

Ali Hassan

Professor

College of Electrical & Mechanical Engineering

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About

Dr. Ali Hassan is working as Professor in the College of Electrical & Mechanical Engineering. Dr. Ali Hassan has a PhD in Machine Learning. Dr. Ali Hassan has published 80 research articles & conference papers having a citation count of 976, carried out 2 projects and filed 3 intellectual property.

Qualifications

<b>PhD in Machine Learning</b> University of Southampton , United Kingdom	2008 - 2012
<b>MS in Image Processing</b> NUST, Islamabad , Pakistan	2004 - 2007
<b>BE in Computer Engineering</b> NUST, Islamabad , Pakistan	2000 - 2004

Experience

<b>Professor</b> College of Electrical & Mechanical Engineering	2022- Present
<b>Associate Professor</b> College of Electrical & Mechanical Engineering	2019 - 2022
<b>Assistant Professor</b> College of Electrical & Mechanical Engineering	2017 - 2019
<b>Assistant Professor</b> College of Electrical & Mechanical Engineering	2015 - 2017
<b>Assistant Professor</b> College of Electrical & Mechanical Engineering	2012 - 2015
<b>Assistant Professor</b> College of Electrical & Mechanical Engineering	2012 - 2012
<b>Lab Demonstrator</b> NUST , NUST Centre for Cyber Technology and Spectrum Management (CCT&SM)	2007 - 2008
<b>Teaching Assistant</b> NUST College of EME , NUST College of EME	2004 - 2006

Awards

<b>Gold Medal to UG Project</b>	2015
My co-supervised project titled 'Multi Gig inline protocol analyzer based on software defined networking (SDN)' won the best project award and NUST Gold Medal for the best project for the graduating degree of 2015.	
<b>APICTA Silver Merit Award</b>	2013
Asia Pacific ICT Alliance Award 2013 in Hong Kong: Our project i-Hospital won APICTA Silver Merit Award in Research and Development.	
<b>Best Student Presentation</b>	2011
Awarded with best student presentation in ISIS Postgraduate Conference, held at Chillworth Manor, Southampton, UK, 2011	
<b>Scholarship for PHD</b>	2010
Awarded with scholarship by School of Electronics & Computer Science, University of Southampton, to cover for the third year fee during my PhD 2010--2011	
<b>Ambitions Award for 2009</b>	2009
Awarded with Institute of Engineering & Technology Ambitions Award for 2009	

Research Projects

<b>National Projects</b>	
<b>AI based Smart Gloves</b>	2022
<b>Funding Agency:</b> NGIRI IGNITE	
<b>Amount:</b> PKR 24,300.00	
<b>Status:</b> Completed	
<b>Industry 4.0 Process Virtualization System</b>	2019
<b>Funding Agency:</b> HEC	
<b>Amount:</b> PKR 13,370,000.00	
<b>Status:</b> Completed	

International Projects

Research Articles

<b>AI-CADS: An Artificial Intelligence based framework for automatic early detection and severity evaluation of coronary artery disease</b>	2025
<i>Muhammad Sajid Ali Hassan Dilshad Ahmed Khan Shoab Ahmed Khan Asim Dilawar Bakhshi Sayed Tanveer Abbas Gilani Muhammad Usman Akram Mustansar Ali Ghazanfar</i>	
<i>Biomedical Signal Processing and Control</i> , Volume:106, Article Number: 107705, Pages:10	
<b>Impact Factor:</b> 4.9   <b>Quartile:</b> 1	
<b>DOI:</b> <a href="https://doi.org/10.1016/j.bspc.2025.107705">https://doi.org/10.1016/j.bspc.2025.107705</a>	
<b>A triple-shallow CNN with genetic algorithm channel selection method for classifying EEG complex limb movements</b>	2025
<i>Beenish Khalid Ali Hassan Muhammad Yasin Muhammad Salman Muhammad Fasih Uddin Butt Wadood Abdul Imran Khan Niazi</i>	
<i>Biomedical Signal Processing and Control</i> , Volume:105, Article Number: 107541, Pages: 13	
<b>Impact Factor:</b> 4.9   <b>Quartile:</b> 1   <b>Citations:</b> 1	
<b>DOI:</b> <a href="https://doi.org/10.1016/j.bspc.2025.107541">https://doi.org/10.1016/j.bspc.2025.107541</a>	
<b>JamBIT: RL-based framework for disrupting adversarial information in battlefields</b>	2025
<i>Muhammad Salman Taehong Lee Ali Hassan Muhammad Yasin Kiran Khurshid Youngtae Noh</i>	
<i>Ad Hoc Networks</i> , Volume 167, Article Number 103697	
<b>Impact Factor:</b> 4.400   <b>Quartile:</b> 1	
<b>DOI:</b> <a href="https://doi.org/10.1016/j.adhoc.2024.103697">https://doi.org/10.1016/j.adhoc.2024.103697</a>	
<b>AI-CADR: Artificial Intelligence Based Risk Stratification of Coronary Artery Disease using Novel Non-invasive Biomarkers</b>	2024
<i>Muhammad Sajid Ali Hassan Dilshad Ahmed Khan Shoab Ahmed Khan Asim Dilawar Bakhshi Muhammad Usman Akram Mishal Babar Farhan Hussain Wadood Abdul</i>	
<i>IEEE Journal of Biomedical and Health Informatics</i> , Volume:28, Issue:12, Page(s):7543-7552	
<b>Impact Factor:</b> 6.700   <b>Quartile:</b> 1   <b>Citations:</b> 3	
<b>DOI:</b> <a href="https://doi.org/10.1109/JBHI.2024.3453911">https://doi.org/10.1109/JBHI.2024.3453911</a>	
<b>Advances in Pruning and Quantization for Natural Language Processing</b>	2024

