

# Muhammad Khuram Shahzad

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## About

Dr. Muhammad Khuram Shahzad is working as Associate Professor in the School of Electrical Engineering and Computer Science. Dr. Muhammad Khuram Shahzad has a PhD in Computer Engineering. Dr. Muhammad Khuram Shahzad has published 38 research articles & conference papers having a citation count of 543, carried out 0 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in Computer Engineering</b> Sung Kyun Kwan University , Korea	2013 - 2016
<b>MS in Information Technology</b> NUST, Islamabad , Pakistan	2004 - 2007
<b>BS in Information Technology</b> University of Lahore , Pakistan	1999 - 2004

## Experience

<b>Associate Professor</b> School of Electrical Engineering and Computer Science	2022- Present
<b>Assistant Professor</b> School of Electrical Engineering and Computer Science	2019 - 2022
<b>Associate Professor</b> NUST University , H-12, Islamabad	2022 - 2023
<b>Assistant Professor</b> NUST University , H-12 Islamabad	2019 - 2022
<b>Assistant Professor</b> Keimyung University , Daegu, S. Korea	2017 - 2018
<b>Post doctorate</b> Sungkyunkwan University , Suwon, South Korea	2016 - 2017
<b>Lab Supervisor</b> NUST University , H-12 Islamabad	2008 - 2008
<b>Research Assistant</b> NUST University (NIIT) , H-12 Islamabad	2006 - 2007

## Research Articles

<b>Improved Urdu-English Neural Machine Translation with a fully Convolutional Neural Network Encoder</b> Huma Israr Muhammad Khuram Shahzad Shahid Anwar International Journal of Mathematics and Mathematical Sciences, Volume 9, No. 5, Pages 1067-1088 Impact Factor: 1.300   Quartile: 2   Citations: 2 DOI: https://doi.org/10.33889/IJMEMS.2024.9.5.056	2024
<b>Deep Learning Based Fabric Defect Detection</b> Syeda Rabia Arshad Muhammad Khuram Shahzad Research Reports on Computer Science, Volume 3, Issue 1, Pages 1-11 Impact Factor: N/A DOI: https://doi.org/10.37256/rrcs.3120244156	2024

