

Mohsin Islam Tiwana

Professor

College of Electrical & Mechanical Engineering

Email: mohsintiwana@ceme.nust.edu.pk

Contact: 0514432540

LinkedIn: https://www.linkedin.com/in/mtiwana/



About

Dr. Mohsin Islam Tiwana is working as Professor in the College of Electrical & Mechanical Engineering. Dr. Mohsin Islam Tiwana has a PhD in Biomedical Engg. Dr. Mohsin Islam Tiwana has published 70 research articles & conference papers having a citation count of 595, carried out 12 projects and filed 38 intellectual property.

Qualifications

PhD in Biomedical Engg University of New South Wales , Australia	2009 - 2012
BE in Machatronics NUST, Islamabad , Pakistan	2003 - 2007

Experience

Professor College of Electrical & Mechanical Engineering	2024- Present
Professor College of Electrical & Mechanical Engineering	2023 - 2023
Associate Professor College of Electrical & Mechanical Engineering	2018 - 2023
Assistant Professor College of Electrical & Mechanical Engineering	2013 - 2018
Post Doc Research Fellow Impression Technology , 2/1 Skyline Pl, Frenchs Forest NSW 2086, Australia	2012 - 2013

Research Projects

National Projects

Assistive Feeding System	2022
Funding Agency: IGNITE	
Amount: PKR 61,635.00	
Status: Completed	
MIG Based Metal Additive Manufacturing System	2021
Funding Agency: IGNITE	
Amount: PKR 79,400.00	
Status: Completed	
Setup of EEG Signal Acquisition for BCI	2014
Funding Agency: NUST	
Amount: PKR 775,000.00	
Status: Completed	
CNC Hotwire Cutter	2019
Funding Agency: IGNITE	
Amount: PKR 74,000.00	
Status: Completed	
EMG Powered Active Ankle Lower Limb Prosthetic Foot	2016
Funding Agency: PSF	
Amount: PKR 2,991,660.00	
Status: Completed	
Establishment of National Center of Robotics and Automation (Robot Design and Development Lab - RDDDL)	2018
Funding Agency: HEC	
Amount: PKR 82,506,000.00	
Status: Approved_inprocess	
Development of Nano-Materials Based Tactile Sensors for Tele-Manipulation in Robotic Surgery	2021
Funding Agency: HEC and British Council	
Amount: PKR 43,055,271.00	
Status: Completed	
Human Interaction Robot With Medical Instrumentation	2021
Funding Agency: IGNITE	
Amount: PKR 81,837.00	
Status: Completed	
Electromyogram (EMG) Powered Active Ankle Lower Limb Prosthetic Foot	2016
Funding Agency: PSF	
Amount: PKR 2,610,996.00	
Status: Approved_inprocess	
Myo Prosthetic Upper Limb	2016
Funding Agency: IGNITE	
Amount: PKR 14,139,000.00	
Status: Completed	
Establishment of National Center of Robotics and Automation	2018
Funding Agency: HEC	
Amount: PKR 220,672,000.00	
Status: Approved_inprocess	
Smart Phone Based on-tree Mango Fruit Quantity and Quality Estimation using near Infrared Spectroscopy and Machine Vision	2018
Funding Agency: Pakistan Agricultural Research Council (PARC) ALP Sectt	
Amount: PKR 5,283,000.00	
Status: Completed	