<p>UMMARA BIBI MAHRUKH MAZHAR DILSHAD SABIR MUHAMMAD FASIH UDDIN BUTT Ali Hassan MUSTANSAR ALI GHAZANFAR ARSHAD ALI KHAN WADOOD ABDUL</p> <p>IEEE Access , Volume:12, Page(s):139113-139128</p> <p><b>Impact Factor:</b> 3.4   <b>Quartile:</b> 2   <b>Citations:</b> 7</p> <p><b>DOI:</b> doi.org/10.1109/ACCESS.2024.3465631</p>	
<p><b>Enhancing Signature Verification Using Triplet Siamese Similarity Networks in Digital Documents</b></p> <p>Sara Tehsin Ali Hassan Inzamam Mashood Nasir Norma Latif Fitriyani Muhammad Syafrudin Farhan Riaz</p> <p>Mathematics , Volume 12(17), Article Number 2757</p> <p><b>Impact Factor:</b> 2.300   <b>Quartile:</b> 1   <b>Citations:</b> 7</p> <p><b>DOI:</b> https://doi.org/10.3390/math12172757</p>	2024
<p><b>Applications of Pruning Methods in Natural Language Processing</b></p> <p>Marva Touheed Urooj Zubair Dilshad Sabir Ali Hassan Muhammad Fasih Uddin Butt Farhan Riaz Wadood Abdul Rashid Ayub</p> <p>IEEE Access , Volume 12, Pages 89418-89438</p> <p><b>Impact Factor:</b> 3.400   <b>Quartile:</b> 2   <b>Citations:</b> 2</p> <p><b>DOI:</b> 10.1109/ACCESS.2024.3411776</p>	2024
<p><b>Enhanced Spatial Stream of Two-Stream Network Using Optical Flow for Human Action Recognition</b></p> <p>Shahbaz Khan Ali Hassan Farhan Hussain Aqib Perwaiz Maazen Alsabaan Farhan Riaz Wadood Abdul</p> <p>Applied Sciences , Volume 13, Issue 14, Article Number 8003</p> <p><b>Impact Factor:</b> 2.7   <b>Quartile:</b> 2   <b>Citations:</b> 10</p> <p><b>DOI:</b> https://doi.org/10.3390/app13148003</p>	2023
<p><b>CoRAE: Energy Compaction-Based Correlation Pattern Recognition Training Using AutoEncoder</b></p> <p>Muhammad Dilshad Sabir Muhammad Fasih uddin Butt Ali Hassan Saad Rehman Mehwish Mehmood Abdulah Jeza Aljohani</p> <p>IEEE Access , Volume:11, Page: 28014-28033</p> <p><b>Impact Factor:</b> 3.476   <b>Quartile:</b> 2   <b>Citations:</b> 5</p> <p><b>DOI:</b> 10.1109/ACCESS.2023.3253964</p>	2023
<p><b>FIPAM: Fuzzy Inference based Placement and Migration Approach for NFV-based IoTs</b></p> <p>Muhammad Arslan Tariq Muhammad Umar Farooq Muhammad Zeeshan Ali Hassan Adnan Akhunzada</p> <p>IEEE Transactions on Network and Service Management, Volume 19, Issue 4, Pages 4298-4309</p> <p><b>Impact Factor:</b> 5.3   <b>Quartile:</b> 2   <b>Citations:</b> 7</p> <p><b>DOI:</b> 10.1109/TNSM.2022.3145658</p>	2022
<p><b>Intelligent framework for automated failure prediction, detection, and classification of mission critical autonomous flights</b></p> <p>Muhammad Waqas Ahmad Muhammad Usman Akram Khurram Hameed Rashid Ahmad Ali Hassan</p> <p>ISA Transactions , Volume 129, Part A, Pages 355-371</p> <p><b>Impact Factor:</b> 5.911   <b>Quartile:</b> 1   <b>Citations:</b> 29</p> <p><b>DOI:</b> https://doi.org/10.1016/j.isatra.2022.01.014</p>	2022
<p><b>A Knowledge Base Technique for Detecting Multiple High-Speed Serial Interface Synchronization Errors in Multiprocessor-Based Real-Time Embedded Systems</b></p> <p>Sabeen Masood Shoab Ahmed Khan Ali Hassan Fatima Khaliq</p> <p>Electronics , Volume:11, Issue:18, Article Number 2945</p> <p><b>Impact Factor:</b> 2.690   <b>Quartile:</b> 3</p> <p><b>DOI:</b> doi.org/10.3390/electronics11182945</p>	2022
<p><b>IoTAuth: IoT Sensor Data Analytics for User Authentication Using Discriminative Feature Analysis</b></p> <p>Samera Batool Ali Hassan Muazzam A. Khan Khattak Ahsan Shahzad Muhammad Umar Farooq</p> <p>IEEE Access , Volume 10, Pages 59115-59124</p> <p><b>Impact Factor:</b> 3.476   <b>Quartile:</b> 2   <b>Citations:</b> 8</p> <p><b>DOI:</b> 10.1109/ACCESS.2022.3178635</p>	2022
<p><b>A Decision Support Framework for National Crop Production Planning</b></p> <p>Nida Rasheed Shoab Ahmed Khan Ali Hassan Saria Safdar</p> <p>IEEE Access , Volume 9, Pages 133402-133415</p> <p><b>Impact Factor:</b> 3.367   <b>Quartile:</b> 2   <b>Citations:</b> 13</p> <p><b>DOI:</b> 10.1109/ACCESS.2021.3115801</p>	2021
<p><b>A novel framework for testing high-speed serial interfaces in multiprocessor based real-time embedded system</b></p> <p>Sabeen Masood Shoab Ahmed Khan Ali Hassan Urooj Fatima</p>	2021

