Muhammad Shahzad Younis

Professor

School of Electrical Engineering and Computer Science

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About

Dr. Muhammad Shahzad Younis is working as Professor in the School of Electrical Engineering and Computer Science. Dr. Muhammad Shahzad Younis has a PhD in Signal Processing. Dr. Muhammad Shahzad Younis has published 50 research articles & conference papers having a citation count of 991, carried out 20 projects and filed 3 intellectual property.

Qualifications

PhD in Signal Processing   2005 - 2009
 Petronas Technology University , Malaysia

MS in Ee   2003 - 2005
 UET Taxila , Pakistan

BE in Dsp   1999 - 2002
 NUST, Islamabad , Pakistan

Experience

Professor   2022- Present
 School of Electrical Engineering and Computer Science

Associate Professor   2019 - 2022
 School of Electrical Engineering and Computer Science

Assistant Professor   2012 - 2019
 School of Electrical Engineering and Computer Science

Assistant Professor   2009 - 2012
 School of Electrical Engineering and Computer Science

Lecturer   2003 - 2005
 UET Taxila , UET Taxila, Islamabad

Design Engineer   2002 - 2003
 AERO , AERO Islamabad

Professional Memberships

PEC   Since 2003

Research Projects

National Projects

Design and optimize an automotive radar transmitter and receiver system using MATLAB/Octave for a   2024
77 GHz frequency, targeting eventual implementation on a Xcelerium Vector Processor
 Funding Agency: Commercial
 Amount: PKR 1,764,000.00
 Status: Approved_inprocess

Cybersecurity Augmentation Using Deep Learning-Aided Radio Frequency Fingerprinting for Physical   2025
Layer Authentication in Next-Generation IoT- A Deployment Framework
 Funding Agency: psf
 Amount: PKR 18,840,000.00
 Status: Approved_inprocess

Seamless Building Access Control using Facial Recognition Technology 2024
   Funding Agency: NUST
   Amount: PKR 500,000.00
   Status: Completed

Impact of Informational Nudging on Electricity Consumption Behavior 2024
   Funding Agency: NUST
   Amount: PKR 1,002,000.00
   Status: Approved_inprocess

NUST Digital Twin through Advanced Modeling & Simulation 2024
   Funding Agency: NUST
   Amount: PKR 50,000,000.00
   Status: Approved_inprocess

Deploying an Automatic Number Plate Recognition (ANPR) System for Entry Points at Gate-1 2024
   Funding Agency: NUST
   Amount: PKR 500,000.00
   Status: Completed

Development of Campus Grid Monitoring System 2023
   Funding Agency: NUST
   Amount: PKR 1,000,000.00
   Status: Approved_inprocess

Deployment of Indigenously developed Energy Sub Metering Technology at NSTP Building 2022
   Funding Agency: NUST
   Amount: PKR 200,000.00
   Status: Completed

Development of Multipupose Moisture Meter 2020
   Funding Agency: NUST
   Amount: PKR 280,000.00
   Status: Completed

Multiprose moisture meter 2020
   Funding Agency: NUST
   Amount: PKR 280,000.00
   Status: Approved_inprocess

Soil Moisture Meter 2020
   Funding Agency: NUST
   Amount: PKR 296,600.00
   Status: Completed

On Development of Generalized Tracks Association (GTA) & Validation, Optimization System (VOS) by Uncertainty Measurement of Multiple Sensor Tracks Data through Modeling and Simulation 2019
   Funding Agency: PAF
   Amount: PKR 4,979,000.00
   Status: Approved_inprocess

iDoc: A Portable, Cost-Effective Diagnostic Screening Device for Early Dengue Fever Detection 2017
   Funding Agency: PSF
   Amount: PKR 1,550,000.00
   Status: Completed

IoT Based Industrial Load Monitoring and Management System 2019
   Funding Agency: HEC
   Amount: PKR 13,600,000.00
   Status: Completed