International Projects

Research Articles

Design of a novel tri-axis ZnO nanowires based piezoelectric accelerometer <i>Muhammad sohaib Khan Hassan Elahi Muhammad Mubasher Saleem Masood Ur Rehman Muhammad Abdullah Tayyab Mohsin Islam Tiwana</i> <i>PLoS ONE</i> , Volume 20, Issue 3, Article Number e0318069 Impact Factor: 2.900 Quartile: 1 DOI: https://doi.org/10.1371/journal.pone.0318069	2025
Sensorized laparoscopic surgical grasper with integrated capacitive force sensor for robot-assisted minimally invasive surgery <i>Muhammad Ameer Usman Muhammad Rehan Taimoor Shabbir Mohsin Islam Tiwana Amir Hamza Muhammad Mubasher Saleem</i> <i>Sensor Review</i> , Volume 45, No. 2, Pages 236-247 Impact Factor: 1.600 Quartile: 3 DOI: https://doi.org/10.1108/SR-09-2024-0765	2025
Enhancing Ocular Precision: A Tactile Force Feedback-Enabled Handheld Cyclodialysis Spatula for Eye Surgery <i>Adeel Arshad Muhammad M. Saleem Hamid Jabbar Muhammad Osama Ali Mohsin Islam Tiwana Rebecca Cheung</i> <i>IEEE Sensors Journal</i> , Volume 25, No. 2, Article Number 3220-3229 Impact Factor: 4.300 Quartile: 1 DOI: https://doi.org/10.1109/JSEN.2024.3494875	2025
A high sensitivity, low cost and fully decoupled multi-axis capacitive tactile force sensor for robotic surgical systems <i>Sajid Hussain Muhammad Mubasher Saleem Muhammad Rehan Hassan Elahi Mohsin Islam Tiwana</i> <i>Plos One</i> , https://journals.plos.org/plosone/s/journal-information Impact Factor: 2.9 Quartile: 1 Citations: 2 DOI: doi.org/10.1371/journal.pone.0313737	2024
Two-dimensional hybrid incremental learning (2DHIL) framework for semantic segmentation of skin tissues <i>Muhammad Imran Muhammad Usman Akram Mohsin Islam Tiwana Anum Abdul Salam Danilo Greco</i> <i>Image and Vision Computing</i> , Volume 148, Article Number: 105098 Impact Factor: 4.7 Quartile: 1 Citations: 2 DOI: 10.1016/j.imavis.2024.105098	2024
Experimental Verification of Coupling Strength on the Mode-Localization in Single MEMS DETF Resonators and Its Application as a Force Sensor <i>Masood Ur Rehman Muhammad Mubasher Saleem Mohsin Islam Tiwana Rana Iqtidar Shakoor Shafaat Ahmed Bazaz Rebecca Cheung</i> <i>IEEE Transactions on Electron Devices</i> , Volume 71, Issue 7, Pages 4292-4299 Impact Factor: 2.900 Quartile: 2 Citations: 4 DOI: 10.1109/TED.2024.3405931	2024
Transformer-based framework for multi-class segmentation of skin cancer from histopathology images <i>Muhammad Imran Mohsin Islam Tiwana Mashood Mohammad Mohsan Norah Saleh Alghamdi Muhammad Usman Akram</i> <i>Frontiers in Medicine</i> , Volume 11, Article Number 1380405 Impact Factor: 3.100 Quartile: 1 Citations: 2 DOI: https://doi.org/10.3389/fmed.2024.1380405	2024
A high-resolution and low-cost mesoscale tactile force sensor based on mode-localization effect and fabricated using rapid prototyping <i>Masood Ur Rehman Muhammad Mubasher Saleem Mohsin Islam Tiwana Rana Iqtidar Shakoor Rebecca Cheung</i> <i>Sensors and Actuators A: Physical</i> , Volume:369, Article Number: 115140 Impact Factor: 4.6 Quartile: 1 Citations: 4 DOI: 10.1016/j.sna.2024.115140	2024
A novel framework for classification of two-class motor imagery EEG signals using logistic regression classification algorithm <i>Rabia Avais Khan Nasir Rashid Muhammad Shahzaib Umar Farooq Malik Arshia Arif Javaid Iqbal M Mubasher Saleem Umar Shahbaz Khan Mohsin Islam Tiwana</i> <i>PLOS ONE</i> , Volume 18(9), Article Number e0276133 Impact Factor: 3.7 Quartile: 2 Citations: 7 DOI: https://doi.org/10.1371/journal.pone.0276133	2023
A W-shaped convolutional network for robust crop and weed classification in agriculture <i>Syed Imran Moazzam Tahir Habib Nawaz Waqar Shahid Qureshi Umar Shahbaz Khan Mohsin Islam Tiwana</i> <i>Precision Agriculture</i> , Pages 1-17	2023