<i>Applied Sciences</i> , Volume 11, Issue 16, Article Number 7465	
<b>Impact Factor:</b> 2.838   <b>Quartile:</b> 2   <b>Citations:</b> 3	
<b>DOI:</b> <a href="https://doi.org/10.3390/app11167465">https://doi.org/10.3390/app11167465</a>	
<b>TiQSA: Workload Minimization in Convolutional Neural Networks Using Tile Quantization and Symmetry Approximation</b>	2021
<i>Muhammad Abdullah Hanif Ali Hassan Saad Rehman Muhammad Shafique Dilshad Sabir</i>	
<i>IEEE Access</i> , Volume 9, Pages 53647-53668	
<b>Impact Factor:</b> 3.476   <b>Quartile:</b> 2   <b>Citations:</b> 4	
<b>DOI:</b> 10.1109/ACCESS.2021.3069906	
<b>A Framework for Classification of Gabor Based Frequency Selective Bone Radiographs Using CNN</b>	2021
<i>Rehan Nemati Farhan Riaz Ali Hassan Saad Rehman Muhammad Ajmal Azad Muhammad Abbas Farhan Hussain Saddam Rubab</i>	
<i>Arabian Journal of Science and Engineering</i> , Volume 46, Pages 4141-4152	
<b>Impact Factor:</b> 2.807   <b>Quartile:</b> 2   <b>Citations:</b> 2	
<b>DOI:</b> <a href="https://doi.org/10.1007/s13369-021-05339-7">https://doi.org/10.1007/s13369-021-05339-7</a>	
<b>Weight Quantization Retraining for Sparse and Compressed Spatial Domain Correlation Filters</b>	2021
<i>Dilshad Sabir Muhammad Abdullah Hanif Ali Hassan Saad Rehman Muhammad Shafique</i>	
<i>Electronics</i> , Volume 10(3), Article Number 351	
<b>Impact Factor:</b> 2.690   <b>Quartile:</b> 3   <b>Citations:</b> 2	
<b>DOI:</b> <a href="https://doi.org/10.3390/electronics10030351">https://doi.org/10.3390/electronics10030351</a>	
<b>Authentication of Remote IoT Users Based on Deeper Gait Analysis of Sensor Data</b>	2020
<i>Samera Batool Ali Hassan Nazar Abbas Saqib Muazam Khattak</i>	
<i>IEEE Access</i> , Volume 8, Pages 101784-101796	
<b>Impact Factor:</b> 3.367   <b>Quartile:</b> 2   <b>Citations:</b> 16	
<b>DOI:</b> 10.1109/ACCESS.2020.2998412	
<b>Gaussian Mixture Model Based Probabilistic Modeling of Images for Medical Image Segmentation</b>	2020
<i>Farhan Riaz Ali Hassan Saad Rehman Muhammad Ajmal Rehan Hafiz Naif Radi Aljohani Raheel Nawaz Rupert Young Miguel Coimbra</i>	
<i>IEEE Access</i> , Volume 8, Pages 16846-16856	
<b>Impact Factor:</b> 3.367   <b>Quartile:</b> 2   <b>Citations:</b> 39	
<b>DOI:</b> 10.1109/ACCESS.2020.2967676	
<b>Approximate Proximal Gradient-Based Correlation Filter for Target Tracking in Videos: A Unified Approach</b>	2019
<i>Aimal Khan Haris Masood Saad Rehman Farhan Riaz Ali Hassan Muhammad Abbas</i>	
<i>Arabian Journal for Science and Technology</i> , Volume 44, Issue 11, Pages 9363-9380	
<b>Impact Factor:</b> 1.711   <b>Quartile:</b> 2   <b>Citations:</b> 7	
<b>DOI:</b> 10.1007/s13369-019-03861-3	
<b>Self-Paced Online vs. Cue-Based Offline Brain–Computer Interfaces for Inducing Neural Plasticity</b>	2019
<i>Ali Hassan Mads Jochumsen Muhammad Samran Navid Rasmus Wiberg Nedergaard Nada Signal Usman Rashi Heidi Haavik Denise Taylor Imran Khan Niazi</i>	
<i>Brain Sciences</i> , Volume: 9, Issue: 6, Article Number: 127	
<b>Impact Factor:</b> 3.332   <b>Quartile:</b> 2   <b>Citations:</b> 17	
<b>DOI:</b> 10.3390/brainsci9060127	
<b>Pervasive blood pressure monitoring using Photoplethysmogram (PPG) sensor</b>	2019
<i>Ali Hassan Farhan Riaz Muhammad Ajmal Azad Junaid Arshad Muhammad Imran Saad Rehman</i>	
<i>Future Generation Computer Systems</i> , Volume 98, Pages 120—130	
<b>Impact Factor:</b> 6.125   <b>Quartile:</b> 1   <b>Citations:</b> 65	
<b>DOI:</b> <a href="https://doi.org/10.1016/j.future.2019.02.032">https://doi.org/10.1016/j.future.2019.02.032</a>	
<b>Movement intention detection in adolescents with cerebral palsy from single-trial EEG</b>	2018
<i>Mads Jochumsen Muhammad Shafique Ali Hassan Imran Khan Niazi</i>	
<i>Journal of Neural Engineering</i> , NULL	
<b>Impact Factor:</b> 4.551   <b>Quartile:</b> 1   <b>Citations:</b> 21	
<b>DOI:</b> 10.1088/1741-2552/aae4b8	
<b>Efficient Prediction and Classification of Epileptic Seizures Using EEG Data Based on Univariate Linear Features</b>	2018
<i>Syed Muhammad Usman Ali Hassan</i>	
<i>Journal of Computers</i> , Volume 13, Number 6, Pages 616-621	

