

Umar Shahbaz Khan

Professor

College of Electrical & Mechanical Engineering

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About

Dr. Umar Shahbaz Khan is working as Professor in the College of Electrical & Mechanical Engineering. Dr. Umar Shahbaz Khan has a PhD in Electrical And Electronics Engineering (Image Processing, Embedded Systems). Dr. Umar Shahbaz Khan has published 106 research articles & conference papers having a citation count of 804, carried out 9 projects and filed 19 intellectual property.

Qualifications

PhD in Electrical And Electronics Engineering (Image Processing, Embedded Systems) University of Liverpool , United Kingdom	2007 - 2010
MPhil in Ground Penetrating Radar Data Processing University of Liverpool , United Kingdom	2006 - 2007
BE in Mechatronics Engineering NUST, Islamabad , Pakistan	2001 - 2005

Experience

Professor College of Electrical & Mechanical Engineering	2023- Present
Associate Professor College of Electrical & Mechanical Engineering	2021 - 2023
Assistant Professor College of Electrical & Mechanical Engineering	2016 - 2021
Assistant Professor College of Electrical & Mechanical Engineering	2012 - 2016
Assistant Professor College of Electrical & Mechanical Engineering	2011 - 2012
Project Director National Centre of Robotics and Automation , NUST College of E&ME, Peshawar Road, Rawalpindi	2018 - 2022

Professional Memberships

PEC

Research Projects

National Projects

SceneScribe - AI Enabled Intelligent Glasses for Assistance of Visually Impaired'	2025
Funding Agency: IGNITE	
Amount: PKR 89,429.00	
Status: Completed	
Multi-DOF Upper Limb Prosthetic Hand	2023
Funding Agency: MINISTRY OF PLANNING, DEVELOPMENT & SPECIAL INITIATIVES	
Amount: PKR 19,628,300.00	
Status: Approved_inprocess	
Development and Production of an AGILE Quadruped Robot	
Funding Agency: HEC	
Amount: PKR 14,680,000.00	
Status: Approved_inprocess	
Dynamic Obstacle Avoidance Using Mobile Robots	2021
Funding Agency: IGNITE	
Amount: PKR N/A	
Status: Completed	
Greenhouse Automation System	2020
Funding Agency: IGNITE	
Amount: PKR 60,000.00	
Status: Completed	
Electromygram (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	
Design and Development of a Multipurpose Agribot for Smart Farming	2019
Funding Agency: PSF	
Amount: PKR 4,501,300.00	
Status: Completed	
Establishment of National Center of Robotics and Automation	2018
Funding Agency: HEC	
Amount: PKR 220,672,000.00	
Status: Approved_inprocess	

International Projects

Research Articles

An optimized Impulse Factor-based VMD-EMD approach to improve SSVEP accuracy for BCI Systems	2025
Umar Shahbaz Khan Tahir Habib Nawaz Ayesha Zeb Adeel Wahab Syed Tayyab Hussain Shah U. Izhar	
Results in Engineering , Volume:25, Article Number:104203, Pages:14	
Impact Factor: 6 Quartile: 1 Citations: 4	
DOI: https://doi.org/10.1016/j.rineng.2025.104203	
Using SegFormer for Effective Semantic Cell Segmentation for Fault Detection in Photovoltaic Arrays	2025
Zaid Mahboob M. Adil Khan Ehtisham Lodhi Tahir Habib Nawaz Umar Shahbaz Khan	
IEEE Journal of Photovoltaics, Volume: 15, Issue: 2, Pages: 320-331	
Impact Factor: 2.500 Quartile: 2 Citations: 3	
DOI: https://doi.org/10.1109/JPHOTOV.2024.3450009	
Mental Fatigue Classification Aided by Machine Learning-Driven Model under the Influence of Foot and Auditory Binaural Beats Brain Massage Via fNIRS	2024
Umar Shahbaz Khan Nazo Haroon Taikyeong Ted. Jeong Noman Naseer Hamid Jabbar	