Impact Factor: 5.767 Quartile: 1 Citations: 13 DOI: https://doi.org/10.1007/s11119-023-10027-7	
A high sensitivity and multi-axis fringing electric field based capacitive tactile force sensor for robot assisted surgery <i>Adeel Irshad Dr. Muhammad Mubashir Saleem Dr. Mohsin Islam Tiwana Hamood Ur Rahman Sohail Iqbal Rebecca Cheung</i> <i>Sensors and Actuators A: Physical</i> , Volume 354, Article Number: 114272 Impact Factor: 4.291 Quartile: 1 Citations: 23 DOI: 10.1016/j.sna.2023.114272	2023
Towards sweetness classification of orange cultivars using short-wave NIR spectroscopy <i>Ayesha Zeb Waqar Shahid Qureshi Abdul Ghafoor Aman Ullah Malik Muhammad Imran Alina Mirza Mohsin Islam Tiwana Eisa Alanazi</i> <i>Scientific Reports</i> , Volume 13, Issue 1, Article Number 325 Impact Factor: 4.996 Quartile: 2 Citations: 17 DOI: https://doi.org/10.1038/s41598-022-27297-2	2023
Design and Characterization of Three-Axis High Range Inductive Tactile Force Sensor Utilizing Magnetorheological Elastomer for Robotic Surgical Applications <i>Muhammad Abdullah Khalid Muhammad Mubasher Saleem Syed Ali Raza Bukhari Mohsin Islam Tiwana Rana Iqtidar Shakoor Rebecca Cheung</i> <i>IEEE Sensors Journal</i> , Volume 23, Issue 1, Pages 247-255 Impact Factor: 4.325 Quartile: 1 Citations: 13 DOI: 10.1109/JSEN.2022.3222930	2023
Patch-wise weed coarse segmentation mask from aerial imagery of sesame crop <i>Syed Imran Moazzam Umar Shahbaz Khan Waqar Shahid Qureshi Mohsin Islam Tiwana Nasir Rashid Ameer Hamza Kunwar Faraz Ahmed Tahir Habib Nawaz</i> <i>Computers and electronics in agriculture</i> , Volume 203, Article Number 107458 Impact Factor: 6.757 Quartile: 1 Citations: 12 DOI: https://doi.org/10.1016/j.compag.2022.107458	2022
Analysis of Human Gait Cycle With Body Equilibrium Based on Leg Orientation <i>Muhammad Asif Muhammad A. Tayyab Muhammad H. Shahid Usama Arif Mohsin Islam Tiwana Umar Shahbaz Khan Waqar Shahid Qureshi</i> <i>IEEE Access</i> , Volume: 10, Page(s): 123177-123189 Impact Factor: 3.367 Quartile: 2 Citations: 5 DOI: 10.1109/ACCESS.2022.3222859	2022
Human gait recognition subject to different covariate factors in a multi-view environment <i>Muhammad Asif Mohsin Islam Tiwana Umar Shahbaz Khan Muhammad W Ahmed Waqar Shahid Qureshi Javaid Iqbal</i> <i>Results in Engineering</i> , Volume 15, Article Number 100556 Impact Factor: N/A Citations: 37 DOI: https://doi.org/10.1016/j.rineng.2022.100556	2022
A Soft Multi-Axis High Force Range Magnetic Tactile Sensor for Force Feedback in Robotic Surgical Systems <i>Muhammad Rehan Muhammad Mubasher Saleem Mohsin Islam Tiwana Rana Iqtidar Shakoor Rebecca Cheung</i> <i>Sensors</i> , Volume 22, Issue 9, Article Number 3500 Impact Factor: 3.576 Quartile: 1 Citations: 42 DOI: https://doi.org/10.3390/s22093500	2022
A novel approach of overtaking maneuvering using modified RG method <i>Usman Ghumman Hamid Jabbar Mohsin Islam Tiwana Kunwar Faraz Ihsan Ullah Khalil</i> <i>PLoS One</i> , Volume 17(1), Pages e0260455 Impact Factor: 3.240 Quartile: 2 Citations: 2 DOI: https://doi.org/10.1371/journal.pone.0260455	2022
3D Printable Thermoplastic Polyurethane Energy Efficient Passive Foot <i>Muhammad Hassaan Ahmed Asharib Jamshid Usman Amjad Aashir Azhar Muhammad Zawar ul Hassan Mohsin Islam Tiwana Waqar Shahid Qureshi Eisa Alanazi</i> <i>3D Printing and Additive Manufacturing</i> , Pages 1-10 Impact Factor: 5.449 Quartile: 2 Citations: 5 DOI: 10.1089/3dp.2021.0022	2022
A Patch-Image Based Classification Approach for Detection of Weeds in Sugar Beet Crop <i>Syed Imran Muazzam Umar Shahbaz Khan Waqar Shahid Qureshi Mohsin Islam Tiwana Nasir Rashid Waleed S. Alasmary Javaid Iqbal Ameer Hamza</i> <i>IEEE Access</i> , Volume 9, Pages 121698-121715	2021

