

Waqar Shahid Qureshi

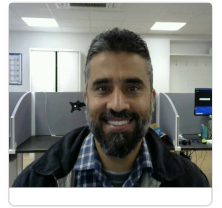
Assistant Professor

College of Electrical & Mechanical Engineering

Email: waqar.shahid@ceme.nust.edu.pk

Contact:

LinkedIn: <https://www.linkedin.com/in/waqar-s-qureshi/>



About

Dr. Waqar Shahid Qureshi is working as Assistant Professor in the College of Electrical & Mechanical Engineering. Dr. Waqar Shahid Qureshi has a PhD in Computer Vision. Dr. Waqar Shahid Qureshi has published 36 research articles & conference papers having a citation count of 965, carried out 12 projects and filed 7 intellectual property.

Qualifications

| | |
|---|-------------|
| PhD in Computer Vision Asian Institute of Technology , Thailand | 2010 - 2015 |
| MS in Digital Signal Processing UET Taxila , Pakistan | 2005 - 2007 |
| BE in Electronics Engineering UET Lahore , Pakistan | 1999 - 2003 |

Experience

| | |
|---|---------------|
| Assistant Professor College of Electrical & Mechanical Engineering | 2023- Present |
| Assistant Professor College of Electrical & Mechanical Engineering | 2021 - 2021 |
| Assistant Professor College of Electrical & Mechanical Engineering | 2021 - 2021 |
| Assistant Professor College of Electrical & Mechanical Engineering | 2019 - 2021 |
| Assistant Professor College of Electrical & Mechanical Engineering | 2016 - 2016 |
| Assistant Professor College of Electrical & Mechanical Engineering | 2016 - 2019 |
| Vice Chief Engineer XYZPrinting Inc Thailand , Bangkok Thailand | 2015 - 2016 |
| Assistant Professor Air University , Air University | 2008 - 2010 |
| Assistant Manager National Engineering and Scientific Commision , Golra More Rawalpindi | 2004 - 2008 |
| Service Engineer AMS PVT LTD , New Garden Town Lahore | 2003 - 2003 |

Awards

Research Projects

National Projects

| | |
|---|------|
| Autonomous Vehicle for Grapeyard Funding Agency: IGNITE | 2021 |
|---|------|

| | |
|--|------|
| Amount: PKR N/A | |
| Status: Completed | |
| Smart phones based fruit quality estimation | 2019 |
| Funding Agency: IGNITE | |
| Amount: PKR 33,400.00 | |
| Status: Completed | |
| Development of a Low Cost Tilt Sensing System for Building Health Monitoring | 2019 |
| Funding Agency: IGNITE | |
| Amount: PKR 72,200.00 | |
| Status: Completed | |
| Development of below waist 3D Human gait system with analytics | 2018 |
| Funding Agency: IGNITE | |
| Amount: PKR 70,000.00 | |
| Status: Completed | |
| Smart Phone Based onTree Mango Fruit Quantity and Quality Estimation using Near Infrared Spectroscopy and Machine Vision | 2018 |
| Funding Agency: PARC | |
| Amount: PKR 5,118,000.00 | |
| Status: Completed | |
| Indigenous Development of Robotic Arm Using Rapid Prototyping Techniques for Application Such as in Field Crop Monitoring | 2016 |
| Funding Agency: HEC | |
| Amount: PKR 500,000.00 | |
| Status: Completed | |
| Low cost Precision Agriculture Services using High Resolution Multi-Spectral Imaging and Mapping Software | 2018 |
| Funding Agency: HEC | |
| Amount: PKR 12,918,000.00 | |
| Status: Completed | |
| Development of a low-cost teleoperated sprayer drone for precision agricultural | 2017 |
| Funding Agency: HEC | |
| Amount: PKR 495,000.00 | |
| Status: Completed | |
| Establishment of National Center of Robotics and Automation | 2018 |
| Funding Agency: HEC | |
| Amount: PKR 220,672,000.00 | |
| Status: Approved_inprocess | |
| Low Cost Precision Agriculture Services usng High Resolution Multi-Spectral Imaging and Mapping Software | 2018 |
| Funding Agency: HEC | |
| Amount: PKR 12,918,000.00 | |
| Status: Completed | |
| 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 | |
| Indigenous Development of Robotic Arm Using Rapid Prototyping Techniques for Application Such as in Field Crop Monitoring | 2016 |
| Funding Agency: HEC | |
| Amount: PKR 500,000.00 | |
| Status: Approved_inprocess | |

