and prediction of myopia progression among school going children” ICMR Extramural Call, 150 lacs, 24 Jan 2025,( Ongoing)
2. “ Design of real time smart intrusion detector and alert generator for restricted areas” funded by Yemota Systems and solutions Pvt. Ltd. Bhopal Sep 2024, 5 Lacs ,( Ongoing)
3. “Image data analysis and interpretation” Under Grant in Aid Scheme, MANIT Bhopal of amount Rupees 24 lacs in 2010. (completed)
4. “Strengthening and development of research Laboratories” Under MHRD-MANIT Scheme of amount Rupees 17 Lacs in 2011. (completed)
5. Development of experimental kits for understanding concept of electronics components of amount Rupees 2 Lacs in 2014. (completed)
6. Technical inspection of e-challan system under Traffic police Bhopal of amount Rs 75000, 2015 as Principal Investigator.
7. Technical Inspection of Nagar Nigam Bhopal Parking zone for Boom barrier Installation of amount 35000, 2015-2016 (undergoing) as Principal Investigator.
8. Testing and Inspections of Machines at HLBS PVT LTD Bhopal on behalf of IFFCO Tokio General Insurance of Amount 27600/- , 2017 as Co- Investigator.
9. Testing and Inspections of Machines at Saifia Technology PVT LTD Mandideep, on behalf of SBI General Insurance of Amount 75900/- , 2016 as Co- Investigator.

## Patents

1. Intelligent car seat belt monitoring system with data logging capabilities,564065, 27 March 2025, The Patent Office, Govt. of India. ( Granted)
2. System for maintenance and, monitoring of fire extinguisher for refilling using internet of things (IOT) sensors and image processing tools, 2021106437, Nov 2021, IP Australia. (Granted)
3. Ayurvedic tablet shaping device, 371470, Sep 2022,The Patent Office, Govt. of India (Granted)
4. Smart necklace and wrist band with machine learning based image processing and GPS,412649,Dec 2021 The Patent Office, Govt. of India (Granted)

