

Dr. SHARIQ MAHMOOD KHAN

(HEC APPROVED SUPERVISOR)

PROFESSOR

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

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ACADEMIC QUALIFICATION

Doctor of Philosophy (Ph.D.) Brunel University London, UK Title: Reliable On-Demand Routing Protocols for Mobile Ad-Hoc Networks		Nov 2015
Master of Computer Science & Information Technology NED University of Engineering & Technology, Karachi Concentration: Networks Management, Network & Information Security	CGPA: 3.95	June 2007
Bachelor of Computer Science & Information Technology NED University of Engineering & Technology, Karachi	"A-I"	Feb 2005
HSC (Pre-Engineering) Sindh Government DJ Science College, Karachi	"A"	Aug 2000

WORK EXPERIENCE (ACADEMIC AND ADMINISTRATIVE)

Professor & Postgraduate Coordinator Department of Computer Science & Information Technology. NED University of Engineering & Technology, Karachi	2022 – Date
Associate Professor Department of Computer Science & Information Technology. NED University of Engineering & Technology, Karachi	2018 – 2022
In-Charge NED Photography Society NED University of Engineering & Technology, Karachi	2017 – 2022
FYP Coordinator Department of Computer Science & Information Technology. NED University of Engineering & Technology, Karachi	2019 – 2021
Turnitin Focal Person – (CSIT)	2015 – Date
Final Year Class Advisor Department of Computer Science & Information Technology. NED University of Engineering & Technology, Karachi	2015 – 2019
Assistant Professor Department of Computer Science & Software Engineering. NED University of Engineering & Technology, Karachi	2009 – 2018
Lecturer Department of Computer Science & IT. NED University of Engineering & Technology, Karachi	2007 – 2009
IT-Manager High Performance Computing Centre, NEDUET	2005 – 2007

BOARD MEMBER

Member Board of Studies - Department of CSIT, Sir Syed University of Engineering and Technology

Member Board of Studies - Department of CSIT, Benazir Bhutto Shaheed University Lyari

Board of Review (Information Technology Department, NED University)

Board of Review Member, Examination Department, NED University.

Board of Review Member, Audit Department, NED University.

Member Senate NED University

Member Academic Council NED University

Member Board of Faculty - Electrical and Computer Engineering (ECE)

Board of Studies Member Department of Computer Science & IT, NED University.

Member: Industrial Advisory Board, Department of Computer Science & IT, NED University.

Member: MS Admission Committee, Department of Computer Science & IT, NED University.

PROFESSIONAL SERVICES

Expert for recommendation of WBL Diploma in Emerging Technologies (Cloud and Cyber Security) - Sindh Board of Technical Education (SBTE)

Expert in Selection Board - Sir Syed University of Engineering and Technology

Expert in Selection Board - University of Sindh (UoS)

Expert member of Charter Inspection and Evaluation Committee (CIEC)

Head Invigilator – PAET 2023-2025 - Department of CS&IT

PH.D and MS THESIS EXAMINER

External Jury member and Expert for Ph.D. Synopsis at FAST-NUCES

External Examiner for Final Ph.D. Thesis Defense - Hamdard University

External Examiner for Final Ph.D. Seminar University of Sindh - Jamshoro

External Examiner for Multiple M.S. Thesis University of Sindh – Jamshoro

COMMUNITY SERVICE

Managing Scholarship for the students of Department of Computer Science and IT by the name of Prof. Dr. Mahmood Khan Pathan Scholarship - Funded by BCITians. The donors of this scholarship are the Alumni of Department of Computer Science and IT (Batch 2000-2001)

FUNDED PROJECTS

✓ PhD. Research Project

- **Title:** Enhancing Packet Delivery in Intelligent Transportation System.
Total Sanctioned Research Fund: 2.84 (Millions PKR)
Funding Agency : NED University and MoST Endowment Fund
Status : Completed
- **Title:** Secure Dynamic Request Scheduling and Selection of Trust based Cloud Service Providers.
Total Sanctioned Research Fund: 1.0 (Millions PKR)
Funding Agency : NED University
Status : Completed