International Projects

Research Articles

| | |
|---|------|
| Aerial imagery-based tobacco plant counting framework for efficient crop emergence estimation | 2024 |
| <i>Ramsha Shahid Waqar Shahid Qureshi Umar Shahbaz Khan Arslan Munir Ayesha Zeb Syed Imran Moazzam</i> <i>Computers and electronics in agriculture</i> , Volume 217, Article Number: 108557 | |
| Impact Factor: 7.7 Quartile: 1 Citations: 17 DOI: 10.1016/j.compag.2023.108557 | |
| New FxLMAT based Algorithms for Active Control of Impulsive Noise | 2023 |
| <i>Alina Mirza Farkhanda Afzal Ayesha Zeb Abdul Wakeel Waqar Shahid Qureshi Ali Akgul</i> <i>IEEE Access</i> , Volume 11, Pages 81279-81288 | |
| Impact Factor: 3.9 Quartile: 2 Citations: 8 DOI: 10.1109/ACCESS.2023.3293647 | |
| Towards automated weed detection through two-stage semantic segmentation of tobacco and weed pixels in aerial Imagery | 2023 |
| <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: 32 DOI: https://doi.org/10.1016/j.atech.2022.100142 | |
| A W-shaped convolutional network for robust crop and weed classification in agriculture | 2023 |
| <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 | |
| Towards sweetness classification of orange cultivars using short-wave NIR spectroscopy | 2023 |
| <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 | |
| Patch-wise weed coarse segmentation mask from aerial imagery of sesame crop | 2022 |
| <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 | |
| Analysis of Human Gait Cycle With Body Equilibrium Based on Leg Orientation | 2022 |
| <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 | |
| Human gait recognition subject to different covariate factors in a multi-view environment | 2022 |
| <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 | |
| A new method for pixel classification for rice variety identification using spectral and time series data from Sentinel-2 satellite imagery | 2022 |
| <i>Usman Rauf Waqar Shahid Qureshi Hamid Jabbar Ayesha Zeb Alina Mirza Eisa Alanazi Umar Shahbaz Khan Nasir Rashid</i> <i>Computers and electronics in agriculture</i> , Volume 193, Article Number 106731 | |
| Impact Factor: 5.565 Quartile: 1 Citations: 16 DOI: https://doi.org/10.1016/j.compag.2022.106731 | |
| 3D Printable Thermoplastic Polyurethane Energy Efficient Passive Foot | 2022 |
| <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 | |

| | |
|--|------|
| 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. Alasmay Javaid Iqbal Ameer Hamza</i> <i>IEEE Access</i> , Volume 9, Pages 121698-121715 Impact Factor: 3.476 Quartile: 2 Citations: 39 DOI: 10.1109/ACCESS.2021.3109015 | 2021 |
| 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 |
| The rise of 3D Printing entangled with smart computer aided design during COVID-19 era <i>Aamer Nazir Aashir Azhar Usman Nazir Yun-Feng Liu Jia-En Chen Waqar Shahid Qureshi Eisa Alanazi</i> <i>Journal of Manufacturing Systems</i> , Volume 60, Pages 774-786 Impact Factor: 9.498 Quartile: 1 Citations: 69 DOI: https://doi.org/10.1016/j.jmsy.2020.10.009 | 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 Alasmay Eisa Alanazi</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 |
| Is this melon sweet? A quantitative classification for near-infrared spectroscopy <i>Ayesha Zeb Waqar Shahid Qureshi Abdul Ghafoor Amanullah Malik Muhammad Imran Javaid Iqbal Eisa Alanazi</i> <i>Infrared Physics and Technology</i> , Volume 114, Article Number 103645 Impact Factor: 2.997 Quartile: 2 Citations: 23 DOI: https://doi.org/10.1016/j.infrared.2021.103645 | 2021 |
| AirMatch: An automated mosaicing system with video preprocessing engine for multiple aerial feeds <i>Nida Rasheed Shoab Ahmad Khan Waqar Shahid Qureshi Manshoor A Naqvi Eisa Alanzi</i> <i>IEICE Transactions on Information and Systems</i> , Volume E104.D, Issue 4, Pages 490-499 Impact Factor: 0.695 Quartile: 4 Citations: 2 DOI: https://doi.org/10.1587/transinf.2020EDK0003 | 2021 |
| Autonomous navigation for a wolfberry picking robot using visual cues and fuzzy control <i>Yue Ma Wenqiang Zhang Waqar Shahid Qureshi Chao Gao Chunlong Zhang Wei Li</i> <i>Information Processing in Agriculture</i> , Volume 8, Issue 1, Pages 15-26 Impact Factor: 0 Citations: 48 DOI: https://doi.org/10.1016/j.inpa.2020.04.005 | 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 |
| Towards Fruit Maturity Estimation Using NIR Spectroscopy <i>Syed Sohaib Ali Shah Ayesha Zeb Eisa Alanazi Waleed Alasmay Amanullah Malik Muhammad Arslan Waqar Shahid</i> <i>Infrared Physics and Technology</i> , Volume 111 Impact Factor: 2.638 Quartile: 2 Citations: 76 DOI: https://doi.org/10.1016/j.infrared.2020.103479 | 2020 |
| Exploiting visual cues for safe and flexible cyber-physical production systems <i>Syed Osama Bin Islam Waqas Akbar Lughman Waqar Shahid Qureshi Azfar Khalid Miguel Angel Mariscal Susana Garcia-Herrero</i> <i>Advances in Mechanical Engineering</i> , Volume 11(12), Pages 1-13 | 2019 |