- Impact Factor:** -  
**DOI:** doi: 10.17706/jcp.13.6.616-621
- Efficient FIR Filter Implementations for Multichannel BCIs Using Xilinx System Generator** 2018  
*Usman Ghani Muhammad Wasim Umar Shahbaz Khan Muhammad Mubasher Saleem Ali Hassan Nasir Rashid Mohsin Islam Tiwana Amir Hamza Amir Kashif*  
*BioMed Research International*, Volume 2018, Article ID 9861350, 9 pages  
**Impact Factor:** 2.197 | **Quartile:** 3 | **Citations:** 6  
**DOI:** <https://doi.org/10.1155/2018/9861350>
- Self-Organizing Hierarchical Particle Swarm Optimization of Correlation Filters for Object Recognition** 2017  
*Sara Tehsin Saad Rehman Muhammad Omer Bin Saeed Farhan Riaz Ali Hassan Muhammad Abbas Rupert Young Mohammad S. Alam*  
*IEEE Access*, Volume 5, Pages 24495-24502  
**Impact Factor:** 3.557 | **Quartile:** 1 | **Citations:** 24  
**DOI:** 10.1109/ACCESS.2017.2762354
- Content-Adaptive Region-Based Color Texture Descriptors for Medical Images** 2017  
*Rida Nisar Mario Dinis-Ribeiro Miguel Tavares Coimbra Farhan Riaz Ali Hassan*  
*IEEE Journal of Biomedical and Health Informatics*, Volume: 21, Issue: 01, Pages 162-171  
**Impact Factor:** 3.85 | **Quartile:** 1 | **Citations:** 30  
**DOI:** 10.1109/JBHI.2015.2492464
- Pulmonary Nodules Detection and Classification Using Hybrid Features from Computerized Tomographic Images** 2016  
*Sheeraz Akram Muhammad Younus Javed Usman Akram Usman Qamar Ali Hassan*  
*Journal of Medical Imaging and Health Informatics*, Volume 6, Number 1, Pages 252-259  
**Impact Factor:** 0.621 | **Quartile:** 4 | **Citations:** 41  
**DOI:** 10.1166/jmihi.2016.1600
- EMD-Based Temporal and Spectral Features for the Classification of EEG Signals using Supervised Learning** 2016  
*Farhan Riaz Ali Hassan Saad Rehman Imran Khan Niazi Kim Dremstrup*  
*IEEE Transactions on Neural Systems and Rehabilitation Engineering*, Volume: 24 Issue: 1 Pages: 28-35  
**Impact Factor:** 3.41 | **Quartile:** 1 | **Citations:** 325  
**DOI:** 10.1109/TNSRE.2015.2441835
- A scalable architecture for geometric correction of multi-projector display systems** 2015  
*Kamran Babar Rehan Hafiz Khawar Khurshid Awais M. Kamboh Ali Hassan Farhan Riaz Byeungwoo Jeon*  
*Displays*, Volume 40, Pages 104-112  
**Impact Factor:** 1.903 | **Quartile:** 1 | **Citations:** 3  
**DOI:** 10.1016/j.displa.2015.05.009
- Artificial Neural Network based Classification of Lungs Nodule using Hybrid Features from Computerized Tomographic Images** 2015  
*Sheeraz Akram Muhammad Younus Javed Usman Qamar Aasia Khanum Ali Hassan*  
*Applied Mathematics & Information Sciences*, Volume 9, No. 1, Pages 183-195  
**Impact Factor:** - | **Citations:** 32  
**DOI:** <http://dx.doi.org/10.12785/amis/090124>
- Scale and rotation invariant texture classification using covariate shift methodology** 2014  
*Ali Hassan Farhan Riaz Arsalan Shaukat*  
*IEEE Signal Processing Letters*, Volume 21, Issue 3, Article number 6722919, Pages 321-324  
**Impact Factor:** 1.751 | **Quartile:** 2 | **Citations:** 5  
**DOI:** 10.1109/LSP.2014.2302576
- Rotation and scale invariant texture classification by compensating for distribution changes using covariate shift in uniform local binary patterns** 2014  
*Ali Hassan Farhan Riaz Saad Rehman*  
*Electronics Letters*, Volume: 50, Issue:1, Pages:27-28  
**Impact Factor:** 0.93 | **Quartile:** 3 | **Citations:** 3  
**DOI:** 10.1049/el.2013.2578
- On Acoustic Emotion Recognition: Compensating for Covariate Shift** 2013  
*Ali Hassan R I Damper M Nirranjan*  
*IEEE TRANSACTIONS ON AUDIO, SPEECH, AND LANGUAGE PROCESSING*, Volume: 21, Issue: 7, Pages: 1458-1468