IEEE Access , Volume 12, Pages 187160-187191	
Impact Factor: 3.400 Quartile: 2	
DOI: 10.1109/ACCESS.2024.3508875	
Precision Segmentation and Binary Masking of Skin Lesions in Automated Dermatological Diagnostics using Detectron2	2024
Hassan Elahi Umar Shahbaz Khan 00000386764-Haseeb Amjad 00000376140-Nija Asif Hassan Akbar Ali R. Ansari Raheel Nawaz	
IEEE Access , Volume: 12, Page(s): 87696-187708	
Impact Factor: 3.4 Quartile: 2 Citations: 1	
DOI: https://doi.org/10.1109/ACCESS.2024.3514865	
Tracking Control and Backlash Compensation in an Inverted Pendulum with Switched-Mode PID Controllers	2024
Aisha Akbar Awan Umar Shahbaz Khan Asad Ullah Awan Amir Hamza	
Applied Sciences-Basel , Volume:14, Issue: 22, Article Number: 10265, Pages:15	
Impact Factor: 2.500 Quartile: 1 Citations: 2	
DOI: https://doi.org/10.3390/app142210265	
Compensation of Backlash for High Precision Tracking Control of Inverted Pendulum by Drive-Anti Drive Mechanisms	2024
Umar Shahbaz Khan Aisha Akbar Awan	
Engineering Proceedings , Volume 75(1), Article Number 32	
Impact Factor: N/A	
DOI: https://doi.org/10.3390/engproc2024075032	
Improved Accuracy for Subject-Dependent and Subject-Independent Deep Learning-based SSVEP BCI Classification: A User-Friendly Approach	2024
Adeel Wahab Umar Shahbaz Khan Tahir Habib Nawaz Hassan Akbar Syed Tayyab Hussain Shah Azfar Khalid Ali. R. Ansari Raheel Nawaz	
IEEE Access , Volume 12, Pages 115935-115950	
Impact Factor: 3.400 Quartile: 2 Citations: 3	
DOI: 10.1109/ACCESS.2024.3442235	
Enhancing Classification Accuracy of fNIRS-BCI for Gait Rehabilitation	2024
Hamza Shabbir Minhas Hammad Nazeer Noman Naseer Umar Shahbaz Khan Ali R. Ansari Raheel Nawaz	
IEEE Access , Volume 12, Pages 117944-117954	
Impact Factor: 3.400 Quartile: 2 Citations: 5	
DOI: 10.1109/ACCESS.2024.3443066	
Emotion Fusion-Sense (Emo Fu-Sense) – A novel multimodal emotion classification technique	2024
Muhammad Umair Nasir Rashid Umar Shahbaz Khan Amir Hamza Javaid Iqbal	
Biomedical Signal Processing and Control, Volume 94, Article Number: 106224	
Impact Factor: 4.9 Quartile: 1	
DOI: 10.1016/j.bspc.2024.1062	
Aerial imagery-based tobacco plant counting framework for efficient crop emergence estimation	2024
Ramsha Shahid Waqar Shahid Qureshi Umar Shahbaz Khan Arslan Munir Ayesha Zeb Syed Imran Moazzam	
Computers and electronics in agriculture, Volume 217, Article Number: 108557	
Impact Factor: 7.7 Quartile: 1 Citations: 17	
DOI: 10.1016/j.compag.2023.108557	
Z-Number-Based Fuzzy Logic Approach for Mobile Robot Navigation	2023
Osama Ali Khan Kunwar Faraz Ahmed Khan Umar Shahbaz Khan Hamid Jabbar	
IEEE Access , Volume 11, Pages 131979-131997	
Impact Factor: 3.9 Quartile: 2 Citations: 1	
DOI: 10.1109/ACCESS.2023.3336014	
A novel framework for classification of two-class motor imagery EEG signals using logistic regression classification algorithm	2023
Rabia Avais Khan Nasir Rashid Muhammad Shahzaib Umar Farooq Malik Arshia Arif Javaid Iqbal M Mubasher Saleem Umar Shahbaz Khan Mohsin Islam Tiwana	
PLOS ONE , Volume 18(9), Article Number e0276133	
Impact Factor: 3.7 Quartile: 2 Citations: 7	
DOI: https://doi.org/10.1371/journal.pone.0276133	