Impact Factor: 3.476 Quartile: 2 Citations: 39 DOI: 10.1109/ACCESS.2021.3109015	
Analysis of visual features and classifiers for Fruit classification problem <i>Sumaira Gahzal Waqar Shahid Qureshi Umar Shahbaz Khan Javaid Iqbal Nasir Rashid Mohsin Islam Tiwana</i> <i>Computers and Electronics in Agriculture</i> , Volume 187, Article Number 106267 Impact Factor: 6.757 Quartile: 1 Citations: 64 DOI: https://doi.org/10.1016/j.compag.2021.106267	2021
Advancements, Trends and Future Prospects of Lower Limb Prosthesis <i>Muhammad Asif Mohsin Islam Tiwana Umar Shahbaz Khan Waqar Shahid Qureshi Javaid Iqbal Nasir Rashid Noman Naseer</i> <i>IEEE Access</i> , Volume 9, Pages 85956-85977 Impact Factor: 3.476 Quartile: 2 Citations: 56 DOI: 10.1109/ACCESS.2021.3086807	2021
Mango maturity classification instead of maturity index estimation: A new approach towards handheld NIR spectroscopy <i>Syed Sohaib Ali Shah Ayesha Zeb Waqar Shahid Amanullah Malik Mohsin Tiwana Kerry Walsh Muhammad Amin Waleed Alasmery Eisa Alanazai</i> <i>Infrared Physics and Technology</i> , Volume 115, Article Number 103639 Impact Factor: 2.997 Quartile: 2 Citations: 36 DOI: https://doi.org/10.1016/j.infrared.2021.103639	2021
Classification of Hand Movements Using MYO Armband on an Embedded Platform <i>Haider Ali Javaid Mohsin Islam Tiwana Ahmed Alsanad Javaid Iqbal Muhammad Tanveer Riaz Saeed Ahmed Faisal Abdulaziz Almisned</i> <i>Electronics</i> , Volume 10(11), Article Number 1322 Impact Factor: 2.690 Quartile: 3 Citations: 35 DOI: https://doi.org/10.3390/electronics10111322	2021
Identification of Tobacco Crop based on Machine Learning for a Precision Agricultural Sprayer <i>Muhammad Tufail Mohsin Islam Tiwana Muhammad Shahab Alam Zubair Ahmed Khan Muhammad Tahir Khan Muhammad Tufail Muhammad Shahab Alam</i> <i>Zubair Ahmed Khan Muhammad Tahir Khan Javaid Iqbal</i> <i>IEEE Access</i> , Volume 9, Pages 23814-23825 Impact Factor: 3.476 Quartile: 2 Citations: 48 DOI: 10.1109/ACCESS.2021.3056577	2021
Improving Classification Performance of Four Class FNIRS-BCI Using Mel Frequency Cepstral Coefficients (MFCC) <i>Umar Shahbaz Khan Ameer Hamza Umer Izhar Javaid Iqbal Nasir Rashid Waqar Shahid Qureshi Mohsin Islam Tiwana Muhammad Saad Bin Abdul Ghaffar</i> <i>Infrared Physics and Technology</i> , Volume 112, Article Number 103589 Impact Factor: 2.638 Quartile: 2 Citations: 32 DOI: https://doi.org/10.1016/j.infrared.2020.103589	2021
A Simulation Based Study for Managing Hospital Resources by Reducing Patient Waiting Time <i>mohsin islam tiwana Jawad Ahmad Javaid Iqbal Imran Ahmad Zubair Ahmad Khan Khalid Khan</i> <i>IEEE Access</i> , Volume 8, Pages 193523-193531 Impact Factor: 3.367 Quartile: 2 Citations: 14 DOI: DOI 10.1109/ACCESS.2020.3032760	2020
EEG Based Four Class Human Limb Movement Detection by Mel Frequency Cepstral Coefficients and Quadratic Multi-Class Support Vector Machine <i>Nasir Rashid Javaid Iqbal Umar Shahbaz Khan Mohsin Islam Tiwana Amir Hamza</i> <i>Journal of Engineering and Applied Sciences</i> , Volume 39, Issue 1, Pages 116-126 Impact Factor: - DOI: http://dx.doi.org/10.17582/journal.jeas/39.1.116.126	2020
Artificial Immune System - Negative Selection Classification Algorithm (NSCA) for Four Class Electroencephalogram (EEG) Signals <i>Nasir Rashid Javaid Iqbal Fahad Mahmood Anam Abid Umar Shahbaz Khan Mohsin I. Tiwana</i> <i>Frontiers in Human Neuroscience</i> , Volume: 12 Article Number: 439 Impact Factor: 2.870 Quartile: 2 Citations: 22 DOI: 10.3389/fnhum.2018.00439	2018
Design of Embedded System for Multivariate Classification of Finger and Thumb Movements Using EEG Signals for Control of Upper Limb Prosthesis <i>Amna Javed Mohsin Islam Tiwana Umar Shahbaz Khan Javaid Iqbal Nasir Rashid</i> <i>BioMed Research International</i> , Volume 2018, Article ID 2695106, 11 pages	2018