## Publications

### Journals

1. Bhupendra Singh Kirar, Dheeraj Kumar Agrawal, Ram Bilas Pachori, "QBVMD-Based Tri Channel Feature Extraction Approach for Glaucoma Diagnosis", IETE Journal of Research, IETE Journal of Research, 71(8), 2847–2859. <https://doi.org/10.1080/03772063.2025.2497513>
2. Praveen Kumar Tyagi, Dheeraj Agrawal, "Automatic Detection of sleep apnea from a single lead ECG signal based on spiking neural network model", Computers in Biology and Medicine, Vol. 179, September 2024, 108877 [doi.org/10.1016/j.combiomed.2024.108877](https://doi.org/10.1016/j.combiomed.2024.108877).
3. Dheeraj Kumar Agarwal, Ayush Porwal, Praveen Kumar Tyagi, Ajay Sharma, "Deep Learning-Based Speech Emotion Recognition: Leveraging Diverse Datasets and Augmentation Techniques for Robust Modeling", Journal of Harbin Institute of Technology(New Series),Volume 31(3), PP. 1-12, July 2024
4. Agrawal, D., Yadav, A.C. & Praveen Kumar Tyagi, "Low-light and hazy image enhancement using retinex theory and wavelet transform fusion", Multimedia Tools Applications, Vol. 83, 72519–72536, Feb 2024, <https://doi.org/10.1007/s11042-024-18459-7>.
5. Neha Rathore, Dheeraj Agrawal, "Automated precision beekeeping for accessing bee brood development and behavior using deep CNN" Bulletin of Entomological Research, Feb 2024, Vol 114(1) pp. 77-87. doi:10.1017/S0007485323000639
6. Bhupendra Singh Kirar, G. Ravi Shankar Reddy, and Dheeraj Kumar Agrawal, "Glaucoma detection using SS-QB-VMD based fine sub band images from fundus images," IETE Journal of Research, Sep 2023, pp.1-12.[doi.org/10.1080/03772063.2021.1959424](https://doi.org/10.1080/03772063.2021.1959424).
7. Praveen Kumar Tyagi, Dheeraj Agrawal, "Systematic Review of Automated Sleep Apnea detection based on physiological signal data using deep learning algorithm" , Biomedical Engineering letters, vol. 13,pp 293-312, Aug 2023
8. Praveen Kumar Tyagi, Dheeraj Agrawal, "Automatic detection of sleep apnea from single-lead ECG signal using enhanced-deep belief network model", Biomedical Signal Processing and Control, Vol. 80(2), Feb 2023,104401
9. S Shekhar, DK Sharma, DK Agarwal, Y Pathak, "Artificial immune systems-based classification model for code-mixed social media data" ,IRBM 43(2), 120-129, April 2022
10. Deepak Parashar, Dheraj Kumar Agrawal, "Classification of glaucoma stages using image empirical mode decomposition from fundus images" Journal of Digital Imaging, vol. 35(5), pp. 1283-1293,Oct 2022
11. D. Parashar and D. Agrawal, "2-D compact variational mode decomposition-based automatic classification of glaucoma stages from fundus images, "IEEE Transactions on Instrumentation and Measurement, vol. 70, pp. 1-10, Dec 2021, Art no. 2507610, doi: 10.1109/TIM.2021.3071223.
12. Y Kurmi, S Gangwar, D Agrawal, S Kumar, HS Srivastava, "Leaf image analysis-based crop diseases classification" Signal, Image and Video Processing, Volume 15, Issue 3, Pages 589-597,April 2021
13. D. Parashar and D. K. Agrawal, "Automatic classification of glaucoma stages using two-dimensional tensor empirical wavelet transform," IEEE Signal Processing Letters, vol. 28, pp. 66-70, June 2021, doi: 10.1109/LSP.2020.3045638.
14. D. Parashar and D. K. Agrawal, "Automated classification of glaucoma stages using flexible analytic wavelet transform from retinal fundus images," IEEE Sensors Journal, vol. 20, no. 21, pp. 12885-12894, June 2020, doi: 10.1109/JSEN.2020.3001972.
15. Bhupendra Singh Kirar, Dheeraj Kumar Agrawal, and Seema Kirar, "Glaucoma detection using image channels and discrete wavelet transform," IETE Journal of Research, 2020, pp.1-8. Doi:10.1080/03772063.2020.1795934.
16. Dheeraj Kumar Agrawal, Bhupendra Singh Kirar and Ram Bilas Pachori, "Automated glaucoma detection using quasi-bivariate variational mode decomposition from fundus images," IET Image Processing, vol.13, no.13, pp. 2401-2408, 2019
17. Bhupendra Singh Kirar, Dheeraj Kumar Agrawal, and Seema Kirar, "Automated glaucoma detection using variational mode decomposition from fundus images," Indian Journal of Public Health Research and Development An International Journal, vol. 11, no. 6, pp. 1146-1153, June 2020.