<b>Neural Machine Translation Models with Attention-Based Dropout Layer</b> <i>Huma Israr Safdar Abbas Khan Muhammad Ali Tahir Muhammad Khuram Shahzad Muneer Ahmed Mohamad Zain</i> <i>Computers, Materials and Continua</i> , Volume 75, Issue 2, Pages 2981-3009 <b>Impact Factor:</b> 3.860   <b>Quartile:</b> 2   <b>Citations:</b> 13 <b>DOI:</b> <a href="https://doi.org/10.32604/cmc.2023.035814">https://doi.org/10.32604/cmc.2023.035814</a>	2023
<b>Translytics: A Novel Approach for Runtime Selection of Database Layout Based on User's Context</b> <i>Muhammad Makhshif Tanvir Muhammad Khuram Shahzad Muhammad Anwar Su Man Nam</i> <i>Scientific Programming</i> , Volume 2022, Article ID 4301944, 11 pages <b>Impact Factor:</b> 1.672   <b>Quartile:</b> 3 <b>DOI:</b> <a href="https://doi.org/10.1155/2022/4301944">https://doi.org/10.1155/2022/4301944</a>	2022
<b>Transfer Learning Auto-Encoder Neural Networks for Anomaly Detection of DDoS Generating IoT Device</b> <i>Unsub Shafiq Muhammad Khuram Shahzad Muhammad Anwar Qaisar Shaheen Muhammad Shiraz Abdullah Gani</i> <i>Security and Communication Networks</i> , Volume 2022, Article ID 8221351, 13 pages <b>Impact Factor:</b> N/A   <b>Citations:</b> 22 <b>DOI:</b> <a href="https://doi.org/10.1155/2022/8221351">https://doi.org/10.1155/2022/8221351</a>	2022
<b>MIYOLO: Modification of Improved YOLO-v3</b> <i>Muhammad Nawaz Mahrukh Khalil Muhammad Khuram Shahzad</i> <i>IETE Journal of Research</i> , Pages 1-10 <b>Impact Factor:</b> 2.333   <b>Quartile:</b> 3   <b>Citations:</b> 3 <b>DOI:</b> <a href="https://doi.org/10.1080/03772063.2022.2048709">https://doi.org/10.1080/03772063.2022.2048709</a>	2022
<b>EPFG: Electricity Price Forecasting with Enhanced GANS Neural Network</b> <i>Maria Hanif Muhammad Khuram Shahzad Vaneeza Mehmood Inshaal Saleem</i> <i>IETE Journal of Research</i> , Pages 1-10 <b>Impact Factor:</b> 2.333   <b>Quartile:</b> 3   <b>Citations:</b> 7 <b>DOI:</b> <a href="https://doi.org/10.1080/03772063.2021.2000510">https://doi.org/10.1080/03772063.2021.2000510</a>	2022
<b>Protocol-Based Deep Intrusion Detection for DoS and DDoS Attacks Using UNSW-NB15 and Bot-IoT Data-Sets</b> <i>Muhammad Zeeshan Qaiser Riaz Muhammad Ahmad Bilal Muhammad Khuram Shahzad Hajira Jabeen Syed Ali Haider Azizur Rahim</i> <i>IEEE Access</i> , Volume 10, Pages 2269-2283 <b>Impact Factor:</b> 3.367   <b>Quartile:</b> 2   <b>Citations:</b> 137 <b>DOI:</b> <a href="https://doi.org/10.1109/ACCESS.2021.3137201">https://doi.org/10.1109/ACCESS.2021.3137201</a>	2022
<b>A review of phishing attacks and countermeasures for internet of things-based smart business applications in industry 4.0</b> <i>Ashina Sadiq Muhammad Anwar Rizwan A. Butt Farhan Masud Muhammad Khuram Shahzad Shahid Naseem Muhammad Younas</i> <i>Human Behavior and Emerging Technologies</i> , Volume 3, Issue 5, Pages 854-864 <b>Impact Factor:</b> N/A   <b>Citations:</b> 49 <b>DOI:</b> <a href="https://doi.org/10.1002/hbe2.301">https://doi.org/10.1002/hbe2.301</a>	2021
<b>Encrypted Network Traffic Analysis of Secure Instant Messaging Application: A Case Study of Signal Messenger App</b> <i>Mehdi Hussain Asmara Afzal Shahzad Saleem M. Khuram Shahzad Anthony T.S.HO Ki-Hyun Jung</i> <i>Applied Sciences</i> , Volume 11, Issue 17, Article Number 7789 <b>Impact Factor:</b> 2.838   <b>Quartile:</b> 2   <b>Citations:</b> 19 <b>DOI:</b> <a href="https://doi.org/10.3390/app11177789">https://doi.org/10.3390/app11177789</a>	2021
<b>GAFOR: Genetic Algorithm Based Fuzzy Optimized Re-Clustering in Wireless Sensor Networks</b> <i>Muhammad Khuram Shahzad S. M. Riazul Islam Mahmud Hossain Mohammad Abdullah-Al-Wadud Atif Alamri Mehdi Hussain</i> <i>Mathematics</i> , Volume 9(1), Article Number 43 <b>Impact Factor:</b> 2.258   <b>Quartile:</b> 1   <b>Citations:</b> 22 <b>DOI:</b> <a href="https://doi.org/10.3390/math9010043">https://doi.org/10.3390/math9010043</a>	2020
<b>Secure and Blockchain-Based Emergency Driven Message Protocol for 5G Enabled Vehicular Edge Computing</b> <i>Lewis Nkenyereye Bayu Adhi Tama Muhammad Khurram Shahzad Yoon-Ho Choi</i> <i>Sensors</i> , Volm 20(1), Article Number 154 <b>Impact Factor:</b> 3.275   <b>Quartile:</b> 1   <b>Citations:</b> 48 <b>DOI:</b> <a href="https://doi.org/10.3390/s20010154">doi:10.3390/s20010154</a>	2019

