Muhammad Umar Farooq

Associate Professor

College of Electrical & Mechanical Engineering

Email: ufarooq@ceme.nust.edu.pk
Contact: 404553517
LinkedIn:

About

Dr. Muhammad Umar Farooq is working as Associate Professor in the College of Electrical & Mechanical Engineering. Dr. Muhammad Umar Farooq has a PhD in Mobile Ad Hoc Networks. Dr. Muhammad Umar Farooq has published 36 research articles & conference papers having a citation count of 172, carried out 1 projects and filed 1 intellectual property.

Qualifications

PhD in Mobile Ad Hoc Networks   2011 - 2015
University Politehnica of Bucharest , Romania

MS in Mobile Ad Hoc Networks   2006 - 2009
NUST, Islamabad , Pakistan

MSc in Software Engineering   2003 - 2005
Quaid-i-Azam University , Pakistan

BSc in Mathematics & Physics   2001 - 2003
BZU, Multan , Pakistan

Experience

Associate Professor   2024- Present
College of Electrical & Mechanical Engineering

Associate Professor   2022 - 2019
College of Electrical & Mechanical Engineering

Assistant Professor   2021 - 2022
College of Electrical & Mechanical Engineering

Assistant Professor   2019 - 2021
College of Electrical & Mechanical Engineering

Assistant Professor   2016 - 2022
College of Electrical & Mechanical Engineering

Assistant Professor   2016 - 2016
College of Electrical & Mechanical Engineering

Assistant Professor   2015 - 2016
COMSATS Institute of Information Technology , COMSATS Sahiwal Campus

Team Lead   2009 - 2011
Center for Advanced Research in Engineering , Ata-Turk Avenue, Sector G-5, Islamabad

Software Engineer   2006 - 2006
Strategic Systems International , SSI, Johar Town, Canal Road, Lahore

Awards

Research Projects

National Projects

Design of Adaptive Multiband Networking Waveform with USRP Implementation for Ad hocWireless Heterogeneous Networks   2022

    Funding Agency: HEC

    Amount: PKR 17,997,600.00

    Status: Approved_inprocess

International Projects

Research Articles

Communication architecture and operations for SDR-enabled UAVs network in disaster-stressed areas   2024

    Rukaiya Shoab Ahmed Khan Muhammad Umar Farooq Irum Matloob

    Ad Hoc Networks , Volume 160, Article Number 103506

    Impact Factor: 4.400 | **Quartile:** 1 | **Citations:** 13

    DOI: https://doi.org/10.1016/j.adhoc.2024.103506

HybridHR-Net: Action Recognition in Video Sequences Using Optimal Deep Learning Fusion Assisted Framework   2023

    Muhammad Naeem Akbar Muhammad Umar Farooq Majed Alhaisoni Usman Tariq Muhammad Usman Akram Seemab Khan

    CMC-Computers, Materials and Continua , Volume 76, Issue 3, Pages 3275-3295

    Impact Factor: 3.1 | **Quartile:** 3 | **Citations:** 4

    DOI: 10.32604/cmc.2023.039289

Gabor Contrast Patterns: A Novel Framework to Extract Features From Texture Images   2023

    Farhan Riaz Farhan Hussain Muhammad Umar Farooq Abdul Wahab Muzaffar Tarik Abuain Waleed Abdel Karim Abu-Ain Muhammad Ajmal Azad

    IEEE Access , Volume 11, Pages 60324-60334

    Impact Factor: 3.9 | **Quartile:** 2 | **Citations:** 6

    DOI: 10.1109/ACCESS.2023.3280053

FIPAM: Fuzzy Inference based Placement and Migration Approach for NFV-based IoTs   2022

    Muhammad Arslan Tariq Muhammad Umar Farooq Muhammad Zeeshan Ali Hassan Adnan Akhunzada

    IEEE Transactions on Network and Service Management, Volume 19, Issue 4, Pages 4298-4309