Impact Factor: 2.197 Quartile: 3 Citations: 16 DOI: 10.1155/2018/2695106	
Efficient FIR Filter Implementations for Multichannel BCIs Using Xilinx System Generator <i>Usman Ghani Muhammad Wasim Umar Shahbaz Khan Muhammad Mubasher Saleem Ali Hassan Nasir Rashid Mohsin Islam Tiwana Amir Hamza Amir Kashif</i> <i>BioMed Research International</i> , Volume 2018, Article ID 9861350, 9 pages Impact Factor: 2.197 Quartile: 3 Citations: 6 DOI: https://doi.org/10.1155/2018/9861350	2018
Self-organizing inter-cell interference coordination in 4G and beyond networks using genetic algorithms <i>Aasia Kashaf Moazzam Islam Tiwana Imran Usman Mohsin Islam Tiwana</i> <i>Automatika</i> , Volume 58, Issue 1, Pages 48-54 Impact Factor: 0.302 Quartile: 4 Citations: 8 DOI: 10.1080/00051144.2017.1337394	2017
Recognition of finger movements using EEG signals for control of upper limb prosthesis using logistic regression <i>Amna Javed Mohsin Tiwana Moazzam Islam Tiwana Nasir Rashid Javaid Iqbal Umar Shahbaz Khan</i> <i>Biomedical Research-India</i> , Volume 28, Issue 17, Pages 7361-7369 Impact Factor: - DOI: http://www.biomedres.info/biomedical-research/recognition-of-finger-movements-using-eeeg-signals-for-control-of-upper-limb-prosthesis-using-logistic-regression-8334.html	2017
Classification of EEG Signals for Wrist and Grip Movements using Echo State Network <i>Z.H. Khan Nasir Hussain Mohsin Islam Tiwana</i> <i>Biomedical Research</i> , Volume: 28, Issue: 3, Pages: 1095-1102 Impact Factor: N/A DOI: http://www.alliedacademies.org/articles/classification-of-eeeg-signals-for-wrist-and-grip-movements-using-echo-state-network.html	2017
Bio-inspired PVDF-based, mouse whisker mimicking, tactile sensor <i>Javaid Iqbal Mohsin Islam Tiwana Moazzam Islam Tiwana Stephen James Redmond Nigel Hamilton Lovell</i> <i>Applied Sciences</i> , Volume: 6 Issue: 10 Article Number: 297 Impact Factor: 1.679 Quartile: 3 Citations: 16 DOI: 10.3390/app6100297	2016
Temporal based EEG Signals Classification for Talocrural and Knee Joint Movements using Emotive Head Set <i>Anjum Naeem Malik Mohsin Islam Tiwana Javaid Iqbal</i> <i>Journal of Biomedical Engineering and Medical Imaging</i> , Volume 2, Issue no 6 Impact Factor: 0 DOI: 10.14738/jbemi.26.1730	2016
GA based sensing of sparse multipath channels with superimposed training sequence <i>Syed Junaid Nawaz Moazzam I. Tiwana Mohammad N. Patwary Noor M. Khan Mohsin I. Tiwana Abdul Haseeb</i> <i>Elektronika ir Elektrotechnika</i> , Volume: 22 Issue: 1 Pages: 87-91 Impact Factor: 0.859 Quartile: 4 Citations: 2 DOI: 10.5755/j01.eee.22.1.14114	2016
Spatial Temporal based Classification for Antebrachium and Carpus Movement of EEG Data Using Emotive Head set <i>Muhammad Ahsan Gul Javaid Iqbal Mohsin islam Tiwana</i> <i>Journal of Biomedical Engineering and Medical Imaging</i> , Volume 1, Issue 6, Pages 67-75 Impact Factor: - DOI: DOI:10.14738/jbemi.16.813	2015
A Novel Framework of Automated RRM for LTE SON Using Data Mining: Application to LTE Mobility <i>Moazzam Islam Tiwana</i> <i>Journal of Network and Systems Management</i> , Volume: 22 Issue: 2 Pages: 235-258 Special Issue: SI Impact Factor: 0.796 Quartile: 3 Citations: 5 DOI: 10.1007/s10922-013-9284-2	2014
Self-Organizing Networks: A Packet Scheduling Approach for Coverage/Capacity Optimization in 4G Networks Using Reinforcement Learning	2014