<b>AEF: Adaptive En-Route Filtering to Extend Network Lifetime in Wireless Sensor Networks</b> <i>S. M. Riazul Islam Kyung-Sup Kwak Lewis Nkenyereye Muhammad K Shahzad</i> <i>Sensors</i> , Volume 19, Issue 18 <b>Impact Factor:</b> 3.275   <b>Quartile:</b> 1   <b>Citations:</b> 14 <b>DOI:</b> 10.3390/s19184036	2019
<b>PKSM: Pre-key Distribution and Sink Mobility in Commutative Cipher Based En-route Filtering to Extend the Network Lifetime in WSNs</b> <i>M Khuram Shahzad Tae Ho Cho</i> <i>Ad Hoc &amp; Sensor Wireless Networks</i> , Volume: 42, Issue: 1-2, Pages: 19-33 <b>Impact Factor:</b> 0.948   <b>Quartile:</b> 4 <b>DOI:</b> <a href="https://www.oldcitypublishing.com/journals/ahsw-n-home/ahsw-n-issue-contents/ahsw-n-volume-42-number-1-2-2018/ahsw-n-42-1-2-p-19-33/">https://www.oldcitypublishing.com/journals/ahsw-n-home/ahsw-n-issue-contents/ahsw-n-volume-42-number-1-2-2018/ahsw-n-42-1-2-p-19-33/</a>	2018
<b>LNDIR: A Light-Weight Non-Increasing Delivery-Latency Interval-Based Routing for Duty-Cycled Sensor Networks</b> <i>Muhammad Khuram Shahzad Dang Tu Nguyen V. Zalyubovskiy H. Choo</i> <i>International Journal of Distributed Sensor Networks</i> , Volume 14, Issue 4, Pages 1-16 <b>Impact Factor:</b> 1.614   <b>Quartile:</b> 3   <b>Citations:</b> 8 <b>DOI:</b> <a href="https://doi.org/10.1177%2F1550147718767605">https://doi.org/10.1177%2F1550147718767605</a>	2018
<b>A Network Density-adaptive Improved CCEF Scheme for Enhanced Network Lifetime, Energy efficiency, and Filtering in WSNs</b> <i>M Khuram Shahzad Tae Ho Cho</i> <i>Ad-Hoc and Sensor Wireless Networks</i> , Volume: 35, Issue: 1-2, Pages: 129-149 <b>Impact Factor:</b> 0.753   <b>Quartile:</b> 4 <b>DOI:</b> <a href="https://www.oldcitypublishing.com/journals/ahsw-n-home/ahsw-n-issue-contents/ahsw-n-volume-35-number-1-2-2017/ahsw-n-35-1-2-p-129-149/">https://www.oldcitypublishing.com/journals/ahsw-n-home/ahsw-n-issue-contents/ahsw-n-volume-35-number-1-2-2017/ahsw-n-35-1-2-p-129-149/</a>	2017
<b>Smart Distribution Networks: A Review of Modern Distribution Concepts from a Planning Perspective</b> <i>Syed Ali Abbas Kazmi Muhammad Khuram Shahzad Akif Zia Khan Dong Ryeol Shin</i> <i>Energies</i> , Volume 10, Issue 4, Article Number 501 <b>Impact Factor:</b> 2.676   <b>Quartile:</b> 2   <b>Citations:</b> 81 <b>DOI:</b> 10.3390/en10040501	2017
<b>Voltage Stability Index for Distribution Network connected in Loop Configuration</b> <i>Syed Ali Abbas Kazmi Muhammad Khuram Shahzaad Dong Ryeol Shin</i> <i>IETE Journal of Research</i> , Volume: 63 Issue: 2 Pages: 281-293 <b>Impact Factor:</b> 0.829   <b>Quartile:</b> 4   <b>Citations:</b> 29 <b>DOI:</b> 10.1080/03772063.2016.1257376	2017
<b>Multi-Objective Planning Techniques in Distribution Networks: A Composite Review</b> <i>Ali Abbas Kazmi Muhammad K. Shahzad Dong Ryeol Shin</i> <i>Energies</i> , Volume 10, Issue 2, Article Number 208 <b>Impact Factor:</b> 2.676   <b>Quartile:</b> 2   <b>Citations:</b> 42 <b>DOI:</b> 10.3390/en10020208	2017
<b>An Energy-aware Routing and Filtering node (ERF) selection in CCEF to extend Network lifetime in WSNs</b> <i>M Khuram Shahzad Tae Ho Cho</i> <i>IETE Journal of Research</i> , Volume: 63, Issue: 3, Pages: 368-380 <b>Impact Factor:</b> 0.829   <b>Quartile:</b> 4   <b>Citations:</b> 21 <b>DOI:</b> 10.1080/03772063.2016.1241721	2017
<b>Witness-Header and Next-Node Selection to Extend Network Lifetime in Energy-Efficient Clone-Node Detection in WSNs</b> <i>M Khuram Shahzad Quang-Ngoc Phung</i> <i>I.J. Information Technology and Computer Science</i> , Volume 8, Issue 10, Pages 22-28 <b>Impact Factor:</b> 0 <b>DOI:</b> 10.5815/ijitcs.2016.10.03	2016
<b>ERCA: Energy-aware Routing and re-Clustering Algorithm for CCEF to extend Network Lifetime in WSNs</b> <i>M Khuram Shahzad Jae Kwan Lee Tae Ho Cho</i> <i>Advanced Computational Intelligence: An International Journal</i> , Volume 3, Issue 1, Pages 11-24 <b>Impact Factor:</b> 0 <b>DOI:</b> 10.5121/acii.2016.3102	2016