Body-Pose-Guided Action Recognition with Convolutional Long Short-Term Memory (LSTM) in Aerial Videos <i>Sohaib Mustafa Saeed Hassan Akbar Tahir Habib Nawaz Hassan Elahi Umar Shahbaz Khan</i> <i>Applied Sciences</i> , Volume 13, Issue 16, Article Number 9384 Impact Factor: 2.7 Quartile: 2 Citations: 7 DOI: https://doi.org/10.3390/app13169384	2023
Towards automated weed detection through two-stage semantic segmentation of tobacco and weed pixels in aerial Imagery <i>Syed Imran Moazzam Umar Shahbaz Khan Waqar Shahid Qureshi Tahir Habib Nawaz Kunwar Faraz Ahmed Khan</i> <i>Smart Agricultural Technology</i> , Volume 4, Article Number 100142 Impact Factor: N/A Citations: 35 DOI: https://doi.org/10.1016/j.atech.2022.100142	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 Impact Factor: 5.767 Quartile: 1 Citations: 13 DOI: https://doi.org/10.1007/s11119-023-10027-7	2023
Deep Learning Based Multiresponse Optimization Methodology for Dual-Axis MEMS Accelerometer <i>Fahad ul Hassan Asif Mattoo Tahir Habib Nawaz Muhammad Mubasher Saleem Umar Shahbaz Khan Amir Hamza</i> <i>Micromachines</i> , Volume 14, Issue 4, Article Number 817 Impact Factor: 3.523 Quartile: 2 Citations: 2 DOI: https://doi.org/10.3390/mi14040817	2023
Multi-criteria Handoff Decision making Algorithm for Seamless Mobility in Heterogenous Wireless Networks <i>Muhammad Wajid Khan Umar Shahbaz Khan Muhammad Mubasher Saleem Nasir Rashid</i> <i>Journal of Communications</i> , Volume 18, Issue 3, Pages 164-171 Impact Factor: N/A Citations: 4 DOI: 10.12720/jcm.18.3.164-171	2023
IoT-Based Non-Intrusive Automated Driver Drowsiness Monitoring Framework for Logistics and Public Transport Applications to Enhance Road Safety <i>Muhammad Adil Khan Tahir Habib Nawaz Umar Shahbaz Khan Amir Hamza Nasir Rashid</i> <i>IEEE Access</i> , Volume 11, Pages 14385-14397 Impact Factor: 3.476 Quartile: 2 Citations: 44 DOI: https://doi.org/10.1109/ACCESS.2023.3244008	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
LASSO Homotopy-Based Sparse Representation Classification for fNIRS-BCI <i>Asma Gulraiz Noman Naseer Hammad Nazeer Muhammad Jawad Khan Rayyan Azam Khan Umar Shahbaz Khan</i> <i>Sensors</i> , Volume 22(7), Article Number 2575 Impact Factor: 3.576 Quartile: 1 Citations: 12 DOI: https://doi.org/10.3390/s22072575	2022