✓ Final Year Project

- **Recipient of Ignite - National Technology Fund 2017-18 (HEC)**
 - Progressive Web App For Connecting Blood Donors and Recipients
Status : Completed
 - React-Native Based Mobile Application for Tracking of NED Shuttle Using Global Position System
Status : Completed
- **Recipient of NED Alumni Association of Southern California (NEDAASC) FYP Funding 2024-25**
 - **NavigateSolo :** A Smart Navigation System for Enhancing Mobility and Safety for the Visually Impaired Individuals
Status : Completed

TRAINING : HIGHER EDUCATION

✓ Higher Education Teachers Training 2019

- Successfully completed this capacity building course from NED University.
- This course was based on the course from the Harvard University
Titled " Higher Education Teaching Certificate"

AWARDS/ SCHOLARSHIPS

▪ Recipient of Faculty Development Scholarship for Ph.D. at Brunel University, UK.	2010
Master with CGPA 3.95/4	NED University Karachi 2007
Bachelor with Distinction	NED University Karachi 2005
Winner	IEEE Student Branch Paper Presentation, 'Urdu Mobile Phone Messenger', IEEE Karachi 2004
Winner	ProQuest 2003 Software Competition, Karachi University 2003
Cash Award	The Vice Chancellor NED University of Engineering & Technology Engr. Abul Kalam sanction cash award for Winning "All Pakistan Software Competition (ProQuest)" held at Karachi University. 2003

CONFERENCES ORGANIZED

- **Conference Co-Chair and Secretary**, 4th International Conference on Innovations in Computer Science (**ICONICS'24**), December 14-15, 2022.
- **Conference Secretary**, 3rd International Conference on Innovations in Computer Science & Software Engineering (**ICONICS'22**), December 14-15, 2022.
- **Conference Secretary**, 2nd International Conference on Innovations in Computer Science & Software Engineering (**ICONICS'18**), December 5-6, 2018.
- **Founding Conference Secretary**, 1st International Conference on Innovations in Computer Science & Software Engineering (**ICONICS'16**), December 15-16, 2016.

CREATIVE CONTRIBUTIONS

- **Director** : NED University welcome video (showcased on NED official website) YouTube Link :
<https://www.youtube.com/watch?v=6c4yF5992KE>
- **Production Manager** : Documentary on NED University "A tale of 100 years – An enchanting engineering Legacy"
YouTube Link : <https://www.youtube.com/watch?v=GtWcmGmSMe4>
- As an In-Charge of NED Photography Society provided photographic support in the following NED University Annual Reports :
 - NED University Annual report 2019-20
 - NED University Annual report 2018-19
 - NED University Annual report 2017-18
 - NED University Annual report 2016-17

COMPLETED PH.D. RESEARCH PROJECTS

- Enhancing Packet Delivery in Intelligent Transportation System
- Secure Dynamic Request Scheduling and Selection of Trust based Cloud Service Providers

COMPLETED MS RESEARCH PROJECTS

- Hammad Shaikh, Analysis of Privacy-Preserving Algorithms and Techniques for Trustworthy Data Sharing, Spring-2024
- Syed Muhammed Nouman Qadir, Investigating Black Hole Attack in Wireless Sensor Network, Fall-2023
- Ayesha Urooj Choudary, Investigating the Performance Li-Fi-Based Underwater Communication, Fall-2023
- Muhammad Umar Khan, Exploring the Practicality and Challenges of Various MLOps Frameworks: An Investigation, Fall-2023
- Abdul Aziz, Performance Analysis for 5G cellular networks: Effects of Different Weather Conditions on Millimeter waves Propagations at 26 GHz and 28 GHz and UAV assisted 5G Heterogeneous Network, Spring-2023
- Muhammad Junaid, Detection and analysis of decentralized finance scams in the Binance smart chain, Spring-2023
- Emon Batool, Analysis of Threats and Security of Endpoints in a Smart Home, Fall-2022
- Syed Muhammad Ali Minhal, A Secure Key Management Scheme in Underwater Acoustic Sensor Networks (UASN), Fall-2022
- Josph Terence Peter Noronha Trend forecasting using Data Analytics for a New e-Commerce Business, Fall-2022
- Sana Faryal Balouch, Cloud Computing: Review of Recent Advancements & Challenges Related To Cloud Forensics, Spring-2022
- Muhammad Huzaifa Sharf, Challenges in Information Security of Pakistan and way forward, Fall-2021
- Danish Karim, Analysis of Worldwide Impact of Covid-19, Fall-2021