    Impact Factor: 5.3 | **Quartile:** 2 | **Citations:** 7

    DOI: 10.1109/TNSM.2022.3145658

A Novel Cooperative Micro-Caching Algorithm Based on Fuzzy Inference Through NFV in Ultra-Dense IoT Networks   2022

    Muhammad Umar Farooq Muhammad Zeeshan Muhammad Talha Jahangir Muhammad Asif

    Journal of Network and Systems Management, Volume 30, Issue 1, Article Number 20

    Impact Factor: 2.198 | **Quartile:** 3 | **Citations:** 7

    DOI: 10.1007/s10922-021-09632-6

5G/SDR-Assisted Cognitive Communication in UAV Swarms: Architecture and Applications   2022

    Kashif Shahzad Muhammad Zeeshan Adnan Akhunzada Muhammad Umar Farooq

    IT Professional , Volume 24, Issue 3, Pages 28-34

    Impact Factor: 2.590 | **Quartile:** 2 | **Citations:** 2

    DOI: 10.1109/MITP.2022.3161318

IoTAuth: IoT Sensor Data Analytics for User Authentication Using Discriminative Feature Analysis   2022

    Samera Batool Ali Hassan Muazzam A. Khan Khattak Ahsan Shahzad Muhammad Umar Farooq

    IEEE Access , Volume 10, Pages 59115-59124

    Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 8

    DOI: 10.1109/ACCESS.2022.3178635

Data collection protocols for VANETs: a survey   2022

    Maryam Gillani Hafiz Adnan Niaz Muhammad Umar Farooq Ata Ullah

    Complex & Intelligent Systems, Volume 8, Pages 2593-2622

    Impact Factor: 6.700 | **Quartile:** 1 | **Citations:** 42

    DOI: 10.1007/s40747-021-00629-x

A novel minimal set decode-amplify-forward (MS-DAF) relaying scheme for MIMO-NOMA   2022

    Muhammad Zeeshan Mahnoor Ajmal Muhammad Umar Farooq Tabinda Ashraf

Telecommunication Systems , Volume 80, Issue 1, Pages 141-152

Impact Factor: 2.5 | **Quartile:** 3 | **Citations:** 1
DOI: 10.1007/s11235-022-00894-2

Traffic Aware Data Gathering Protocol for VANETs

2022

Maryam Gillani Hafiz Adnan Niaz Ata Ullah Muhammad Umar Farooq Saad Rehman

IEEE Access , Volume 10, Pages 23438-23449

Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 15
DOI: 10.1109/ACCESS.2022.3154780

Dynamic link adaptation for filterband multicarrier in networks with diverse service quality and throughput requirements

2022

Amna Javed Tiwana Muhammad Zeeshan Tabinda Ashraf Muhammad Umar Farooq Kashif Shahzad Adnan Akhunzada

Telecommunication Systems , Volume 79, Issue 1, Pages 109-122

Impact Factor: 2.5 | **Quartile:** 3 | **Citations:** 3
DOI: 10.1007/s11235-021-00845-3

Connected Dominating Set Enabled On-demand Routing (CDS-OR) for Wireless Mesh Networks

2021

Muhammad Umar Farooq Muhammad Zeeshan

IEEE Wireless Communications Letters , Volume 10, Issue 11, Pages 2393-2397

Impact Factor: 4.348 | **Quartile:** 1 | **Citations:** 11
DOI: 10.1109/LWC.2021.3101476

A novel hybrid spreading and scrambling based multiple access (SSMA) technique for capacity improvement

2021

Tabinda Ashraf Muhammad Zeeshan Muhammad Umar Farooq

Telecommunication Systems , Page 1-13

Impact Factor: 2.336 | **Quartile:** 3
DOI: 10.1007/s11235-021-00814-w

A Stochastic Distribution Based Methodology to Estimate Control Phase Time for Software-Defined Radios in Tactical MANETs

2021

Rukaiya Rukaiya Muazzam A. Khan Khattak Irum Matloob Irum Nosheen Shoab Ahmed Khan Muhammad Umar Farooq