- Analyzing Classification Performance of fNIRS-BCI for Gait Rehabilitation Using Deep Neural Networks** 2022
Huma Hamid Noman Naseer Hammad Nazeer Muhammad Jawad Khan Rayyan Azam Khan Umar Shahbaz Khan
Sensors , Volume 22(5), Article Number 1932
Impact Factor: 3.576 | **Quartile:** 2 | **Citations:** 41
DOI: <https://doi.org/10.3390/s22051932>
- A new method for pixel classification for rice variety identification using spectral and time series data from Sentinel-2 satellite imagery** 2022
Usman Rauf Waqar Shahid Qureshi Hamid Jabbar Ayesha Zeb Alina Mirza Eisa Alanazi Umar Shahbaz Khan Nasir Rashid
Computers and electronics in agriculture , Volume 193, Article Number 106731
Impact Factor: 5.565 | **Quartile:** 1 | **Citations:** 16
DOI: <https://doi.org/10.1016/j.compag.2022.106731>
- A death, infection, and recovery (DIR) model to forecast the COVID-19 spread** 2022
Fazila Shams Assad Abbas Wasiaq Khan Umar Shahbaz Khan Raheel Nawaz
Computer Methods and Programs in Biomedicine Update , Volume 2, Article Number 100047
Impact Factor: N/A | **Citations:** 2
DOI: <https://doi.org/10.1016/j.cmpbup.2021.100047>
- A Patch-Image Based Classification Approach for Detection of Weeds in Sugar Beet Crop** 2021
Syed Imran Muazzam Umar Shahbaz Khan Waqar Shahid Qureshi Mohsin Islam Tiwana Nasir Rashid Waleed S. Alasmay Javaid Iqbal Ameer Hamza
IEEE Access , Volume 9, Pages 121698-121715
Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 39
DOI: [10.1109/ACCESS.2021.3109015](https://doi.org/10.1109/ACCESS.2021.3109015)
- Enhancing Classification Accuracy of Transhumeral Prosthesis: A Hybrid sEMG and fNIRS approach** 2021
Neelum Yousaf Sattar Zareena Kausar Syed Ali Usama Noman Naseer Umer Farooq Ahmed Abdullah Syed Zahid Hussain Umar Shahbaz Khan Haroon Khan Peyman Mirtaheri
IEEE Access , Volume 9, Pages 113246-113257
Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 15
DOI: [10.1109/ACCESS.2021.3099973](https://doi.org/10.1109/ACCESS.2021.3099973)
- Analysis of visual features and classifiers for Fruit classification problem** 2021
Sumaira Gahzal Waqar Shahid Qureshi Umar Shahbaz Khan Javaid Iqbal Nasir Rashid Mohsin Islam Tiwana
Computers and Electronics in Agriculture , Volume 187, Article Number 106267
Impact Factor: 6.757 | **Quartile:** 1 | **Citations:** 64
DOI: <https://doi.org/10.1016/j.compag.2021.106267>
- EMG Based Control of Transhumeral Prosthesis Using Machine Learning Algorithms** 2021
Neelum Yousaf Sattar Zareena Kausar Syed Ali Usama Umer Farooq Umar Shahbaz Khan
International Journal of Control Automation and Systems , Pages 1-11
Impact Factor: 2.964 | **Quartile:** 2 | **Citations:** 26
DOI: <https://doi.org/10.1007/s12555-019-1058-5>
- Advancements, Trends and Future Prospects of Lower Limb Prosthesis** 2021
Muhammad Asif Mohsin Islam Tiwana Umar Shahbaz Khan Waqar Shahid Qureshi Javaid Iqbal Nasir Rashid Noman Naseer
IEEE Access , Volume 9, Pages 85956-85977
Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 56
DOI: [10.1109/ACCESS.2021.3086807](https://doi.org/10.1109/ACCESS.2021.3086807)
- Energy Storage for Energy Security and Reliability through Renewable Energy Technologies: A New Paradigm for Energy Policies in Turkey and Pakistan** 2021
Umar Shahbaz Khan Riaz Uddin Hashim Raza Khan Asad Arfeen Muhammad Ayaz Shirazi Athar Rashid
Sustainability , Volume 13(5), Article Number 2823
Impact Factor: 3.889 | **Quartile:** 2 | **Citations:** 12
DOI: <https://doi.org/10.3390/su13052823>
- Improving Classification Performance of Four Class FNIRS-BCI Using Mel Frequency Cepstral Coefficients (MFCC)** 2021
Umar Shahbaz Khan Ameer Hamza Umer Izhar Javaid Iqbal Nasir Rashid Waqar Shahid Qureshi Mohsin Islam Tiwana Muhammad Saad Bin Abdul Ghaffar
Infrared Physics and Technology , Volume 112, Article Number 103589
Impact Factor: 2.638 | **Quartile:** 2 | **Citations:** 32
DOI: <https://doi.org/10.1016/j.infrared.2020.103589>