- Tasneem Mansoor, Efficient Duping Technique for Data Confidentiality in Online Transaction, Spring-2020
- Mahnoor Fatima, Securing Medical Data Transmission using Cryptography and Steganography Spring-2020
- Muhammad Nabeel Ibrahim Khan Analysis of SDN Controller in Densely Populated Wireless Network Spring-2020
- Maryam Anwer, Deep Learning Approach for Internet of Things to Distributed Attack Detection Scheme, Spring 2019
- Madiha Amjad Hussain, Artificial Intelligence in Cyber Security, Spring-2019
- Hina Siddiqi, Charity Fund Based on Block Chain, Fall-2019
- Tooba, Improving IoT based Health Care Systems with the integration of Fog Computing Secure Layer, Fall-2019
- Muzna Junaid Chisti, Body Sensor Network ID Based Cryptography, Fall-2019
- Nazia Majeed, Masquerading Attack detection using received signal strength, Fall-2019
- Qurrat UL Ain Shamsher, Analysis of Cyberattacks against IoT Connected Devices, Fall-2019
- Jibran Resheed Khan, Underwater Wireless Sensor Network Communications, Fall-2019

COURSES TAUGHT

- Cryptography (Master's Level Course)
- Advanced Computer Networking (Master's Level Course)
- Network & Information Security (Undergraduate Level Course)
- Wireless Networks & Mobile Computing (Undergraduate Level Course)
- Data Structures Algorithm & Applications (Undergraduate Level Course)
- Programming language (Undergraduate Level Course)
- Fundamentals of Information Technology (Undergraduate Level Course)

SELECTED RESEARCH PUBLICATIONS

- KHAN, JIBRAN R., SHARIQ M. KHAN, and FARHAN A. SIDDIQUI. "Investigative Analysis of Vulnerabilities and Attacks on Underwater Wireless Sensor Networks." *Adhoc & Sensor Wireless Networks* 60 (2025).
- Shaikh, Hammad, and Shariq Mahmood Khan. "Implementation of Differential Privacy for Enhancing Data Privacy in Wearable Fitness Trackers." *2024 4th International Conference on Innovations in Computer Science (ICONICS). IEEE*, 2024.
- Khan, Muhammad Mubashir, et al. "Ransomware prevention using moving target defense based approach." *Concurrency and Computation: Practice and Experience* 35.7 (2023): e7592.
- Hyder, Muhammad Faraz, et al. "Countering crossfire DDoS attacks through moving target defense in SDN networks using OpenFlow traffic modification." *Transactions on Emerging Telecommunications Technologies* 34.12 (2023): e4853.
- Khan, Muzammil Ahmad, Shariq Mehmood Khan, and Siva Kumar Subramaniam. "SECURITY ISSUES IN CLOUD COMPUTING USING EDGE COMPUTING AND BLOCKCHAIN: THREAT, MITIGATION, AND FUTURE TRENDS-A SYSTEMATIC LITERATURE REVIEW." *Malaysian Journal of Computer Science* 36.4 (2023).
- Akhtar, Talha, Najmi Ghani Haider, and Shariq Mahmood Khan. "A comparative study of the application of glowworm swarm optimization algorithm with other nature-inspired algorithms in the network load balancing problem." *Engineering, Technology & Applied Science Research* 12.4 (2022): 8777-8784.
- Khan, Muzammil Ahmad, Shariq Mahmood Khan, and Siva Kumar Subramaniam. "Secured dynamic request scheduling and optimal CSP selection for analyzing cloud service performance using intelligent approaches." *IEEE Access* 11 (2023): 140914-140933.
- Khan, Humera Mehfooz, et al. "Analysis of 3D Building Construction Applications in Augmented Reality." *International Journal of Computer Science & Network Security* 22.10 (2022): 340-346.
- Khan, Danish M., et al. "Development of wavelet coherence EEG as a biomarker for diagnosis of major depressive disorder." *IEEE Sensors Journal* 22.5 (2022): 4315-4325.