Random-Neighborhood-RAM: An FPGA-based Memory Architecture for Real-Time Random-Neighborhood Image and Video Processing Algorithms 2017
   Funding Agency: HEC
   Amount: PKR 446,000.00
   Status: Approved_inprocess

Solar Powered Temperature and Relative Humidity Monitoring for Multipurpose Silo Bin 2017
   Funding Agency: PARC

Amount: PKR 7,207,000.00

Status: Completed

Cattle Vitals: A SMART SYSTEM FOR SILENT HEAT AND EARLY DISEASE 2019

  Funding Agency: HEC

  Amount: PKR 4,540,000.00

  Status: Completed

International Projects

Industry Projects

National Projects

Automotive FMCW Radar Design and Development 2024

  Client: Industry

  Amount: PKR 4,200,000.00

  Status: Approved_inprocess

Real Time Air Quality Monitoring System for Cotton Web Pvt Ltd 2023

  Client: CottonWeb

  Amount: PKR 1,357,000.00

  Status: Approved_inprocess

Development of Tracking Portal for restoration of habitats 2021

  Client: Serena Hotels

  Amount: PKR 1,870,000.00

  Status: Approved_inprocess

International Projects

Research Articles

Improved Proximal Policy Optimization Algorithm for Sequential Security-Constrained Optimal Power Flow Based on Expert Knowledge and Safety Layer 2024

  Yanbo Chen Shahzad Younis Qintao Du Honghai Liu Liangcheng Cheng

  Journal of Modern Power Systems and Clean Energy, Volume 12, Issue 3

  Impact Factor: 6.3 | **Quartile:** 1 | **Citations:** 7

  DOI: 10.35833/MPCE.2023.000232

Framework for the analysis of renewable energy grid policies in the context of COVID-19 2022

  Abdul Kashif Janjua Muhammad Kashif Farooq Ahmad Ahmed Rasheed Muhammad Shahzad Younis Syed Ali Abbas Kazmi Kashif Imran

  Heliyon , Volume 8, Issue 10, Article Number e10123

  Impact Factor: 3.776 | **Quartile:** 2 | **Citations:** 3

  DOI: doi.org/10.1016/j.heliyon.2022.e10123

Machine learning approach for prediction of crimp in cotton woven fabrics 2021

  Shahzad Younis Muhammad Zohaib Fazal Sharifullah Khan Muhammad Azeem Abbas Yasir Nawab

  Tehnicki Vjesnik-Technical Gazette , Volume 28, Issue 1, Pages 88-95

  Impact Factor: 0.864 | **Quartile:** 4 | **Citations:** 5

  DOI: https://doi.org/10.17559/TV-20191018180716

COVID-19 digital contact tracing applications and techniques: A review post initial deployments 2021

  Muhammad Shahroz Farooq Ahmad Muhammad Shahzad Younis Nadeem Ahmed Maged N. Kamel Boulos Junaid Qadir Ricardo Vinuesa

  Transportation Engineering , Volume 5, Article Number 100072

  Impact Factor: N/A | **Citations:** 119

  DOI: https://doi.org/10.1016/j.treng.2021.100072

Multi-Horizon Electricity Load and Price Forecasting using an Interpretable Multi-Head Self-Attention and EEMD-Based Framework 2021

  Muhammad Furqan Azam Muhammad Shahzad Younis

  IEEE Access , Volume 9, Pages 85918-85932

  Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 48

  DOI: 10.1109/ACCESS.2021.3086039

Ensuring Reliable Operation of Electricity Grid by Placement of FACTS Devices for Developing Countries 2021

Atif Naveed Khan Kashif Imran Abraiz Khattak Kafait Ullah Muhammad Shahzad Younis Muhammad Nadeem Anamitra Pal Muhammad Waseem Younas

Energies , Volume 14(8), Article Number 2283

Impact Factor: 3.252 | **Quartile:** 3 | **Citations:** 9
DOI: https://doi.org/10.3390/en14082283

Modeling, simulation and forecasting of wind power plants using agent-based approach   2020

Imran Mahmood Anis-ur-Rahman Mahe Mobeen Shahzad Younis Asad Waqar Malik Muhammad Moazam Fraz Kafait Ullah