| | |
|---|------|
| Impact Factor: 1.161 Quartile: 3 Citations: 20 DOI: https://doi.org/10.1177/1687814019897228 | |
| Automated analysis of visual leaf shape features for plant classification <i>G. Saleem M. Akhtar N. Ahmed Waqar Shahid</i> <i>Computer and Electronics in Agriculture</i> , Volume: 157 Pages: 270-280 Impact Factor: 3.858 Quartile: 1 Citations: 135 DOI: 10.1016/j.compag.2018.12.038 | 2019 |
| Machine vision for counting fruit on mango tree canopies <i>Waqar Shahid A. Payne K.B. Walsh R. Linker O. Cohen M.N. Dailey</i> <i>Precision Agriculture</i> , Volume: 18 Issue: 2 Pages: 224-244 Impact Factor: 2.435 Quartile: 1 Citations: 128 DOI: 10.1007/s11119-016-9458-5 | 2017 |
| QuickBlaze: Early Fire Detection Using a Combined Video Processing Approach <i>Waqar Shahid Qureshi Mongkol Ekpanyapong Matthew Dailey Suchet Rinsurongkawong, Anton Malenichev Olga Krasotkina</i> <i>Fire Technology</i> , Volume 52, Pages 1293-1317 Impact Factor: 1.471 Quartile: 2 Citations: 68 DOI: 10.1007/s10694-015-0489-7 | 2016 |
| Joint Localization of Pursuit Quadcopters and Target Using Monocular Cues <i>Abdul Basit Waqar Shahid Qureshi Matthew N. Dailey Tomas Krajn?k</i> <i>Journal of Intelligent & Robotic Systems</i> , Volume 78, Pages 613–630 Impact Factor: 0.932 Quartile: 3 Citations: 6 DOI: DOI 10.1007/s10846-014-0081-2 | 2015 |
| Conference Proceedings | |
| Detection of Grape Clusters in Images Using Convolutional Neural Network <i>Muhammad Osama Shahzad Anas Bin Aqeel Waqar Shahid Qureshi</i> <i>2023 International Conference on Robotics and Automation in Industry, ICRAI 2023</i> , res.country(177,) Citations: N/A DOI: 10.1109/ICRAI57502.2023.10089582 | 2023 |
| Vision-Based Hybrid Detection for Pick and Place Application in Robotic Manipulators <i>Muhammad Umar Anjum Umar Shahbaz Khan Amir Hamza Waqar Shahid Qureshi Wajih Ahmed Khan</i> <i>2023 International Conference on Robotics and Automation in Industry, ICRAI 2023</i> , res.country(177,) Citations: N/A DOI: 10.1109/ICRAI57502.2023.10089602 | 2023 |
| Crop and Weeds Classification in Aerial Imagery of Sesame Crop Fields Using a Patch-Based Deep Learning Model-Ensembling Method <i>Syed Imran Moazzam Umar Shahbaz Khan Tahir Habib Nawaz Waqar Shahid Qureshi</i> <i>IEEE International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: 1 DOI: 10.1109/ICoDT255437.2022.9787455 | 2022 |
| Analysis of rule-based and shallow statistical models for COVID-19 cough detection for a preliminary diagnosis <i>Arshia Arif Eisa Alanazi Ayesha Zeb Waqar Shahid Qureshi</i> <i>2022 13th Asian Control Conference (ASCC)</i> , res.country(259,) Citations: N/A DOI: 10.23919/ASCC56756.2022.9828183 | 2022 |
| Learning Fruit Class from Short Wave Near Infrared Spectral Features, an AI Approach Towards Determining Fruit Type <i>Ayesha Zeb Waqar Shahid Qureshi Abdul Ghafoor Dymrna O' Sullivan</i> <i>2022 8th International Conference on Mechatronics and Robotics Engineering, ICMRE 2022</i> , res.country(57,) Citations: N/A DOI: 10.1109/ICMRE54455.2022.9734107 | 2022 |
| Towards Facial Recognition Problem in Covid-19 Pandemic <i>Waqar Shahid Qureshi Imran Mundiya Muhammad Sohaib ul Hassan Mohsin Islam Tiwana Eisa Alanzi</i> <i>2020 4rd International Conference on Electrical, Telecommunication and Computer Engineering (ELTICOM)</i> , res.country(100,) | 2020 |