<b>Impact Factor: 2.625   Quartile: 1   Citations: 104</b> <b>DOI: 10.1109/TASL.2013.2255278</b>	
<b>Texture Classification Using Rotation- and Scale-Invariant Gabor Texture Features</b> <i>Farhan Riaz Ali Hassan Usman Qamar Saad Rehman</i> <i>IEEE Signal Processing Letters</i> , Volume: 20, Issue: 6, Pages: 607-610 <b>Impact Factor: 1.639   Quartile: 2   Citations: 90</b> <b>DOI: 10.1109/LSP.2013.2259622</b>	2013
<b>Classification of emotional speech using 3DEC hierarchical classifier</b> <i>Ali Hassan R I Damper</i> <i>SPEECH COMMUNICATION</i> , Volume: 54, Issue: 7, Pages: 903-916 <b>Impact Factor: 1.283   Quartile: 2   Citations: 31</b> <b>DOI: <a href="http://dx.doi.org/10.1016/j.specom.2012.03.003">http://dx.doi.org/10.1016/j.specom.2012.03.003</a></b>	2012
<b>Crypt analysis of two time pads in case of compressed speech</b> <i>Liaquat Ali Khan Shamim Baig Ali Hassan</i> <i>Computers &amp; Electrical Engineering</i> , NULL <b>Impact Factor: 0.837   Quartile: 3   Citations: 3</b> <b>DOI: 10.1016/j.compeleceng.2011.04.008</b>	2011
<b>Conference Proceedings</b>	
<b>Ensemble Learning for Offline Signature Verification using Fused Deep Features</b> <i>Sara Tehsin Prof Ali Hassan Dr Farhan Riaz</i> <i>2024 5th International Conference on Advancements in Computational Sciences (ICACS)</i> , res.country(177,) <b>Citations: N/A</b> <b>DOI: 10.1109/ICACS60934.2024.10473290</b>	2024
<b>EMD and VMD in Pre-Movement EEG Signal Analysis: A Hybrid Mode Selection to Classify Upper Limb Complex Movements Using Statistical Features</b> <i>Beenish Khalid Ali Hassan Ehsan Ullah Munir Imran Khan Niazi</i> <i>2023 IEEE 20th International Conference on Smart Communities: Improving Quality of Life using AI, Robotics and IoT (HONET)</i> res.country(233,) <b>Citations: N/A</b> <b>DOI: 10.1109/HONET59747.2023.10374838</b>	2023
<b>A Systematic Literature Review of Latest Cloud Forensic Frameworks, Tools and Challenges</b> <i>Ummer Farooq Arsalan Shaukat Wasi Haider Butt Ali Hassan</i> <i>2nd International Conference on Emerging Trends in Electrical, Control, and Telecommunication Engineering</i> , res.country(177,) <b>Citations: N/A</b> <b>DOI: 10.1109/ETECTE59617.2023.10396682</b>	2023
<b>Classification of Complicated Upper Limb Movements from Pre-movement EEG Signals Using STFT and Spectral Characteristics</b> <i>Ehsan Azam Ali Hassan Muhammad Abdul Basit Malik Imran Khan Niazi</i> <i>IEEE Symposium on Computer-Based Medical Systems</i> , res.country(109,) <b>Citations: N/A</b> <b>DOI: 10.1109/CBMS58004.2023.00249</b>	2023
<b>Motor Imagery EEG Classification Using Fine-Tuned Deep Convolutional EfficientNetB0 Model</b> <i>Muhammad Shahroze Ali Hassan Aqsa Rahim Muhammad Hashir Ashraf Amna Rahim Shayaan Saghir</i> <i>3rd International Conference on Artificial Intelligence (ICAI)</i> , res.country(177,) <b>Citations: N/A</b> <b>DOI: 10.1109/ICAI58407.2023.10136681</b>	2023
<b>A Study &amp; Proposed Architecture for Large Scale IoT Networks in the space of Public Transportation</b> <i>Afaq Ahmad Khan Muhammad Umar Farooq Ali Hassan</i> <i>3rd IEEE International Conference on Artificial Intelligence, ICAI 2023</i> , res.country(177,) <b>Citations: N/A</b> <b>DOI: 10.1109/ICAI58407.2023.10136684</b>	2023
<b>Subject Wise Motor Imagery Classification from EEG Data Using Transfer Learning</b> <i>Afaq Ahmad Khan Ali Hassan Ali Hassan Muhammad Talha Jahangir</i> <i>2022 24th International Multitopic Conference, INMIC 2022</i> , res.country(177,) <b>Citations: N/A</b>	2022