Journal of Cleaner Production , Volume 276, Article Number 124172

Impact Factor: 9.297 | **Quartile:** 1 | **Citations:** 15
DOI: https://doi.org/10.1016/j.jclepro.2020.124172

A Scenario-Based Stochastic Optimization Approach for Non-Intrusive Appliance Load Monitoring   2020

Muhammad Shahzad Younis Hasan Arshad Nasir Muhammad Shahroz

IEEE Access , Volume 8, Pages 142205-142217

Impact Factor: 3.367 | **Quartile:** 2 | **Citations:** 5
DOI: 10.1109/ACCESS.2020.3013682

Offline Hand Written Urdu Word Spotting using Random Data Generation   2020

Muhammad Shahzad Younis Faiq Faizan Farooqui Muhammad Hassan Muhammad Kashif Siddhu

IEEE Access , Volume 8, Pages 131119-131136

Impact Factor: 3.367 | **Quartile:** 2 | **Citations:** 9
DOI: https://doi.org/10.1109/ACCESS.2020.3010166

Speech Technology for Healthcare: Opportunities, Challenges, and State of the Art   2020

Muhammad Shahzad Younis Siddique Latif Adnan Qayyum Muhammad Usama Junaid Qadir

IEEE Reviews in Biomedical Engineering , Volume 14, Pages 342-356

Impact Factor: 0 | **Citations:** 115
DOI: DOI: 10.1109/RBME.2020.3006860

Steganographic universal adversarial perturbations   2020

Salah ud Din Naveed Akhtar Atif Mansoor Muhammad Shahzad Younis Faisal Shafait Muhammad Shafique

Pattern Recognition Letters , Volume 135, Pages 146-152

Impact Factor: 3.756 | **Quartile:** 2 | **Citations:** 21
DOI: https://doi.org/10.1016/j.patrec.2020.04.025

Development of a cost-effective CVD prediction model using lifestyle factors. A cohort study in   2020
Pakistan

Muhammad Shahzad Younis Parveen Naheeda Sharifullah Khan Saeed Ullah Shah Muhammad Azeem Abbas Kinza Waqar

African Health Sciences , Volume 20, Issue 2, Pages 849-859

Impact Factor: 0.927 | **Quartile:** 4
DOI: https://www.ajol.info/index.php/ahs/article/view/197906

Probabilistic Analysis of Targeted Attacks Using Transform-Domain Adversarial Examples   2020

Zakia Yahya Muhammad Hassan Shahzad Younis Muhammad Shafique

IEEE Access , Volume 8, Pages 3855-33869

Impact Factor: 3.367 | **Quartile:** 2 | **Citations:** 16
DOI: 10.1109/ACCESS.2020.2974525

m-SAAC: Multi-stage adaptive approximation control to select approximate computing modes for   2019
vision applications

Rida Amjad Rehan Hafiz Muhammad Usman Ilyas Muhammad Shahzad Younis Muhammad Shafique

Microelectronics Journal , Volume 91, Pages 84-91

Impact Factor: 1.405 | **Quartile:** 3 | **Citations:** 8
DOI: 10.1016/j.mejo.2010.07.010

Applying Uncertain Frequent Pattern Mining to Improve Ranking of Retrieved Images   2019

Madiha Liaqat Sharifullah Khan Muhammad Majid Shahzad Younis Kashif Rajpoot

Applied Intelligence , Volume 49, Issue 8, Pages 2982-3001

Impact Factor: 3.325 | **Quartile:** 2 | **Citations:** 12
DOI: 10.1007/s10489-019-01412-9

Design optimisation using convex programming: Towards waste-efficient building designs   2019

Muhammad Bilal Olugbenga Akinade Juan Manuel Davila Delgado Lukman A. Akanbi Anuoluwapo O. Ajayi Muhammad S. Younis Lukumon Oyedele