18. Bhupendra Singh Kirar and Dheeraj Kumar Agrawal, "Current research on glaucoma detection using compact variational mode decomposition from fundus images," International Journal of Intelligent Engineering and Systems, Vol.12, No.3, 2019, pp. 1-10.
19. Bhupendra Singh Kirar and Dheeraj Kumar Agrawal, "Computer aided diagnosis of glaucoma using discrete and empirical wavelet transform from fundus images," IET Image Processing, Vol. 13, No. 1, pp. 73-82, 2019.
20. Bhupendra Singh Kirar and Dheeraj Kumar Agrawal, "Glaucoma diagnosis using discrete wavelet transform and histogram features from fundus image," International Journal of Engineering & Technology, Vol. 7, No. 4, pp. 2546-2551, 2018.
21. Bhupendra Singh Kirar and Dheeraj Kumar Agrawal, "Comparison between empirical and variational mode decomposition based on percentage variation in entropy feature from glaucoma image," Indian Journal of Public Health Research and Development: An International Journal, Vol. 9, No. 9, pp. 10-15, 2018.
22. Tahir Khan, J S Yadav, Dheeraj Agarwal, "A Broad Survey on Performance Analysis of Number Plate Recognition from Stationary Images and Video Sequences", International Journal of Engineering and Technology, Vol. 7 No 3.10, pp. 164-168, 2018.
23. Bhupendra Singh Kirar, Dheeraj Kumar Agrawal, Rajendra Kumar Baghel, and Seema Kirar, "Glaucoma image analysis using discrete wavelet transform," Journal of Engineering, Science & Management Education, Vol. 10 (II), pp. 114-118, 2017.
24. Hardeep Singh, Dheeraj Agrawal, "A hybrid content based image retrieval system based on local binary pattern (LBP), color moment (CM) and edges ", International Journal of Engineering and Technology, Vol. 9 No 1, pp. 45-54, 2017
25. Hardeep Singh, Dheeraj Agrawal, "Result Analysis and Comparison of Hybrid Method based on Local Binary Pattern (LBP) and Color Moment (CM) for Efficient Image Retrieval ", International Journal of Computer Applications (0975 – 8887) Volume 159 – No 5, pp. 14-19, 2017.
26. Uma Shankar Kurmi, Dheeraj Agrawal, R. K. Baghel, "Occluded face recognition using feature selection approach" Human Frontier Scientific Program Journal, Vol. 9, No 12 ,pp. 86-94, 2015
27. Dubey R, Agrawal D , "Bearing Fault Classification using ANN based Hilbert footprint Analysis", IET Science, Measurement, and Technology (SCI Journal), vol. 8,issue 9, pp. 1016-1022, 2015.
28. Dubey R, Agrawal D, "Bearing Fault Diagnosis using Spectral Estimation", International Journal of Electrical and Electronics Engineers (IJEEE, ISSN: 2321-2055), Vol. 7, Issue 1, pp.194-200, June-2015.
29. Uma Shankar Kurmi, Hari Shankar Srivastava, Dheeraj Agrawal, R. K. Baghel, "Performance Evaluation of RGB Skin Color Segmentation Based Face Detection Technique" Engineering Universe for Scientific Research and Management, Vol.6 Issue 2, pp. 1-6 2014
30. Uma Shankar Kurmi, Dheeraj Agrawal, R. K. Baghel, "Partially Occluded Face Recognition and Components Estimation" International Journal of Scientific Engineering and Technology, Volume No.3 Issue No.2, pp. 159 – 162, 2014.
31. Uma Shankar Kurmi, Dheeraj Agrawal, R. K. Baghel, "Study of Different Face Recognition Algorithms and Challenges" International Journal of Engineering Research, Volume No.3, Issue No.2, pp. 112-115,2014
32. Vijeta Yadav, Dheeraj Agrawal, "VLSI Architecture for Discrete Wavelet Packet Transform using CSD Technique" International Journal of Emerging Technologies in Computational and Applied Sciences, Volume 3, Issue 5, Page 259-263,2013
33. Dheeraj Agrawal, Nitin Meena, "Performance Comparison of Moving Object Detection Techniques in Video Surveillance System" The International Journal of Engineering And Science, Volume 2, Issue 01,|Pages 240-242,2013
34. Ranbeer Tyagi, Dheeraj Agrawal, " Analysis the Results of Acoustic Echo Cancellation for Speech Processing using LMS Adaptive Filtering Algorithm" International Journal of Computer Applications (0975 – 8887) Volume 56– No.15, October 2012, pp. 07-11