Enhancing Classification Performance of fNIRS-BCI by Identifying Cortically Active Channels Using the z-Score Method <i>Umar Shahbaz Khan Hammad Nazeer Noman Naseer Aakif Mehboob Muhammad Jawad Khan Rayyan Azam Khan Yasar Ayaz</i> <i>Sensors</i> , Volume 20(23), Article Number 6995 Impact Factor: 3.576 Quartile: 1 Citations: 26 DOI: https://doi.org/10.3390/s20236995	2020
Enhancing classification accuracy of fNIRS-BCI using features acquired from vector-based phase analysis <i>Umar Shahbaz Khan Hammad Nazeer Noman Naseer Rayyan Azam Khan Farzan Majeed Noori Nauman Khalid Qureshi Muhammad Jawad Khan</i> <i>Journal of Neural Engineering</i> , Volume 17, Article Number 056025 Impact Factor: 5.379 Quartile: 1 Citations: 49 DOI: https://doi.org/10.1088/1741-2552/abb417	2020
Microfabrication Process-Driven Design, FEM Analysis and System Modeling of 3-DoF Drive Mode and 2-DoF Sense Mode Thermally Stable Non-Resonant MEMS Gyroscope <i>Umar Shahbaz Khan Ameer Hamza Javaid Iqbal Syed Ali Raza Bukhari Muhammad Mubasher Saleem Rana Iqtidar Shakoor</i> <i>Micromachines</i> , Volume 11, Issue 09, Article Number 862 Impact Factor: 2.891 Quartile: 2 Citations: 18 DOI: https://doi.org/10.3390/mi11090862	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
Human Activity Recognition using 2D Skeleton Data and Supervised Machine Learning <i>Umar Shahbaz Khan Javaid Iqbal Nasir Rashid Muhammad Mubasher Saleem Sumaira Ghazal</i> <i>IET Image Processing</i> , Volume: 13, Issue: 13, Pages: 2572-2578 Impact Factor: 1.995 Quartile: 3 Citations: 40 DOI: 10.1049/iet-ipr.2019.0030	2019
Design, closed-form modeling and analysis of SU-8 based electrothermal microgripper for biomedical applications <i>Muhammad Mubasher Saleem Umar Shahbaz Khan Amir Hamza Muhammad Umar Masood</i> <i>Microsystem Technologies</i> , Volume 25, pages 1171–1184 Impact Factor: 1.737 Quartile: 3 Citations: 18 DOI: 10.1007/s00542-018-4059-z	2019
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 and Analysis of a High-Gain and Robust Multi-DOF Electro-thermally Actuated MEMS Gyroscope <i>Muhammad Saqib Muhammad Mubasher Saleem Naveed Mazhar Saif Ullah Awan Umar Shahbaz Khan</i> <i>Micromachines</i> , Volume 9, Issue 11, Article Number 577 Impact Factor: 2.426 Quartile: 2 Citations: 22 DOI: 10.3390/mi9110577	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 Impact Factor: 2.197 Quartile: 3 Citations: 16 DOI: 10.1155/2018/2695106	2018
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>	2018

Recognition of finger movements using EEG signals for control of upper limb prosthesis using logistic regression 2017

Amna Javed Mohsin Tiwana Moazzam Islam Tiwana Nasir Rashid Javaid Iqbal Umar Shahbaz Khan