Journal of Building Engineering , Volume 23, Pages 231-240

Impact Factor: 3.379 | **Quartile:** 1 | **Citations:** 10

Wireless Technologies for Emergency Response: A Comprehensive Review and Some Guidelines

2018

Touseef Yaqoob Farrukh Pervez Junaid Qadir Mohsin Khalil Usman Ashraf Shahzad Younis

IEEE Access , Volume 6, Pages 71814-71838

Impact Factor: 4.098 | **Quartile:** 1 | **Citations:** 49

Memory-Based User-Centric Backhaul-Aware User Cell Association Scheme

2018

Farrukh Pervez Mona Jaber Junaid Qadir Shahzad Younis Muhammad Ali Imran

IEEE Access , Volume 6, Pages 39595-39605

Impact Factor: 4.098 | **Quartile:** 1 | **Citations:** 13

Community Detection in Networks: A Multidisciplinary Review

2018

Muhammad Aqib Javed Muhammad Shahzad Younis Siddique Latif Junaid Qadir Adeel Baig

Journal of Network and Computer Applications , NULL

Impact Factor: 5.273 | **Quartile:** 1 | **Citations:** 399

Mobile Health in the Developing World: Review of Literature and Lessons From a Case Study

2017

SIDDIQUE LATIF RAJIB RANA JUNAID QADIR ANWAAR ALI MUHAMMAD ALI IMRAN MUHAMMAD SHAHZAD YOUNIS

IEEE Access , Volume 5, Pages 11540-11556

Impact Factor: 3.557 | **Quartile:** 1 | **Citations:** 89

A multi-hop angular routing protocol for wireless sensor networks

2016

Mariam Akbar Nadeem Javaid Muhammad Imran Areeba Rao Muhammad Shahzad Younis Iftikhar Azim Niaz

International Journal of Distributed Sensor Networks, Volume 12, Issue 9, Pages 1-13

Impact Factor: 1.236 | **Quartile:** 3 | **Citations:** 12

Automatic Modulation Classification for Low SNR Digital Signal in Frequency-Selective Fading Environments

2015

Waqas Wallayt Muhammad S. Younis Muhammad Imran Muhammad Shoaib Mohsen Guizani

Wireless Personal Communications , Volume 84, Issue 3, Pages 1891-1906, Special Issue SI

Impact Factor: 0.701 | **Quartile:** 4 | **Citations:** 9

A Near-Optimal LLR Based Cooperative Spectrum Sensing Scheme for CRAHNs

2015

Sheeraz A. Alvi Muhammad Shahzad Younis Muhammad Imran Fazal-e-Amin Mohsen Guizani

IEEE Transactions on Wireless Communications, Volume 14, Issue 7, Pages 3877-3887

Impact Factor: 2.925 | **Quartile:** 1 | **Citations:** 12

Nonlinear Bayesian Estimation of BOLD Signal Under Non-Gaussian Noise

2015

Ali Fahim Khan Muhammad Shahzad Younis Khalid Bashir Bajwa

Computational and Mathematical Methods in Medicine, Volume 2015, Article ID 389875, 10 pages

Impact Factor: 0.887 | **Quartile:** 3 | **Citations:** 2

Automatic Classification of Initial Categories of Alzheimer?s Disease from Structural MRI Phase Images: A Comparison of PSVM, KNN and ANN Methods

2012

Ahsan Bin Tufail Ali Abidi Muhammad Shahzad Younis adil masood

International Journal of Biomedical and Biological Engineering, Volume 6, Issue 12

Impact Factor: 0

A HOS-based blind deconvolution algorithm for the improvement of time resolution of mixed phase low SNR seismic data

2009

Muhammad Shahzad Younis Ahmad Fadzil M Hani M Firdaus M Halim

Journal of Geophysics and Engineering, Volume 6, Issue 1, Pages 87-100

Impact Factor: 1.477 | **Quartile:** 3 | **Citations:** 4

Conference Proceedings

PCA-Based Adversarial Attacks on Signature Verification Systems 2024

Maham Jahangir Azka Basit Muhammad Shahzad Younis Faisal Shafait

International Conference on Document Analysis and Recognition (ICDAR) 2024, res.country(88,)