- Ali, Shahid Muhammad, et al. "Design and evaluation of a button sensor antenna for on-body monitoring activity in healthcare applications." *Micromachines* 13.3 (2022): 475.
- Kazi, Abdul Karim, Shariq Mahmood Khan, and Najmi Ghani Haider. "Reliable group of vehicles (RGoV) in VANET." *IEEE Access* 9 (2021): 111407-111416.
- Anwer, Maryam, S. Mahmood Khan, and M. Umer Farooq. "Attack detection in IoT using machine learning." *Engineering, Technology & Applied Science Research* 11.3 (2021): 7273-7278.
- Farooq, M. U., Ahmed, A., Khan, S. M., & Nawaz, M. B. (2021). Estimation of Traffic Occupancy using Image Segmentation. *Engineering, Technology and Applied Science Research*, 11(4), 7291-7295.
- Kazi, Abdul Karim, Khan, Shariq Mahmood "DyTE: An Effective Routing Protocol for VANET in Urban Scenarios" *Engineering, Technology & Applied Science Research*. Vol. 11, No. 2. 2021 6979-6985
- A. K. Kazi and S. M. Khan, "Working of various routing protocols in Vehicular Ad-hoc Network: A Survey," *University of Sindh Journal of Information and Communication Technology*, vol. 4, no. 4, pp. 278–286, Dec. 2020.
- M. J. Chishti and S. M. Khan, "Body Sensor Network – ID-Based Cryptography," *University of Sindh Journal of Information and Communication Technology*, vol. 4, no. 3, pp. 143–151, Oct. 2020.
- Subramaniam, S. K., Khan, S. M., & Nilavalan, R. (2018). STATIC NETWORK PERFORMANCE OPTIMISATION USING DUAL INTERLEAVE ROUTING ALGORITHM. *IIUM Engineering Journal*, 19(1), 129 - 143.
- Khalil, Usman & Nasir, Adnan & Khan, S.M. & Javid, T & Raza, S.A. & Siddiqui, A. (2018). Automatic Road Accident Detection Using Ultrasonic Sensor. 206-212. 10.1109/INMIC.2018.8595541.
- Khan, N.A., Khan, S.M., Kanji, S.J. and Iltifat, U., 2017. Use Hand Gesture to Write in Air Recognize with Computer Vision. *IJCSNS*, 17(5), p.51.
- Awan, J.H., Memon, S., Khan, S.M., Usman, M., Khan, R.A., Abbasi, S., Noonari, A.Q. and Hussain, Z., 2017. A user friendly security framework for the protection of confidential information. *International Journal of Computer Science and Network Security (IJCSNS)*, 17(4), p.215.
- Abdullah, M., Khan, N.A., and Khan, S.M, 2017. Domineering Analysis & Mitigation of IP-SEC VPN Using GNS3. *International Journal of Computer Science and Network Security (IJCSNS)*, 17(4), p.245.
- M. A. Memon, S. Memon and S. Khan, "THD Minimization from H-Bridge Cascaded Multilevel Inverter Using Particle Swarm Optimization Technique," *Mehran University Research Journal of Engineering & Technology*, vol. 36, pp. 33-38, January 2017.
- S. Subramaniam, S.M.Khan et al, "Network performance optimization using odd and even routing algorithm for pipeline network," in 2016 8th Computer Science and Electronic Engineering (CEECE), 2016, pp. 118-123.
- S. M. Khan, R. Nilavalan and A. F. Sallama, "A Novel Approach for Reliable Route Discovery in Mobile Ad-Hoc Network," *Wireless Personal Communications*, vol. 83, pp. 1519-1529, July 2015.
- A. Sallama, M. Abbod and S. M. Khan, "Applying Sequential Particle Swarm Optimization Algorithm to Improve Power Generation Quality," *International Journal of Engineering and Technology*, vol. 4, pp. 223-233, 2014.
- M. Adnan, P. A. Longley and S. M. Khan, "Social dynamics of Twitter usage in London, Paris, and New York City," *First Monday*, vol. 19, 2014.
- S. M. Faraz, S. I. Behlim, S. M. Khan and S. A. Sattar, "Interactive training framework a new approach to e-Learning," in *Proceedings of the 7th International Conference on Frontiers of Information Technology*, 2009, pp. 79.
- S. M. Khan, Q. Ni "Delay-Constraint Routing Simulation For Vehicular Ad Hoc Network", Presented Poster on IEEE-SED-ResCon, June 2011, Brunel University, UK.