DOI: 10.1109/INMIC56986.2022.9972989	
<b>Machine Learning based Theoretical Framework for Failure Prediction, Detection, and Correction of Mission-Critical Flight Software</b> <i>Muhammad Waqas Ahmad Muhammad Usman Akram Kashif Saghar Wasi Haider Butt Rashid Ahmad Ali Hassan</i> <i>2022 2nd International Conference on Digital Futures and Transformative Technologies (ICoDT2), res.country(177,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICoDT255437.2022.9787424	2022
<b>Simulating synchronization issues on a multiprocessor embedded system for testing</b> <i>Sabeen Masood Shoab Ahmed Khan Ali Hassan</i> <i>2021 IEEE International Conference on Information Communication and Software Engineering (ICICSE), res.country(48,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICICSE52190.2021.9404126	2021
<b>Application of Separate Modal Analysis and Scale-Invariant Feature Transform on Clinical Data for the Screening of Breast Cancer</b> <i>Amer Sohail Kashif Mubashir Hussain Jingzhou Zhao Ali Hassan Hamood Ud Rahman Yongjun Tang</i> <i>2021 IEEE International Conference on Information Communication and Software Engineering (ICICSE), res.country(48,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICICSE52190.2021.9404094	2021
<b>Identification of Remote IoT Users Using Sensor Data Analytics</b> <i>Muazzam A. Khan Nazar A. Saqib Ali Hassan Samera Batool</i> <i>FICC: Future of Information and Communication Conference, res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1007/978-3-030-12388-8_24	2019
<b>A Survey of Deep Learning and Traditional Approaches for EEG Signal Processing and Classification</b> <i>Memoona Ittikhar Ali Hassan Shoab A Khan</i> <i>2018 IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), res.country(38,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/IEMCON.2018.8614893	2018
<b>Supervised Level Sets For Dermoscopic Image Segmentation</b> <i>Muntaha Sakeena Rubata Riasat Ali Hassan Farhan Riaz</i> <i>2018 IEEE 20th International Conference on e-Health Networking, Applications and Services (Healthcom) , res.country(56,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1109/HealthCom.2018.8531083	2018
<b>Curve Evolution Based on Edge Following Algorithm for Medical Image Segmentation</b> <i>Sana Ullah Shah Khalid Farhan Hussain Ali Hassan Farhan Riaz</i> <i>IEEE Intelligent Systems Conference IntelliSys 2018, res.country(231,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1007/978-3-030-01054-6_38	2018
<b>Segmentation of heart sound by clustering using spectral and temporal features</b> <i>Shah Khalid Ali Hassan Sana Ullah Farhan Riaz</i> <i>IEEE Intelligent Systems Conference IntelliSys 2018, res.country(231,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1007/978-3-030-01054-6_24	2018
<b>Convolutional neural network based image segmentation: a review</b> <i>Hina Ajmal Saad Rehman Muhammad Umar Farooq Qurrat-ul-Ain Farhan Riaz Ali Hassan</i> <i>SPIE Defense + Security, res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1117/12.2304711	2018
<b>Comparison of SIFT and ASIFT based filters for better recognition and tracking in a remote scene environment</b> <i>Haris Masood Saad Rehman Kaiser Chaudry Farhan Riaz Ali Hassan Muhammad Umar Farooq</i> <i>SPIE Defense + Security, res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1117/12.2305266	2018
<b>PCA and LDA based Classifiers for Osteoporosis Identification</b>	2018

<p><i>Hina Ajmal Saad Rehman Farhan Riaz Ali Hassan Aqib Perwaiz Qurrat U. Ain</i>  29th Pattern Recognition and Tracking Conference held from 15-19 Apr 2018 in USA, res.country(233,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1117/12.2304728</p>	
<p><b>Estimation of Illumination Map form Dermoscopy Images for Extracting Differential Structure using Gabor Local mesh Patterns</b></p> <p><i>Farhan Riaz Rida Nisar Ali Hassan Muntaha Sakeena Muhammad Ajmal Azad</i>  2017 International Conference on Computational Science and Computational Intelligence (CSCI), res.country(233,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/CSCI.2017.72</p>	2017
<p><b>Detection and Classification of Pilots Cognitive State using EEG</b></p> <p><i>Q.A. Khan Ali Hassan Saad Rehman Farhan Riaz</i>  2nd IEEE International Conference on Computational Intelligence and Applications, res.country(48,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/CIAPP.2017.8167249</p>	2017
<p><b>Automatic Tracking of Cervical Spine Using Fluoroscopic Sequences</b></p> <p><i>Muhammad Nauman Ali Hassan Farhan Riaz Saad Rehman Rasmus Wiberg Nedergard Kelly Holt Heidi Haavik Imran Khan Niazi</i>  IEEE Intelligent Systems Conference, res.country(231,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/IntelliSys.2017.8324355</p>	2017
<p><b>Fully Invariant Wavelet Enhanced Minimum Average Correlation Energy Filter for Object Recognition in Cluttered and Occluded Environments</b></p> <p><i>Sara Tehsin Saad Rehman Farhan Riaz Omer Saeed Ali Hassan Muazzam Khan Muhammad S. Alam</i>  Pattern Recognition and Tracking XXVIII(2017) , res.country(233,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1117/12.2262434</p>	2017
<p><b>Transfer Learning for Electroencephalogram Signal</b></p> <p><i>Farah Abid Ali Hassan Anum Abid Imran Khan Niazi Mads Jochumsen</i>  9th International Conference on Computer and Electrical Engineering, res.country(68,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> <a href="https://www.researchgate.net/publication/318785747_Transfer_learning_for_electroencephalogram_signals">https://www.researchgate.net/publication/318785747_Transfer_learning_for_electroencephalogram_signals</a></p>	2016
<p><b>Efficient Predication and Classification of Epileptic Seizures using EEG data based on Univariate Linear Features</b></p> <p><i>Muhammad Usman Ali Hassan</i>  2016 9th International Conference on Computer and Electrical Engineering (ICCEE 2016), res.country(68,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> <a href="http://www.jcomputers.us/vol13/jcp1306-04.pdf">http://www.jcomputers.us/vol13/jcp1306-04.pdf</a></p>	2016
<p><b>Detection of Acoustic Events by using MFCC and Spectro-Temporal Gabor Filterbank Features</b></p> <p><i>Umair Zafar Khan M Usman Akram Ali Hassan Arslan Shaukat Muhammad Kashan Basit Abdul Wahid</i>  8th International Conference on Signal Processing Systems, res.country(170,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1145/3015166.3015186</p>	2016
<p><b>How well can the fusion of Gabor filters and local binary patterns help in identifying gastric lesions?</b></p> <p><i>Farhan Riaz Ali Hassan Pedro Pimentel-Nunes Diogo Libnio e Jorge Lage Miguel Tavares Coimbra</i>  2016 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC) res.country(233,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/EMBC.2016.7590921</p>	2016
<p><b>Crowd Counting using Adaptive Segmentation in a Congregation</b></p> <p><i>Muhamad Sajid Shoab A Khan Ali Hassan</i>  2016 IEEE International Conference on Signal and Image Processing (ICSIP), res.country(48,)</p> <p><b>Citations:</b> N/A  <b>DOI:</b> 10.1109/SIPROCESS.2016.7888363</p>	2016
<p><b>Fully Invariant Quaternion Based Filter for Target Recognition</b></p> <p><i>Dilshad Sabir Saad Rehman Ali Hassan</i>  2015 IEEE International Conference on Signal and Image Processing Applications (ICSIPA), res.country(157,)</p>	2015