Citations: N/A

DOI: https://doi.org/10.1007/978-3-031-70533-5

Effect of PV System Design and Financial Variables on Systems Perfomance and Financial Feasibility 2023

Abdul Kashif Janjua Shahzad Younis Muhammad Zaid Masood Khan Muhammad Musadiq Ahmed

2023 International Conference on Energy, Power, Environment, Control, and Computing (ICEPECC), res.country(177,)

Citations: N/A

DOI: 10.1109/ICEPECC57281.2023.10209405

Automatic Tree Counting from Satellite Imagery Using YOLO V5, SSD and UNET Models: A case study 2023
of a campus in Islamabad, Pakistan

Um-e-Hani Shahzad Younis Sadia Munir Tariq Saeed Hamad Younis

3rd IEEE International Conference on Artificial Intelligence, ICAI 2023, res.country(177,)

Citations: N/A

DOI: 10.1109/ICAI58407.2023.10136679

Team of Tiny ANNs: A Way Towards Cost-Efficient Scalable Deep Learning 2022

Hamad Younis Muhammad Hassan Shahzad Younis

2022 2nd International Conference on Artificial Intelligence (ICAI), res.country(282,)

Citations: N/A

DOI: 10.1109/ICAI55435.2022.9773451

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mm-wave FMCW Radar Based Object Classification Using Deep Neural Networks 2021

Ahtsham Zafar Asad Khan Arslan Majid Shahzad Younis Shahzad Younis

2021 1st International Conference on Microwave, Antennas & Circuits (ICMAC), res.country(270,)

Citations: N/A

DOI: 10.1109/ICMAC54080.2021.9678295

Classical Adversarial Attack on mm-Wave FMCW Radar 2021

Ahtsham Zafar Asad Khan Shahzad Younis

2021 International Conference on Frontiers of Information Technology (FIT), res.country(282,)

Citations: N/A

DOI: 10.1109/FIT53504.2021.00059

Covid-19 identification using deep neural networks 2021

Asad khan Shahzad Younis Haneen Algethami

2021 International Conference of Women in Data Science at Taif University (WiDSTaif), res.country(192,)

Citations: N/A

DOI: 10.1109/WiDSTaif52235.2021.9430219

Covid-19 Identification Using Deep Neural Networks 2021

Asad Ullah Shahzad Younis Haneen Algethami

2021 International Conference of Women in Data Science at Taif University (WiDSTaif), res.country(192,)

Citations: N/A

DOI: 10.1109/WiDSTaif52235.2021.9430219

Orange Class Identification using Neural Networks and Transfer Learning 2020

Umair Raiz Shahzad Younis Ahmed Rasheed

23rd IEEE International Multi-Topic Conference, INMIC 2020, res.country(177,)

Citations: N/A

DOI: 10.1109/INMIC50486.2020.9318045

Machine Learning Based Grain Moisture Estimation for Real-time Monitoring of High-Temperature 2020
Paddy Drying Silo

Farooq Ahmad Shahzad Rana Usman Zahid Liaqat Ali Shahid

2020 IEEE 23rd International Multitopic Conference (INMIC), res.country(177,)

Citations: N/A

DOI: 10.1109/INMIC50486.2020.9318071

Classification of Chest Diseases using Wavelet Transforms and Transfer Learning 2020

Ahmed Rasheed Muhammad Shahzad Younis Muhammad Bilal Maha Rasheed

Medical Imaging and Computer-Aided Diagnosis , res.country(231,)

Citations: N/A

DOI: https://link.springer.com/chapter/10.1007/978-981-15-5199-4_16

Smart Heart Management - IOT Heart Attack Detection   2018

Asad Ali Shah Shahzad Younis Sri Devi Ravana

15th High-capacity Optical Networks & Enabling/Emerging Technologies (HONET-ICT), res.country(177,)