35. Devendra Singh Raghuvanshi, Dheeraj Agrawal, " Human face detection using skin color segmentation, face features and region properties" International journal of computer applications, Vol. 38, No.9 ,2012, pp. 14-17
36. Dheeraj Agrawal, Rahul Dubey "Biometric system for user authentication based on Hough transform and Neural Network" International Journal of Electronics Communication and Computer Engineering, Volume 2, Issue1,2011,pp 01-05
37. Dheeraj Agrawal, J.Singhai "A Comparative Analysis of Image Restoration Method for Motion Blurred Images Using Image Fusion Approaches" International Journal of Electronics and computers. Vol2 no.1, 2010, pp. 73-77.
38. Dheeraj Agrawal, J.Singhai "A Comparative Analysis of Image Restoration Method for Motion Blurred Images Using Image Fusion Approaches" International Journal of Electronics and computers. Vol2 no.1, 2010, pp. 73-77.
39. Dheeraj Agrawal, J.Singhai "Multifocus Image Fusion using Modified Pulse Coupled Neural Network for Improved Image Quality" IET Image Processing, Vol. 4, Issue 6,2010, pp. 443-451.
40. Dheeraj Agrawal, J.Singhai, "Image Fusion Techniques for Multifocus Images – An Introduction, Review and Comparison" International Journal of computer science, system engineering and information technology, Vol. 2 No. 1, 2009, pp.41-44.
41. Dheeraj Agrawal, Al-Dahoud, J.Singhai "A Modified Partition Fusion Technique of Multifocus Images for Improved Image Quality" Ubiquitous Computing and Communication Journal" Vol. 4 no. 3, 2009, pp. 658-663.

#### **International Conference:**

1. Dheeraj Kumar Agarwal, Chandrakant Singh, "Hardware Encrypted QR Code using Verilog" ,7th International Conference on Communication and Computational Technologies (ICCCT 2025),National Forensic Sciences University Goa Campus, India during February 14-15, 2025. ( Presented)
2. Rathore N., Jain R., Agrawal D.K., "Computer-aided design analysis of Honeybee colony using Images"5th International Conference on Innovative Trends in Information Technology, ICITIIT 15-16 March 2024,IIIT Kottayam DOI: 10.1109/ICITIIT61487.2024.10580675
3. Alamuri D., Kirar B.S., Agrawal D.K., "Cardiovascular Health Prognosis: Machine Learning Approaches for Precise Heart Disease Prediction" ,2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science, SCEECS Bhopal,24-25 February 2024, DOI 10.1109/SCEECS61402.2024.10482323
4. Dixit Sambhav , Kirar Bhupendra Singh, Agrawal Dheraj Kumar, "Performance Analysis of Deep Learning Models for Accurate Glaucoma Detection", 2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science, SCEECS Bhopal, 24-25 February 2024, DOI 10.1109/SCEECS61402.2024.10482323
5. Porwal A., Tyagi P.K., Kumar Agarwal D. , "Comparative Analysis of Filtering Noise from Voice Signal by Different Decomposition Methods", 2023 International Conference on Evolutionary Algorithms and Soft Computing Techniques, EASCT 2023, Bengaluru 20-21 October 2023, DOI 10.1109/EASCT59475.2023.10393054
6. Porwal A., Tyagi P.K., Agarwal D.K., "Comparative Analysis of Different Neural Network Models for Speaker Gender Recognition by Voice" 2nd IEEE International Conference on Communication, Security and Artificial Intelligence, ICCSAI 2023, Greater Noida, 23-25 November 2023, DOI 10.1109/ICCSAI59793.2023.10421302
7. Singhai J.,Agrawal D.,Yadav A.C.,Tyagi P.K., "Image Enhancement for Low-Light and Hazy Conditions Using Retinex Theory and Wavelet Transform Fusion" 26th International Conference on Information Fusion, FUSION 2023, 2023, Charleston, 27-30 June 2023, DOI 10.23919/FUSION52260.2023.10224102
8. Tyagi P.K.,Rathore N.,Agrawal D.A., "Review on Heartbeat Classification for Arrhythmia Detection Using ECG signal Processing"2023 IEEE International Students' Conference on Electrical, Electronics and Computer Science, SCEECS 2023,Bhopal,18-23 February 2023,DOI 10.1109/SCEECS57921.2023.10063143
9. Rathore N., Tyagi P.K.,Agrawal D., "Semi-automatic Analysis of cells in honeybee comb images",2023 IEEE International Students' Conference on Electrical, Electronics and Computer Science, SCEECS 2023,Bhopal 18-19 February 2023,DOI 10.1109/SCEECS57921.2023.10063122
10. Bhupendra Singh Kirar, Sarthak Sanjay Tilwankar, Aditya Paliwal, Deepa Sharma and Dheraj Kumar Agrawal, "Detection of covid-19 affected persons using convolutional neural network from x-rays images", 4th International