IEEE Access , Volume 9, Page 71687-71698

Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 7
DOI: 10.1109/ACCESS.2021.3079173

Bidirectional Language Modeling: A Systematic Literature Review

2021

Muhammad Shah Jahan Habib Ullah Khan Shahzad Akbar Muhammad Umar Farooq Sarah Gul Anam Amjad

Scientific Programming , Volume 2021, Article ID 6641832, 15 pages

Impact Factor: 1.672 | **Quartile:** 3 | **Citations:** 12
DOI: 10.1155/2021/6641832

Adaptive Multi-Input Medium Access Control (AMI-MAC) Design using Physical Layer Cognition for Tactical SDR Networks

2021

Muhammad Zeeshan Kashif Shahzad Muhammad Umar Farooq Shoab Ahmad Khan

IEEE Access , Vol. 9, pp. 58364-58377

Impact Factor: 3.745 | **Quartile:** 2 | **Citations:** 7
DOI: 10.1109/ACCESS.2021.3073030

A Novel Self-Forming Virtual Sub-Nets Based Cross-Layer MAC Protocol for Multihop Tactical Network

2021

Rukaiya Rukaiya Farhan Hussain Shoab Ahmed Khan Muhammad Umar Farooq

Applied Sciences , Volume 11(6), Article Number 2470

Impact Factor: 2.838 | **Quartile:** 2 | **Citations:** 3
DOI: 10.3390/app11062470

CFFD-MAC: A Hybrid MAC for Collision Free Full-Duplex Communication in Wireless Ad-Hoc Networks

2021

Rukaiya Rukaiya Farhan Hussain Adnan Akhunzada Shoab Ahmed Khan Muhammad Umar Farooq

IEEE Access , Volume 9, Page 35584-35598

Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 15
DOI: 10.1109/ACCESS.2021.3061943

Multi-objective regression test suite optimization using three variants of adaptive neuro fuzzy inference system

2020

Ayesha Kiran Wasi Haider Butt Arsalan Shaukat Muhammad Umar Farooq Urooj Fatima Farooque Azam Zeeshan Anwar

On-demand Link State Hybrid Routing Protocol for Mobile Ad hoc Networks 2015

Nicolae Tapus Muhammad Umar Farooq

Scientific Bulletin, Series C , Volume 77, Issue 4, Pages 1-14

Impact Factor: -
DOI: https://www.scientificbulletin.upb.ro/rev_docs_arhiva/full648_410129.pdf

Conference Proceedings

A Study & Proposed Architecture for Large Scale IoT Networks in the space of Public Transportation 2023

Afaq Ahmad Khan Muhammad Umar Farooq Ali Hassan

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

Citations: N/A
DOI: 10.1109/ICAI58407.2023.10136684

NOMA-enabled Cognitive Communication based on Hybrid Narrowband/Wideband SDR Waveform 2022

Muhammad Zeeshan Kashif Shahzad Muhammad Umar Farooq

2022 3rd International Informatics and Software Engineering Conference (IISEC), res.country(224,)

Citations: N/A
DOI: 10.1109/IISEC56263.2022.9998288

SDN/NFV Enabled Security for an Enterprise Network using Commodity Hardware 2022

Rizwan Saeed Safwan Qureshi Muhammad Umar Farooq Muhammad Zeeshan

Proceedings - 2022 International Conference on Computing, Electronics and Communications Engineering. iCCECE 2022, res.country(231,)

Citations: N/A
DOI: 10.1109/iCCECE55162.2022.9875076

Challenges in Transition of Software Defined Radio Implementation from Bare Metal to Real-Time Operating System 2021

Kashif Shahzad Muhammad Zeeshan Muhammad Umar Farooq Shoab Ahmed Khan

2021 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)

Citations: N/A
DOI: 10.1109/ICRAI54018.2021.9651406

Near-Far Problem as a Function of Analog to Digital Converter Resolution in Software Defined Radio Tactical Network 2021

Kashif Shahzad Muhammad Zeeshan Muhammad Umar Farooq Shoab Ahmed Khan

12th International Conference on Information, Intelligence, Systems & Applications (IISA), res.country(88,)