Conference Proceedings

Assistive Feeding System: Design and Evaluation <i>Usama Jahangir Wajid Ali Muhammad Fahad Amir Mohsin Islam Tiwana Hamid Jabbar</i> <i>2024 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI62391.2024.10894327	2024
Development and Evaluation of a Machine Learning Model for Cobot Action Prediction: Optimizing Algorithms Through Cognitive Workload Metrics <i>Dr.Yasir Ahmad Uzair Khaleeq Uz Zaman Afshan Naseem Mohsin Islam Tiwana Lala Rukh</i> <i>2024 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI62391.2024.10894663	2024
A Lightweight CNN for RGB-D Grasp Classification in Computer Vision-Based Prosthetic Hands <i>Umar Farooq Wajdan Ali Khan Ayesha Zeb Izna Awais Mohsin Islam Tiwana Muhammad Qasim Tariq</i> <i>6th International Conference on Robotics and Automation in Industry, res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI62391.2024.10894378	2024
A Soft Robotics Approach to Prosthetic Hands: Integrating 3D Printing Techniques and Embedded Vision <i>Wajdan Ali Khan Umar Farooq Ayesha Zeb Izna Awais Muhammad Qasim Tariq Mohsin Islam Tiwana</i> <i>6th International Conference on Robotics and Automation in Industry, res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI62391.2024.10894254	2024
MASA: Multi Agent Situational Awareness for Visually Impaired <i>Zaid Mahboob Salman Sadiq Umar Shahbaz Khan Ayesha Zeb Mohsin Islam Tiwana</i> <i>Proceedings of 2024 21st International Bhurban Conference on Applied Sciences and Technology, IBCAST 2024, res.country(177,)</i> Citations: N/A DOI: 10.1109/IBCAST61650.2024.10877205	2024
Computation of Human Body Equilibrium for Leg Based on Gait Cycle <i>Muhammad Asif Muhammad Abdullah Tayyab Muhammad Hammad Shahid Muhammad Naeem Zafar Konain Haider Bhatti Syed Arsalan Ali Murtaza Kazmi</i> <i>Mohsin Islam Tiwana</i> <i>2021 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI54018.2021.9651391	2021
Lower Limb Prosthesis Gait Cycle Prediction Analysis Using Gyroscope and Load Cell <i>Syed Sohaib Ali Shah Syed Irfan Shah Muhammad Adnan Khalil Umar Shahbaz Khan Mohsin Islam Tiwana</i> <i>2021 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI54018.2021.9651371	2021
Towards Facial Recognition Problem in Covid-19 Pandemic <i>Waqar Shahid Qureshi Imran Mundiylal Muhammad Sohaib ul Hassan Mohsin Islam Tiwana Eisa Alanzi</i> <i>2020 4rd International Conference on Electrical, Telecommunication and Computer Engineering (ELTICOM), res.country(100,)</i> Citations: N/A DOI: 10.1109/ELTICOM50775.2020.9230504	2020
Improved Classification Accuracy of Four Class FNIRS-BCI <i>Muhammad Saad Bin Abdul Ghaffar Noman Naseer Umar Shahbaz Khan Nasir Rashid Mohsin Islam Tiwana</i> <i>12th International Conference on Electronics, Computers and Artificial Intelligence (ECAI), res.country(188,)</i> Citations: N/A DOI: 10.1109/ECAI50035.2020.9223258	2020

Development of NI my-RIO Based Control Module for Versatile Terrain Autonomous Mobility Platform (VTAMP) <i>Abubakar Siddique Abdullah Afridi Qazi Umer Jamil Dr Mohsin Islam Tiwana Hashim Akram Muhammad Umar Masood Dr Nasir Rashid Dr Javaid Iqbal</i> <i>2019 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI47710.2019.8967352	2019
A Review of Application of Deep Learning for Weeds and Crops Classification in Agriculture <i>Umar Shahbaz Khan Mohsin Islam Tiwana Javaid Iqbal Waqar Shahid Qureshi Syed I. Moazzam Syed Irfan Shah</i> <i>3rd IEEE International Conference on Robotics and Automation in Industry, res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI47710.2019.8967350	2019
Control of Ankle Angles During Gait Cycle for Lower Limb Prosthesis <i>Umar Shahbaz Khan Muneeb Masood Raja Mohsin Islam Tiwana Amir Hamza Muhammad Adnan Khalil Abdul Hanan</i> <i>3rd IEEE International Conference on Robotics and Automation in Industry, res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI47710.2019.8967363	2019
Detection and Classification of Hard Exudates with Fundus Images Complements and Neural Networks <i>Muhammad Altaf Hussain Syed Osama Bin Islam MI Tiwana Ubaid-ur-Rehman W. S. Qureshi</i> <i>2019 5th International Conference on Control, Automation and Robotics (ICCAR), res.country(48,)</i> Citations: N/A DOI: 10.1109/ICCAR.2019.8813469	2019
Signal Conditioning and Processing of Motionlabs Pre-Amplifier EMG Sensor <i>Saad Bin Ubaid Ahmad Shoaib M Tahir Waseem Malik Umair Dr. Mohsin Tiwana</i> <i>2nd International Conference on BioSignal Analysis, Processing and Systems (ICBAPS), res.country(157,)</i> Citations: N/A DOI: 10.1109/icbaps.2018.8527389	2018
Comparative Analysis of EMG Signal Features in Time-domain and Frequency-domain using MYO Gesture Control <i>Haider Ali Javaid Nasir Rashid Mohsin Islam Tiwana Muhammad Waseem Anwar</i> <i>4th International Conference on Mechatronics and Robotics Engineering held from 07-11 Feb 2018 in France, res.country(75,)</i> Citations: N/A DOI: 10.1145/3191477.3191481	2018
Design and Development of Non-invasive Prototype to Measure Pulse Rate, Blood Glucose and Oxygen Saturation Level in Arterial Blood <i>Nazo Haroon Mohsin Islam Tiwana</i> <i>2nd IEEE Future Technologies Conference, res.country(38,)</i> Citations: N/A DOI: https://saiconference.com/Downloads/FTC2017/Proceedings/30_Paper_410-Design_and_Development_of_Non-Invasive_Prototype.pdf	2017
Object tracking with a robotic manipulator mounted on ground vehicle using Image Based Visual Servoing <i>Muhammad Ahsan Sami Muhammad Umar Masood Muhammad Waqar Muhammad Mujtaba Abraham Ali Shah Adnan Shujah Nasir Rashid Mohsin I. Tiwana Javaid Iqbal</i> <i>17th International Conference on Control, Automation and Systems (ICCAS), res.country(121,)</i> Citations: N/A DOI: 10.23919/ICCAS.2017.8204442	2017
Design and development of a semi-autonomous stair climbing robotic platform for rough terrains <i>Nasir Rashid Muhammad Umar Masood Muhammad Ahsan Sami Haris Sohail Muhammad Mujtaba Muhammad Abubakar Siddique Hashir Akram Nasir Rashid Mohsin I. Tiwana Javaid Iqbal</i> <i>17th International Conference on Control, Automation and Systems (ICCAS), res.country(121,)</i> Citations: N/A DOI: 10.23919/ICCAS.2017.8204443	2017
EEG signals classification and determination of optimal feature-classifier combination for predicting the movement intent of lower limb <i>Anjum Naeem Malik Javaid Iqbal Mohsin Islam Tiwana</i> <i>2016 2nd International Conference on Robotics and Artificial Intelligence (ICRAI), res.country(177,)</i> Citations: N/A	2016