11. Conference on Machine Intelligence and Signal Processing (MISP2022), March 12-14, 2022, Raipur, India.(Accepted)
12. D. Parashar and D. Agrawal, "Computer-aided diagnosis of glaucoma at early-stage using retinal fundus images" 2021 Tenth IEEE International Conference on Internet of Everything, Microwave Engineering, Communication and Networks (IMECON), Jaipur, India, December 2021, pp. 1-4, doi: 10.1109/IMECON53809.2021.9689175.
13. Bhupendra Singh Kirar, Gulrej Ahmed, and Dheraj Kumar Agrawal, "Decomposition methods: A comparative analysis using entropy feature from fundus images," International Conference on Emerging Trends in Industry 4.0 (2021 ETI 4.0), 19 - 21, May 2021 | Raigarh, Chhattisgarh, India.
14. D. Parashar and D. Agrawal, "SVM based supervised machine learning framework for glaucoma classification using retinal fundus images," 2021 10th IEEE International Conference on Communication Systems and Network Technologies (CSNT), Bhopal, India, June 2021, pp. 660-663, doi: 10.1109/CSNT51715.2021.9509708.
15. D. Parashar and D. Agrawal, "Texture-based feature extraction from fundus images for glaucoma diagnosis," 2021 Sixth IEEE International Conference on Wireless Communications Signal Processing and Networking (WiSPNET), Chennai, India, March 2021, pp. 200-203, doi: 10.1109/WiSPNET51692.2021.9419395. (Scopus indexed conf.)
16. D. Parashar and D. Agrawal, "Improved classification of glaucoma in retinal fundus images using 2D-DWT," 2021 IEEE International Conference on Advances in Electrical, Computing, Communications, and Sustainable Technologies (ICAECT), Bhilai, India, February 2021, pp. 1-5, doi: 10.1109/ICAECT49130.2021.9392531. (Scopus indexed conf.)
17. D. Parashar and D. Agrawal, "Automated classification of glaucoma using retinal fundus images," 2020 First IEEE International Conference on Measurement, Instrumentation, Control and Automation (ICMICA), NIT Kurukshetra, India, June 2020, pp. 1-6, doi: 10.1109/ICMICA48462.2020.9242702. (Scopus indexed conf.)
18. D. Parashar and D. Agrawal, "Glaucoma classification using DWT image decomposition technique from fundus images," Proceedings of National Conference on Emerging Trends in Automation, Data Engineering, and Communication (NCETinADC2021), MANIT Bhopal, India, December 2021.
19. Bhupendra Singh Kirar, Gulrej Ahmed, Shilpa Sharma, and Dheeraj Kumar Agrawal, "Advanced glaucoma detection using hybrid approach and singular value decomposition from fundus images," International Conference on Applied Scientific Computational Intelligence using Data Science (ASCI 2020), 22nd-23rd December 2020, Jaipur, India, Vol. 1099, 2021. IOP Conf. Ser.: Mater. Sci. Eng. 1099 012065
20. Yashwant Kurmi, Suchi Gangwar, Dheeraj Agrawal, Satrughan Kumar, Deepatna Saxena, Moly Saxena, Harishanker Shrivastava, "An algorithm for various crop diseases detection and classification using leaves images", 2nd IEEE International Conference on Data, Engineering and Applications (IDEA), Feb 2020, DOI: 10.1109/IDEA49133.2020.9170737
21. Yadunath Pathak, Dheeraj Agarwal, Shailendra Tiwari, Manju Khurana, "CT Image Reconstruction using Fourth-order PDE based AD regularization" 2019 Fifth International Conference on Image Information Processing (ICIIP) Pages 161-166, Nov 2019, DOI: 10.1109/ICIIP47207.2019.8985747
22. Bhupendra Singh Kirar and Dheeraj Kumar Agrawal, "Two dimensional discrete wavelet transform based glaucoma classification," IEEE Sponsored 3rd International Conference for Convergence in Technology (I2CT) 2018.
23. Himanshu Banga, Dheeraj K Agarwal, "Single Bit -Line 10T SRAM cell for Low power and High SNM" IEEE International conference on "Recent Innovation in Signal processing and Embedded Systems" MANIT Bhopal 27-29 Oct 2017.
24. Nitesh Agrawal, Jyoti Singh, Dheeraj Agarwal, "Grape Leaf Disease Detection and classification Using Multi-class Support Vector Machine" IEEE International conference on "Recent Innovation in Signal processing and Embedded Systems" MANIT Bhopal 27-29 Oct 2017
25. Himanshu Banga, Dheeraj Agarwal, "Implementation of 16X16 SRAM Memory Array" IEEE International conference on "Recent Innovation in Signal processing and Embedded Systems" MANIT Bhopal 27-29 Oct 2017
26. Ram naresh Pal, Dheeraj Agrawal, "Design of Dual Band and Dual Mode Microstrip Patch Antenna for Using Wireless Communication" IEEE International conference on "Recent Innovation in Signal processing and Embedded Systems" MANIT Bhopal 27-29 Oct 2017