<b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICSIPA.2015.7412244	
<b>Using a Portable Device for Online Single-Trail MRCP Detection and Classification</b> <i>Ali Hassan Usman Ghani Farhan Riaz Saad Rehman Mads Jochumsen Denise Taylor Imran Khan Niazi</i> <i>Intelligent Data Engineering and Automated Learning – IDEAL 2015</i> , res.country(178,)	2015
<b>Citations:</b> N/A <b>DOI:</b> 10.1007/978-3-319-24834-9_61	
<b>Separate Modal Analysis using Scale Invariant Feature Transform (SIFT) with Digital Image Elasto Tomography (DIET) for breast cancer screening test</b> <i>Amer Sohail Kashif Mubashir Hussain Hamood Ur Rehman Owais Nazir Ali Hassan Muhammad Awais Dildar</i> <i>2015 International Conference on Informative and Cybernetics for Computational Social Systems (ICCSS)</i> , res.country(48,)	2015
<b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICCSS.2015.7281162	
<b>A Robust Classification Model with Voting based feature Selection for Diagnosis of Epilepsy</b> <i>Ali Hassan Farhan Riaz Abdul Basit</i> <i>2015 IEEE 28th Canadian Conference on Electrical and Computer Engineering (CCECE)</i> , res.country(38,)	2015
<b>Citations:</b> N/A <b>DOI:</b> 10.1109/CCECE.2015.7129181	
<b>A Robust Classification Model based on iBSA and GCA Biomarker for Diagnosis of Epilepsy</b> <i>Ali Hassan Farhan Riaz Abdul Basit</i> <i>2015 IEEE 28th Canadian Conference on Electrical and Computer Engineering (CCECE)</i> , res.country(38,)	2015
<b>Citations:</b> N/A <b>DOI:</b> 10.1109/CCECE.2015.7129180	
<b>An Empirical Study to Remove Noise from Signal-Trail MRCP for Movement Intention Detection</b> <i>Ali Hassan Farhan Riaz Saad Rehman Mads Jochumsen Imran Niazi Kim Dremstrup</i> <i>2015 IEEE 28th Canadian Conference on Electrical and Computer Engineering (CCECE)</i> , res.country(38,)	2015
<b>Citations:</b> N/A <b>DOI:</b> 10.1109/CCECE.2015.7129183	
<b>Enhanced Dynamic Quadrant Histogram Equalization Plateau Limit for Image Contrast Enhancement</b> <i>Rizwan Khalid Saad Rehman Farhan Riaz Ali Hassan</i> <i>2015 Fifth International Conference on Digital Information and Communication Technology and its Applications (DICTAP)</i> , res.country(126,)	2015
<b>Citations:</b> N/A <b>DOI:</b> 10.1109/DICTAP.2015.7113176	
<b>DSP Middleware Adaptation for Network on System (NoS) based Hybrid Embedded System</b> <i>Abu Bakr Nisar Alvi Shoab A Khan Ali Hassan Umer Farooq</i> <i>2014 IEEE/ACS 11th International Conference on Computer Systems and Applications (AICCSA)</i> , res.country(186,)	2014
<b>Citations:</b> N/A <b>DOI:</b> 10.1109/AICCSA.2014.7073174	
<b>Distance Regularized Curve Evolution: A Formulation Using Creaseness Features for Dermoscopic Image Segmentation</b> <i>Jahan Zeb Farhan Riaz Ali Hassan</i> <i>2014 12th International Conference on Signal Processing (ICSP)</i> , res.country(48,)	2014
<b>Citations:</b> N/A <b>DOI:</b> 10.1109/ICOSP.2014.7015166	
<b>Blood Vessel Segmentation and Centerline Extraction based on Multilayered Thresholding in CT Images</b> <i>Sidra Rashid Shagufta Shoab A Khan Ali Hassan</i> <i>The 2nd International Conference on Intelligent Systems and Image Processing 2014 (ICISIP2014)</i> , res.country(113,)	2014
<b>Citations:</b> N/A <b>DOI:</b> 10.12792/icisip2014.081	
<b>Processing movement related cortical potentials in EEG signals for identification of slow and fast movements</b> <i>Farhan Riaz Ali Hassan Saad Rehman Imran Niazi M. Jochumsen K. Dremstrup</i> <i>2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , res.country(233,)	2014
<b>Citations:</b> N/A	