<b>Sink mobility for commutative cipher based en-route filtering to prolong the network lifetime in wireless sensor networks</b> <i>M Khuram Shahzad Tae Ho Cho</i> <i>International Journal of Advanced Research</i> , Volume 3, Issue 12, pages 1055-1062. <b>Impact Factor:</b> 0 <b>DOI:</b> -	2015
<b>Extending the Network Lifetime by Pre-deterministic Key Distribution in CCEF in Wireless Sensor Networks</b> <i>M Khuram Shahzad Tae Ho Cho</i> <i>Wireless Networks</i> , Volume: 21, Issue: 8, Pages: 2799-2809 <b>Impact Factor:</b> 1.006   <b>Quartile:</b> 3   <b>Citations:</b> 9 <b>DOI:</b> 10.1007/s11276-015-0941-0	2015
<b>Modified CCEF for Energy-efficiency and Extended Network Lifetime in WSNs</b> <i>Muhammad Khuram Shahzad Tae Ho Cho</i> <i>International Journal of Ubicomp (IJU)</i> , Volume 6, No.4, Pages 1-12 <b>Impact Factor:</b> N/A <b>DOI:</b> 10.5121/iju.2015.6401	2015
<b>An Enhanced Detection and Energy-efficient en-route Filtering (EDEF) Scheme in Wireless Sensor Networks</b> <i>Muhammad Khuram Shahzad Tae Ho Cho</i> <i>Informatics Engineering: an International Journal (IEIJ)</i> , Volume 3, No.3, Pages 11-26 <b>Impact Factor:</b> N/A <b>DOI:</b> 10.5121/iej.2015.3302	2015
<b>Points-based Safe Path Planning of Continuum Robots</b> <i>Muhammad Khuram Shahzad Muhammad Sohail Iqbal Peter Bloodsworth</i> <i>International Journal of Advanced Robotic Systems, Sage Publications</i> , Volume 12, Article Number 12 <b>Impact Factor:</b> 0.615   <b>Quartile:</b> 4   <b>Citations:</b> 17 <b>DOI:</b> 10.5772/60857	2015

## Conference Proceedings

<b>A Large-Scale Font-Diverse Sindhi Ligature Recognition System</b> <i>Zeeshan Ali Safdar Abbas Khan M. Khuram Shahzad H. S. M. Bilal</i> <i>2023 International Conference on Frontiers of Information Technology, FIT 2023</i> , res.country(177,)	2023
<b>A Forensic Framework for Webmail Threat Detection Using Log Analysis</b> <i>Abdul Saboor Malik Muhammad Khuram Shahzad Mehdi Hussain</i> <i>Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)</i> res.country(188,)	2022
<b>Classification of IoT based DDOS Attack using Machine Learning Techniques</b> <i>Muhammad Fasih Ashfaq Maryam Malik Urooj Fatima Muhammad Khuram Shahzad</i> <i>14th International Conference on Security for Information Technology and Communications (SECITC 2021)</i> , res.country(121,)	2022
<b>Steel Defect Classification Using Machine Learning</b> <i>Syeda Rabia Arshad Ishwa Obaid Rameesha Gull Muhammad Khuram Shahzad</i> <i>The 16th International Conference on Ubiquitous Information Management and Communication (IMCOM 2022)</i> , res.country(121,)	2022
<b>Hybrid ResNet: A Shallow Deep Learning Architecture for Moderate Datasets</b> <i>Ghulam Murtaza Obaid-ur-Rehman Obaid-ur-Rehman Muhammad K. Shahzad S. M. Riazul Islam Mahmud Hossain Kyung-Sup Kwak</i> <i>2021 International Conference on Information and Communication Technology Convergence (ICTC)</i> , res.country(121,)	2021