Biomedical Research-India , Volume 28, Issue 17, Pages 7361-7369

Impact Factor: -

DOI: <http://www.biomedres.info/biomedical-research/recognition-of-finger-movements-using-ee-g-signals-for-control-of-upper-limb-prosthesis-using-logistic-regression-8334.html>

Multi-Response Optimization of Electrothermal Micromirror Using Desirability Function-Based Response Surface Methodology 2017

Muhammad Mubasher Saleem Umar Farooq Umer Izhar Umar Shahbaz Khan

Micromachines , Volume: 8 Issue: 4 Article Number: 107

Impact Factor: 3.523 | Quartile: 2 | Citations: 8

DOI: [10.3390/mi8040107](https://doi.org/10.3390/mi8040107)

A Multipurpose Vehicle Tracking System Based on ARM CORTEX-M3 STM32, HMC5883L, MPU-6050, GSM and GPS 2016

javaid iqbal Umar Shahbaz Khan Muhammad Husnain Ul Abdeen

Journal of Traffic and Logistics Engineering, Volume 4, Issue 1, Pages 7-12

Impact Factor: 0

DOI: [10.18178/jtle.4.1.7-12](https://doi.org/10.18178/jtle.4.1.7-12)

Design, Simulation and Optimization of electrothermal Micro Actuator 2012

Raja Amer Azim Abid Ali Umar Shahbaz Khan A.A. Syed Umer Izhar

Applied Mechanics and Materials , Volumes 229-231, Pages 1939-1943

Impact Factor: 0 | Citations: 3

DOI: <https://doi.org/10.4028/www.scientific.net/AMM.229-231.1939>

Detection of Landmines and Underground Utilities From Acoustic and GPR Images With A Cepstral Approach 2010

Umar Shahbaz Khan Waleed Al-Nuaimy Fathi E. Abd El-Samie

JOURNAL OF VISUAL COMMUNICATION AND IMAGE REPRESENTATION, Volume: 21, Issue: 7, Pages: 731-740

Impact Factor: 1.101 | Quartile: 2 | Citations: 36

DOI: <https://doi.org/10.1016/j.jvcir.2010.05.007>

Conference Proceedings

Robust State of Charge Estimation of Lithium-Ion Batteries Using a Nonlinearity-Aware PID Observer 2024

Hafiz Muhammad Jawaad Muhammad Saeed Hamid Jabbar Anjum Naeem Malik Hassan Elahi Umar Shahbaz Khan

2024 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)

Citations: N/A

DOI: [10.1109/ICRAI62391.2024.10894055](https://doi.org/10.1109/ICRAI62391.2024.10894055)

Enhanced Military Aircraft Detection Using YOLOv5s with Hyperparameter Evolution in Remote Sensing Images 2024

Wajih Ahmed Khan Fahad Ul Hassan Asif Mattoo Ali Sarosh Amir Hamza Umar Shahbaz Khan Muhammad Umar Anjum

6th International Conference on Robotics and Automation in Industry, ICRAI 2024, res.country(177,)

Citations: N/A

DOI: [10.1109/ICRAI62391.2024.10894385](https://doi.org/10.1109/ICRAI62391.2024.10894385)

Physics-Informed Machine Learning for State of Charge Estimation of Lithium-Ion Batteries 2024

Hafiz Muhammad Jawaad Muhammad Saeed Anjum Naeem Malik Arash Khalatbarisoltani Hassan Elahi Umar Shahbaz Khan

2024 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)

Citations: N/A

DOI: [10.1109/ICRAI62391.2024.10894277](https://doi.org/10.1109/ICRAI62391.2024.10894277)

Internet of Robots: An Open-source Framework for Cloud-Based Global Remote Control and Monitoring of Robots 2024

Fabeha Raheel Laibah Raheel Hassan Mehmood Hassan Mehmood Umar Shahbaz Khan

2024 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)