DOI: 10.1109/ICRAI.2016.7791226	
Design of a novel Simulink model for surface electromyographic (SEMG) sensor design for prosthesis control <i>Javaid Iqbal Mohsin Islam Tiwana Afzaal Ahmad Nasir Rashid Asad Ullah Awan</i> 2015 IEEE Student Symposium in Biomedical Engineering & Sciences (ISSBES), res.country(157,) Citations: N/A DOI: 10.1109/ISSBES.2015.7435917	2015
Actuator Design for Robotic Powered and Ankle-Foot Prosthesis <i>Muhammad Hannan Ahmed Fawaz Wahid Ahsan Ali Nigel H Lovell Mohsin Islam Tiwana Javaid Iqbal</i> 4th International Symposium on Bioelectronics and Bioinformatics held from 14-17 Oct 2015 in China, res.country(48,) Citations: N/A DOI: -	2015
Inverse Kinematics Control of Redundant Planar Manipulator with Joint Using Numerical Method <i>Mohsin Islam Tiwana Nasir Rashid Javaid Iqbal Raabid Hussain Asim Qureshi Rasheeq A. Mughal Raafay Ijaz</i> 2015 15th International Conference on Control, Automation and Systems (ICCAS), res.country(121,) Citations: N/A DOI: 10.1109/ICCAS.2015.7364731	2015
Development of FPGA-based System for Control of an Unmanned Ground Vehicle with 5-DOF Robotic Arm <i>Nasir Rashid Mohsin islam tiwana Javaid Iqbal Muhammad Umar Masood Abdullah Afaq Mohammad Ahmed Ahmed Kama1 Muhammad Shahzaib Asadullah Awan</i> 2015 15th International Conference on Control, Automation and Systems (ICCAS), res.country(121,) Citations: N/A DOI: 10.1109/ICCAS.2015.7365015	2015
Inverse Kinematics Control of Redundant Planar Manipulator with Joint Constraints using Numerical Method <i>Raabid Hussain Asim Qureshi Rasheeq A Raabid Hussain Asim Qureshi Rasheeq A Nasir Rashid Mohsin Islam Tiwana Javaid Iqbal</i> 15th International Conference on Control, Automaton and Systems held from 13-16 Oct 2015 in Korea , res.country(121,) Citations: N/A DOI: https://ieeexplore.ieee.org/document/7364731	2015
Stair Case Perception Using MonoScopic Vision for a Teleoperated vehicle <i>Nasir Rashid Javaid Iqbal Mohsin Islam Tiwana Asim Qureshi Raabid Hussain Rasheeq Ali Raafay Ijaz</i> 2015 Signal Processing: Algorithms, Architectures, Arrangements, and Applications (SPA), res.country(178,) Citations: N/A DOI: 10.1109/SPA.2015.7365155	2015
Development of a Low-Cost Anthropomorphic Manipulator for Commercial Usage <i>Mohsin Islam Tiwana Javaid Iqbal Nasir Rashid Razeen Hussain Mustafa A. Shahid Jibran A. Khan</i> 2015 International Symposium on Innovations in Intelligent SysTems and Applications (INISTA), res.country(68,) Citations: N/A DOI: 10.1109/INISTA.2015.7276750	2015
Articulated design architecture and open-loop command and control system for a tele-operated Versatile Terrain Mobility Platform <i>Raabid Hussain Raafay Ijaz Rasheeq Ali Nasir Rashid Mohsin Islam Tiwana Javaid Iqbal</i> International Symposium on Innovations in Intelligent SysTems and Applications held from 2-4 Sep 2015 in Madrid, Spain, res.country(68,) Citations: N/A DOI: -	2015
Automated Segmentation of Optic Disc Boundary and Diameter Calculation using Fundus Imagery <i>Salman Muhammad Nigel H Lovell Mohsin Islam Tiwana Javaid Iqbal</i> 2015 Seventh International Conference on Computational Intelligence, Modelling and Simulation, res.country(157,) Citations: N/A DOI: -	2015
Design and Fabrication of Data Acquisition Glove and its Evaluation as a Goniometric Device <i>Saad Islam Mohsin Islam Tiwana Javaid Iqbal Umer ansari</i> 6th WSEAS International Conference on Applied Informatics and Communications (AIC 2006) held from 18-20 Aug 2006 in Greece res.country(88,) Citations: N/A	2006