27. Bhupendra Kirar, Dheeraj Agrawal, "Empirical Wavelet Transform Based Pre-processing and Entropy Feature Extraction from Glaucomatous Digital Fundus Images" IEEE International conference on "Recent Innovation in Signal processing and Embedded Systems" MANIT Bhopal 27-29 Oct 2017
28. Hardeep Singh, Dheeraj Agrawal, "A meta-analysis on content-based image retrieval system", IEEE International Conference on Emerging Technological Trends [ICETT], Kollam on the 21st & 22nd of October 2016
29. Hardeep Singh, Dheeraj Agrawal, "An analysis based on local binary pattern (LBP) and color moment (CM) for efficient image retrieval ", IEEE International Conference on Emerging Technological Trends [ICETT], Kollam on the 21st & 22nd of October 2016
30. Rahul Dubey, Dheeraj Agrawal, "Bearing Fault Diagnosis Using Spectral Estimation" International Conference on Academic Research in Engineering, Management and Information Technology, Feb 2015, M. J. P. Rohilkhand University Bareilly.
31. Rahul Dubey, Dheeraj Agrawal, "Vibration Signature Analysis using Variable Tukey Window: A case study on Bearing Fault Data" IEEE International Conference on Industrial Instrumentation and Control, May 2015, College of Engineering Pune.
32. Dubey R, Agrawal D, "A Novel Approach for diagnosis of noisy component in rolling bearing using Improved Empirical Mode Decomposition", 2nd International Conference on Computer and Communication technology (IC3T), CMR Technical Campus, Hyderabad, India, 24-26 July, 2015.
33. Vijeta Yadav, Dheeraj Agrawal, "VLSI Architecture for Discrete Wavelet Packet Transform using CSD Technique" International Conference on Technological Advancement and Research, Dec 2013, Goa, India.
34. Rahul Dubey, Dheeraj Agrawal, "Comparative Analysis of Off-line Signature Recognition" 2012 IEEE International Conference on Communication, Information & Computing Technology (ICCICT), Oct. 19-20, Mumbai, India
35. U.S.Kurmi, Dheeraj Agrawal, R.K.Baghel, "Face Recognition Algorithm: A Literature Review" in: Proceedings of Second international conference on Computer vision and robotics, Aug 14-15, 2011
36. Dheeraj Agrawal, J.Singhai "A Comparative Analysis of Image Restoration Method for Motion Blurred Images Using Image Fusion Approaches" in: Proceedings of TRACE-2010, Feb 25th -26th, 2010.
37. Dheeraj Agrawal, J.Singhai, "Partition Fusion Approach of Image Fusion Using Modified Pulse Coupled Neural Network for Differently Focused Images" Annual International Conference on Advanced Topics in Artificial Intelligence (ATAI 2010) November 29-30, 2010
38. Dheeraj Agrawal, J.Singhai, "A modified Technique for low RMSE Multi Focus image Fusion" in International Conference on Information Technology, ICIT-2009, at Al-Zayoonah University, Jordan on June 3-5, 2009.