Citations: N/A

DOI: 10.1109/ICRAI62391.2024.10894149	
Autonomous Detection and Geolocalization of Targets Using Unmanned Aerial Vehicles for Search and Rescue (SAR) Operations	2024
<i>Hassan Mehmood Fabeha Raheel Muhammad Bilal Kadri Umar Shahbaz Khan</i> 6th International Conference on Robotics and Automation in Industry, ICRAI 2024, res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICRAI62391.2024.10894267	
Dynamic Temporal Modeling Using Cascaded Deep Networks and Encoder Transformers for Human Action Recognition	2024
<i>Haseeb Amjad Nija Asif Umar Shahbaz Khan Hassan Elahi</i> 2024 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICRAI62391.2024.10894302	
Bare Printed Circuit Board Defects Localization and Detection Using YOLOv5 Models	2024
<i>Wajih Ahmed Khan Amir Hamza Muhammad Usman Akram Umar Shahbaz Khan Tahir Habib Nawaz</i> 2024 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICRAI62391.2024.10894537	
An Improved Method for Identifying SSVEP Single-Channel Target Frequency for BCI Systems	2024
<i>Umar Shahbaz Khan Tahir Habib Nawaz Syed Tayyab Hussain Shah Adeel Wahab Hassan Akbar Zulfiqar Hasan Khan</i> 2024 3rd International Conference on Emerging Trends in Electrical, Control, and Telecommunication Engineering, ETECTE 2024 - Proceedings res.country(177,)	
Citations: N/A	
DOI: 10.1109/ETECTE63967.2024.10823885	
Enhancing the Accuracy of SSVEP Target Frequency Detection: A User- Friendly Approach	2024
<i>Adeel Wahab Umar Shahbaz Khan Tahir Habib Nawaz Syed Tayyab Hussain Shah Naveed Anjum</i> First International Conference on Advances in Mechanical, Materials, Mechatronics, and Energy Engineering (ICAME-24), res.country(177,)	
Citations: N/A	
DOI: 638817996017460160	
MASA: Multi Agent Situational Awareness for Visually Impaired	2024
<i>Zaid Mahboob Salman Sadiq Umar Shahbaz Khan Ayesha Zeb Mohsin Islam Tiwana</i> Proceedings of 2024 21st International Bhurban Conference on Applied Sciences and Technology, IBCAST 2024, res.country(177,)	
Citations: N/A	
DOI: 10.1109/IBCAST61650.2024.10877205	
Indigenous Robotics and Automation Solutions for Industry 4.0	2023
<i>Dr Umar Shahbaz Khan</i> One day symposium on economy of tomorrow: Industry 4.0 and its impact on Engineering Education and Manufacturing res.country(177,)	
Citations: N/A	
DOI: https://nwl.uet.edu.pk/invited-talk/	
YOLO v5, v7 and v8: A Performance Comparison for Tobacco Detection in Field	2023
<i>Zaid Mahboob Ayesha Zeb Umar Shahbaz Khan</i> 2023 International Conference on Digital Futures and Transformative Technologies, ICoDT2 2023, res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICoDT259378.2023.10325705	
Keynote: Indigeneous R&D for Robotics and Automation in Pakistan	2023
<i>Dr. Umar Shahbaz Khan</i> 20th IBCAST 2023, res.country(177,)	
Citations: N/A	
DOI: Nil	
Deep Learning-based Feature Fusion for Action Recognition Using Skeleton Information	2023
<i>Fahad Ul Hassan Asif Mattoo Umar Shahbaz Khan Tahir Habib Nawaz Nasir Rashid</i> 2023 International Conference on Robotics and Automation in Industry, ICRAI 2023, res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICRAI57502.2023.10089577	

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IED Disposal Tracked Robot Operating Software	2020
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Precision Forming Robotic Soil Drilling System	2024
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1 DoF (Degree of Freedom) upper limb prosthetic gripper	2019
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