| | |
|--|------|
| Citations: N/A DOI: 10.1109/ELTICOM50775.2020.9230504 | |
| 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 |
| TOWARDS 3D FACIAL RECONSTRUCTION USING DEEP NEURAL NETWORKS <i>Hafiz Muhammad Umair Munir W.S.Qureshi</i> <i>Multi Conference on Computer Science and Information Systems MCCSIS 2019, res.country(183,)</i> Citations: N/A DOI: http://www.iadisportal.org/digital-library/towards-3d-facial-reconstruction-using-deep-neural-networks# | 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 |
| Generating GIF from 3D Mesh and Point Cloud: An Automated Software <i>Samart Moodleah Pornsuree Jamsri Waqar Shahid</i> <i>The 13th International Conference on Knowledge, Information and Creativity Support Systems (KICSS 2018), res.country(217,)</i> Citations: N/A DOI: https://saki.siit.tu.ac.th/kicss2018/uploads_final/148__c01148c8dd533efebd6041290b0a16f0/PID5618411.pdf | 2018 |
| 3-D Shape Recovery from Image Focus using Rank Transform <i>Fahad Mahmood Jawad Mahmood Waqar Shahid Qureshi Umar Shahbaz Khan</i> <i>ISVC 2016: Advances in Visual Computing, res.country(233,)</i> Citations: N/A DOI: 10.1007/978-3-319-50832-0_50 | 2016 |

Editorial Activities

| | |
|---|------|
| Reviewed Papers for Journals Impact Factor: 2.638 | 2021 |
| Reviewed Papers for Journals Impact Factor: 2.638 | 2021 |
| Reviewed Papers for Journals Impact Factor: 5.65 | 2021 |
| Reviewed Papers for Journals Impact Factor: 5.65 | 2021 |
| Reviewed Papers for Journals Impact Factor: 2.638 | 2021 |
| Reviewed Papers for Journals Impact Factor: 5.65 | 2021 |
| Reviewed Papers for Journals Impact Factor: 2.638 | 2021 |
| Reviewed Papers for Journals Impact Factor: 5.65 | 2021 |

Intellectual Property

Copyrights

Patents

| | |
|--|------|
| Optical Detection & Segmentation of Tobacco Impurity | 2020 |
| Status: Filed | |
| Optical Detection & Segmentation of Tobacco Impurity | 2020 |
| Status: Filed | |

Industrial Designs

| | |
|--|------|
| Eight-bar parallel manipulator Synthesis and control for motion tracking through visual servoing | 2019 |
| Status: Granted | |
| Active IR Marker Cashing | 2018 |
| Status: Granted | |
| Dorsiflexion Control Mechanism | 2018 |
| Status: Filed | |
| Active IR Marker Casing | 2018 |
| Status: Granted Filed | |
| Dorsiflexion Control Mechanism | 2018 |
| Status: Filed | |

Trademarks