#### **National Conference:**

1. D. Parashar and D. Agrawal, "Discrete wavelet transform based approach for glaucomatous image classification," Proceedings of National Conference on Advancements in Mechanical, Electronics and Electrical Engineering (AMEEE), MANIT Bhopal, India, April 2021.
2. Dheeraj Agrawal, "Enhanced Visualization of Images Using Image Fusion Technique for Better Human and Machine Perception" in: 26th M.P. Young Scientist Congress, Feb-28th -1 March 2011.
3. Rahul Dubey, Dheeraj Agrawal, "Offline signature recognition using Hough transform and neural network" Proceedings of National conference on communication, computing & signal processing, April 16-17, 2011
4. Dheeraj Agrawal, J.Singhai, "A review of image fusion algorithms" in: Proceedings of CECET, 14-16 Feb 2009 pp. 259-262.

#### **Book Chapter**

1. Praveen Kumar Tyagi, Dheeraj Agarwal, Pushyamitra Mishra, "A Review of Automated Sleep Apnea Detection Using Deep Neural Network", Artificial Intelligence, Internet of Things (IoT) and Smart Materials for Energy Applications, CRC Taylor & Francis, ISBN 9781032115023, 2022

2. Neha Rathore, Praveen Kumar Tyagi, Deepak Parashar, Dheraj Agrawal, “A Review of Automated Diagnosis of ECG Arrhythmia Using Deep Learning Methods”, ‘AI-Enabled Smart Healthcare Using Biomedical Signals’, IGI Global ISBN 9781668439470,2022
3. Neha Rathore, Praveen Kumar Tyagi, Deepak Parashar, Dheraj Agrawal, “Analogy of Wrist Pulse Signals in the Context of ECG Signals: A Review”, ‘AI-Enabled Smart Healthcare Using Biomedical Signals’, IGI Global ISBN 9781668439470, 2022
4. Deepak Parashar, Dheraj Kumar Agrawal, Praveen Kumar Tyagi, Neha Rathore, “Automated Glaucoma Classification Using Advanced Image Decomposition Techniques From Retinal Fundus Images” , ‘AI-Enabled Smart Healthcare Using Biomedical Signals’, IGI Global ISBN 9781668439470,2022
5. Dubey R, Agrawal D, “A Novel Approach for diagnosis of noisy component in rolling bearing using Improved Empirical Mode Decomposition”, *Advs. in Intelligent Syst., Computing*, Springer (Scopus Index Journal), Volume 380, pp 379-487,2015.

Scopus Id: 57193869522

Web of science id: D-9981-2018

Orchid id: 0000-0001-9196-4830

Vidwan id: <https://vidwan.inflibnet.ac.in/profile/61742>

Google scholar id: [https://scholar.google.com/citations?hl=en&user=\\_HAvqRQAAAAJ](https://scholar.google.com/citations?hl=en&user=_HAvqRQAAAAJ)

### **Declaration:**

I hereby declare that the above written particulars are true to the best of my knowledge and belief.

Date:

Dr. Dheraj Kumar Agrawal

Associate Professor

Electronics and Communication Engg.

MANIT Bhopal.