DOI: -

Editorial Activities

Reviewed Papers for Journals	2022
Impact Factor: 0	
Reviewed Papers for Journals	2022
Impact Factor: 0	
Reviewed Papers for Journals	2022
Impact Factor: 0	
Reviewed Papers for Journals	2022
Impact Factor: 0	
Reviewed Papers for Journals	2022
Impact Factor: 0	

Intellectual Property

Copyrights	
Sole	2020
Status: Filed	
Sole	2020
Status: Filed	
Patents	
An Adaptive AI enabled System for Navigation of Visually Impaired Persons	2024
Status: Filed	
Optical Detection & Segmentation of Tobacco Impurity	2020
Status: Filed	
Optical Detection & Segmentation of Tobacco Impurity	2020
Status: Filed	
Under Actuated Uni Motor Device Mechanism For Adaptive Grasp Upper Limb	2016
Status: Filed	
Torque Asjustable Coupling for Hand Prosthesis	2016
Status: Filed	
Under Actuated Uni Motor Device mechanism for adaptive grasp Upper Limb	2016
Status: Filed	
Torque adjustable coupling for hand prosthesis	2016
Status: Filed	
Industrial Designs	
Casing of Transmission Control Module	2024
Status: Filed	
Casing of Gyrocompass - A Night Navigation Device	2024
Status: Filed	
PCB of Gyrocompass - A Night Navigation Device	2024
Status: Filed	
Printed Circuit Board of Multi Degree of Freedom Prosthesis	2024
Status: Filed	
Multi-DOF upper limb prosthetic	2024

Status: Filed	
Multi-Camera Digital Hand-Held Otoscope	2023
Status: Filed	
Hand Held Digital Otoscope (Class-03)	2023
Status: Licensed Filed	
Hand Held Digital Otoscope	2023
Status: Filed	
Storage Case for Automatic Bore and Pipeline Cleaning Robot	2023
Status: Filed	
Automatic Bore and Pipeline Cleaning Robot	2023
Status: Filed	
Circuit Board for Myobionic Prosthetic Gripper (Class-01)	2022
Status: Filed	
Roller Mechanism StairLift (Class-01)	2020
Status: Filed	
Gripper Mechanism StairLift (Class-01)	2020
Status: Filed	
Roller Mechanism StairLift (Class-1)	2020
Status: Filed	
Gripper Mechanism StairLift (Class-1)	2020
Status: Filed	
1 DoF (Degree of Freedom) upper limb Prosthetic gripper	2019
Status: Filed	
1 DoF (Degree of Freedom) upper limb prosthetic gripper	2019
Status: Filed	
Solenoid in Electro-Pneumatic Recoil Mechanism	2019
Status: Filed	
Multipurpose Shop Set for repair Echelons of EME	2019
Status: Filed	
Multipurpose Shop Set for repair Echelons of EME	2019
Status: Filed	
Solenoid in Electro-Pneumatic Recoil Mechanism	2019
Status: Filed	
Eight-bar parallel manipulator Synthesis and control for motion tracking through visual servoing	2019
Status: Granted	
Active IR Marker Cashing	2018
Status: Granted	
Integrated and Low Profile Foldable Staircase for Military & Commercial vehicles	2018
Status: Granted	
Window Design with Ventilation and Night Mode	2018
Status: Granted	
Dorsiflexion Control Mechanism	2018
Status: Filed	
Active IR Marker Casing	2018
Status: Granted Filed	
Dorsiflexion Control Mechanism	2018
Status: Filed	
MIL-S3 Metal Sheet Corrugation for Military and Industrial Applications	2018
Status: Filed	