<p><b>BPTE: Bitcoin Price Prediction and Trend Examination using Twitter Sentiment Analysis</b></p> <p><i>Muhammad K. Shahzad Laiba Bukhari Tayyeba Muhammad Khan S. M. Riazul Is Mahmud Hossain Kyung-Sup Kwak</i></p> <p><i>International Conference on Information and Communication Technology Convergence, ICTC 2021, res.country(121,)</i></p> <p><b>Citations:</b> N/A</p> <p><b>DOI:</b> 10.1109/ICTC52510.2021.9620216</p>	2021
<p><b>A Fuzzy System based Approach to Extend Network Lifetime for En-Route Filtering Schemes in WSNs</b></p> <p><i>M Khuram Shahzad Lewis Nkenyereye S.M. Riazul Islam</i></p> <p><i>2019 11th International Conference on Computer and Automation Engineering, res.country(13,)</i></p> <p><b>Citations:</b> N/A</p> <p><b>DOI:</b> 10.1145/3313991.3314004</p>	2019
<p><b>Modeling Optimum ETSP Protocol for WSN</b></p> <p><i>Muhammad Khuram Shahzad</i></p> <p><i>IEEE International Multitopic Conference , res.country(177,)</i></p> <p><b>Citations:</b> N/A</p> <p><b>DOI:</b> 10.1109/INMIC.2008.4777798</p>	2008
<p><b>Complexity Reduction of Markov Channel Models for Wireless Networks using Graph Theory</b></p> <p><i>Hassaan Khaliq Qureshi Khurram Shahzad Syed Ali Khayam Muttukrishnan Rajarajan Veselin Rakocevic</i></p> <p><i>Military Communication , res.country(233,)</i></p> <p><b>Citations:</b> N/A</p> <p><b>DOI:</b> 10.1109/MILCOM.2008.4753575</p>	2008
<p><b>SRVF: An Energy-Efficient Link Layer Protocol for Reliable Transmission over Wireless Sensor Networks</b></p> <p><i>Adnan Iqbal Muhammad Khuram Shahzad Syed Ali Khayam</i></p> <p><i>IEEE International Conference on Communications, res.country(48,)</i></p> <p><b>Citations:</b> N/A</p> <p><b>DOI:</b> 10.1109/ICC.2008.35</p>	2008
<p><b>ETSP: An Energy-efficient Time Synchronization Protocol on Wireless Sensor Networks</b></p> <p><i>Muhammad Khuram Shahzad Arshad Ali Nasiruddin Gohar</i></p> <p><i>IEEE 22nd International Conference on Advanced Information Networking and Applications, res.country(113,)</i></p> <p><b>Citations:</b> N/A</p> <p><b>DOI:</b> 10.1109/WAINA.2008.181</p>	2008

Editorial Activities

<b>Cluster Computing</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.6	2024
<b>Journal of Intelligent Systems and Internet of Things</b> Edited Journal Issue / Proceeding / Book <b>Impact Factor:</b> N/A	2024
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.476	2024
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.9	2024
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.476	2023
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.476	2023
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.476	2023
<b>Wireless Personal Communications</b> Reviewed Papers for Journals <b>Impact Factor:</b> 2.2	2023
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.476	2023
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.476	2023
<b>IEEE Access</b> Reviewed Papers for Journals <b>Impact Factor:</b> 3.476	2023
<b>Journal of Supercomputing</b> Reviewed Papers for Journals <b>Impact Factor:</b> 2.557	2022