<b>DOI:</b> 10.1109/EMBC.2014.6944724	
<b>Daily Sound Recognition for Elderly People using Ensemble Methods</b>	2014
<i>Arslan Shaukat Muhammad Ahsan Ali Hassan Farhan Riaz</i>	
2014 11th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD), res.country(48,)	
<b>Citations:</b> 11	
<b>DOI:</b> 10.1109/FSKD.2014.6980871	
<b>Classification of Kinetics of Movement for Lower Limb using Covariate Shift Method for Brain</b>	2014
<b>Computer Interface</b>	
<i>Ali Hassan Imran Khan Niazi M. Jochumsen Farhan Riaz K. Dremstrup</i>	
2014 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), res.country(109,)	
<b>Citations:</b> N/A	
<b>DOI:</b> 10.1109/ICASSP.2014.6854726	
<b>Network on Hybrid Processors based High End Embedded System</b>	2014
<i>Abu Bakr Nisar Alvi Shoab A Khan Ali Hassan</i>	
Second International Conference on Technological Advances in Electrical, Electronics and Computer Engineering, res.country(157,)	
<b>Citations:</b> N/A	
<b>DOI:</b> <a href="https://www.researchgate.net/publication/261064437_Network_on_Hybrid_Processors_based_High_End_Embedded_System">https://www.researchgate.net/publication/261064437_Network_on_Hybrid_Processors_based_High_End_Embedded_System</a>	
<b>Covariate Shift Approach for Invariant Texture Classification</b>	2013
<i>Ali Hassan Arslan Shaukat</i>	
2013 IEEE International Workshop on Machine Learning for Signal Processing (MLSP), res.country(231,)	
<b>Citations:</b> N/A	
<b>DOI:</b> 10.1109/MLSP.2013.6661945	

## Editorial Activities

<b>Computers in Biology and Medicine</b>	2025
Reviewed Papers for Journals	
<b>Impact Factor:</b> 7.7	
<b>IEEE Access</b>	2025
Reviewed Papers for Journals	
<b>Impact Factor:</b> 3.4	
<b>Biomedical Engineering Advances</b>	2025
Reviewed Papers for Journals	
<b>Impact Factor:</b> N/A	
<b>Engineering Applications of Artificial Intelligence</b>	2025
Reviewed Papers for Journals	
<b>Impact Factor:</b> 7.5	
<b>IET Biometrics</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor:</b> 1.8	
<b>Computers in Biology and Medicine</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor:</b> 7.0	
<b>Computers in Biology and Medicine</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor:</b> 7.0	
<b>Signal, Image and Video Processing</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor:</b> 2.0	
<b>N/A</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor:</b> 0	
<b>Computers in Biology and Medicine</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor:</b> 7.0	

<b>N/A</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor: 0</b>	
<b>N/A</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor: N/A</b>	
<b>Measurement</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor: 5.6</b>	
<b>Computers in Biology and Medicine</b>	2024
Reviewed Papers for Journals	
<b>Impact Factor: 7.7</b>	
<b>IEEE Access</b>	2023
Reviewed Papers for Journals	
<b>Impact Factor: 3.9</b>	
<b>Biomedical Signal Processing &amp; Control</b>	2023
Reviewed Papers for Journals	
<b>Impact Factor: 5.1</b>	
<b>N/A</b>	2023
Reviewed Papers for Journals	
<b>Impact Factor: N/A</b>	
	2023
Reviewed Papers for Journals	
<b>Impact Factor: N/A</b>	
<b>Transactions on Biomedical Engineering</b>	2023
Reviewed Papers for Journals	
<b>Impact Factor: 4.6</b>	
<b>Engineering Applications of Artificial Intelligence</b>	2023
Reviewed Papers for Journals	
<b>Impact Factor: 8.0</b>	
<b>Biomedical Signal Processing &amp; Control</b>	2022
Reviewed Papers for Journals	
<b>Impact Factor: 3.88</b>	
	2022
Reviewed Papers for Journals	
<b>Impact Factor: 5.076</b>	
	2022
Reviewed Papers for Journals	
<b>Impact Factor: 3.756</b>	
	2022
Reviewed Papers for Journals	
<b>Impact Factor: 3.367</b>	
<b>Biomedical Signal Processing &amp; Control</b>	2022
Reviewed Papers for Journals	
<b>Impact Factor: 5.076</b>	
	2022
Reviewed Papers for Journals	
<b>Impact Factor: 3.88</b>	
	2022
Reviewed Papers for Journals	
<b>Impact Factor: 3.88</b>	
	2021
Reviewed Papers for Journals	
<b>Impact Factor: 3.880</b>	

Reviewed Papers for Journals <b>Impact Factor:</b> 3.880	2021
Edited Journal Issue / Proceeding / Book <b>Impact Factor:</b> 0	2021
Reviewed Papers for Journals <b>Impact Factor:</b> 1.711	2020
Reviewed Papers for Journals	2020
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Reviewed Papers for Journals	2020
Reviewed Papers for Journals	2020
Reviewed Papers for Journals	2020

## Intellectual Property

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### Copyrights

<b>Software for the Annotation and Labeling of Gastroenterology Images</b> <b>Status:</b> Filed	2022
<b>Industry 4.0 Process Virtualization system Dashboard/Meshloc4F</b> <b>Status:</b> Filed	2021

### Patents

#### Industrial Designs

<b>Industry 4.0 Process Virtualization Routing Node</b> <b>Status:</b> Filed	2021
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