Citations: N/A

DOI: 10.13140/RG.2.2.35678.38727

Transfer Learning for Improving Speech Emotion Classification Accuracy   2018

Siddique Latif Rajib Rana Shahzad Younis Junaid Qadir Julien Epps

INTERSPEECH 2018 , res.country(104,)

Citations: N/A

DOI: 10.21437/Interspeech.2018-1625

Fuzzy Q-learning-based user-centric backhaul-aware user cell association scheme   2017

Farrukh Pervez Mona Jaber Junaid Qadir Shahzad Younis Muhammad Ali Imran

2017 13th International Wireless Communications and Mobile Computing Conference (IWCMC), res.country(68,)

Citations: N/A

DOI: 10.1109/IWCMC.2017.7986564

Feasibility, architecture and cost considerations of using TVWS for rural Internet access in 5G   2017

Mohsin Khalil Junaid Qadir Muhammad Ali Imran Shahzad Younis

2017 20th Conference on Innovations in Clouds, Internet and Networks (ICIN), res.country(75,)

Citations: N/A

DOI: 10.1109/ICIN.2017.7899245

Gossip routing protocol for forest fire detection using wireless sensor networks   2015

Shahzad Younis Kashif Saghar Sidra Younis

2015 12th International Bhurban Conference on Applied Sciences and Technology (IBCAST), res.country(282,)

Citations: N/A

DOI: 10.1109/IBCAST.2015.7058511

Performance analysis of Automatic Modulation Classification in multipath fading environment   2014

Waqas Wallayat Shahzad Younis Muhammad Imran Shaoib Ahmed

2014 5th International Conference on Intelligent and Advanced Systems (ICIAS), res.country(157,)

Citations: N/A

DOI: 10.1109/ICIAS.2014.6869545

A Weighted Linear Combining Scheme for Cooperative Spectrum Sensing   2014

Shahzad Younis Sheraz Muhammad Imran Fazal Amin

The 5th International Conference on Ambient Systems, Networks and Technologies (ANT-2014), the 4th International Conference on Sustainable Energy Information Technology (SEIT-2014) , res.country(20,)

Citations: N/A

DOI: https://doi.org/10.1016/j.procs.2014.05.409

Investigating 3D Echocardiography Image Fusion for Improving Image Quality   2013

Shahzad Younis Ammara Nasim Aisha Gul Kashif Rajpoot

2013 3rd IEEE International Conference on Computer, Control and Communication (IC4), res.country(282,)

Citations: N/A

DOI: 10.1109/IC4.2013.6653735

Independent component analysis based assessment of linked gray and white matter in the initial stages of Alzheimer's disease using structural MRI phase images   2013

Ahsan Bin Tufail Abdul Rehman Adil Masood Siddiqui Shahzad Younis Ali Abidi

2013 International Computer Science and Engineering Conference (ICSEC) , res.country(217,)

Citations: N/A

DOI: 10.1109/ICSEC.2013.6694804

Multiclass classification of initial stages of Alzheimer's disease using structural MRI phase images   2012

Shahzad Younis Ahsan Bin Tufail Adil Ali Abidi

2012 IEEE International Conference on Control System, Computing and Engineering,, res.country(157,)

Citations: N/A

Development of the RLS algorithm based on the iterative equation solvers 2012

Jawad Khokhar Shahzad Younis

2012 IEEE 11th International Conference on Signal Processing, res.country(48,)

Citations: N/A

Modified HOS based Eigenvector algorithm for improvement of poor SNR of seismic data 2007

M. Shahzad Younis Ahmad Fadzil M. Hani

2007 International Conference on Intelligent and Advanced Systems, res.country(157,)

Citations: N/A

Blind deconvolution technique for de-noising of Non-stationary seismic signals using DWT 2007

M. Shahzad Younis Fadzil Hani

2007 International Conference on Intelligent and Advanced Systems, res.country(157,)

Citations: N/A

Intellectual Property

Copyrights

Patents

Industrial Designs

Automated Seed Sowing Rover 2024

Status: Filed

Smart Dendrometer 2019

Status: Granted

Soil Moisture Meter 2019

Status: Granted

Trademarks