Citations: N/A
DOI: 10.1109/IISA52424.2021.9555577

Collision avoidance and dynamic slot scheduling in multi-hop TDMA based ad-hoc networks using genetic algorithm 2019

Shoab Ahmed Khan Muhammad Umar Farooq Rukaiya

9th International Conference on Advances in Computing, Communication and Information Technology, res.country(109,)

Citations: N/A
DOI: 10.15224/978-1-63248-181-8-10

SHANZ Algorithm for QoE Enhancement of HTTP based Adaptive Video Streaming 2019

Muhammad Umar Farooq Farhan Hussain Shahid Nabi

IEEE 11th International Conference on Communication Software and Networks (ICCSN 2019) 2019 IEEE 11th International Conference on Communication Software and Networks (ICCSN 2019) , res.country(48,)

Citations: N/A
DOI: 10.1109/ICCSN.2019.8905278

Convolutional neural network based image segmentation: a review 2018

Hina Ajmal Saad Rehman Muhammad Umar Farooq Qurrat-ul-Ain Farhan Riaz Ali Hassan

SPIE Defense + Security , res.country(233,)

Citations: N/A
DOI: 10.1117/12.2304711

Comparison of SIFT and ASIFT based filters for better recognition and tracking in a remote scene environment   2018

Haris Masood Saad Rehman Qaiser Chaudry Farhan Riaz Ali Hassan Muhammad Umar Farooq

SPIE Defense + Security, res.country(233,)

Citations: N/A
DOI: 10.1117/12.2305266

CAMT: Core assisted multicast tree for ad hoc networks   2014

Muhammad Umar Farooq Nicolae Tapus

RoEduNet Conference 13th Edition: Networking in Education and Research Joint Event RENAM 8th Conference

Citations: N/A
DOI: 10.1109/RoEduNet-RENAM.2014.6955327

CEHR: Core enabled hybrid routing protocol for mobile ad hoc networks   2014

Muhammad Umar Farooq Nicolae Tapus

IEEE 10th International Conference on Intelligent Computer Communication and Processing (ICCP), res.country(188,)

Citations: N/A
DOI: 10.1109/ICCP.2014.6937020

Multiclass On-demand routing in heterogeneous ad hoc networks   2014

Muhammad Umar Farooq Nicolae Tapus

10th International Conference on Communications (COMM), res.country(188,)

Citations: N/A
DOI: 10.1109/ICComm.2014.6866717

Performance comparison of on-demand routing protocols for Mobile Ad hoc Networks   2013

Muhammad Umar Farooq Nicolae Tapus

RoEduNet International Conference 12th Edition: Networking in Education and Research, res.country(188,)

Citations: N/A
DOI: 10.1109/RoEduNet.2013.6714211

Hostname addresing in heterogeneous mobile ad hoc networks   2010

Muhammad Umar Farooq Shoab Ahmad Khan Syed Ayad Hasan Adnan Ahmed Khan

3rd International Conference on Computer Science and Information Technology, res.country(48,)

Citations: N/A
DOI: 10.1109/ICCSIT.2010.5563784

Seamless Communication Over Heterogeneous Interfaces in Mobile Ad Hoc Networks   2009

Muhammad Tassadaque Zia Muhammad Umar Farooq Shoab Ahmad Khan

IFIP International Conference on Wireless and Optical Communications Networks, res.country(65,)

Citations: N/A
DOI: 10.1109/WOCN.2009.5010564

Supporting Heterogeneous Interfaces in Mobile Ad hoc Networks   2009

Muhammad Umar Farooq Muhammad Tassadaque Zia Muhammad Asim Mubarik Shoab Ahmad Khan

International Conference on Computing, Engineering and Information, res.country(233,)

Citations: N/A
DOI: 10.1109/ICC.2009.57

Intellectual Property

Copyrights

Software for the Annotation and Labeling of Gastroenterology Images   2022
Status: Filed

Patents

Industrial Designs

Trademarks