EXPERT REVIEWER OF JOURNALS

- JCR Journal: "Wireless Personal Communications" Published by "Springer USA" (ISSN: 0929-6212)
- JCR Journal: "Ad Hoc & Sensor Wireless Networks" Published by " Old City Publishing Inc., USA" (ISSN: 1551-9899)
- JCR Journal: "Mobile Networks and Applications" Published by "Springer Switzerland" (ISSN : 1383-469X)
- International Journal : "Engineering Sciences and Technology International Research Journal" (ISSN: 2521-5027)
- International Journal of Computer Applications in Technology (ISSN: 0952-8091)
- International Journal of Communication Networks and Distributed Systems (ISSN: 1754-3916)

PROFESSIONAL TRAININGS

- Participated in Workshop as Nominee of NED University: **"Cloud Client Computing & Virtualization"** held on 9th March 2017.
- Training as Nominee of NED University: **Huawei Authorized IT & Network Academy (HAINA)** , Huawei Certified Network Associate (HCNA) at UET Lahore from 17-10-206 to 21-10-2016
- Participated in Symposium as Nominee of NED University: **"International Entrepreneurship Educators Symposium"** held in the Institute of Business Administration (IBA), Karachi.
- Attended training on **"Copyright for Dissertations and Theses"** held on 25th October 2010 at **Brunel University London**.
- Attended training on **"Referencing with RefWorks"** held on 20th October 2010 at **Brunel University London**
- Attended training on **"Early-Stage Research Module"** held on 18th October 2010 at **Brunel University London**
- Attended training on **"Exploiting E-Journals"** held on 13th October 2010 at **Brunel University London**
- Successfully completed 5 days workshop as Nominee of NED University on **"High Performance Computing"** held at GIK Institute. This workshop is organised by GIK Institute in collaboration with **University of Illinois, Chicago USA** from 7th to 11th August 2006.

PARTICIPATION IN CONFERENCES

- Participated in **2nd International Conference on Innovations in Computer Science & Software Engineering (ICONICS'18)** 5th and 6th December 2018 organized by Department of Computer Science & Software Engineering NED UET, Karachi.
- Participated in **1st International Conference on Innovations in Computer Science & Software Engineering (ICONICS-2016)** 15th and 16th December 2016 organized by Department of Computer Science & Software Engineering NED UET, Karachi.
- Attended: **6th International Mechanical Engineering Congress on Green Systems and Innovation** held on 15th and 16th July 2016 at IEP Convention Centre Karachi. IEP Karachi and NED UET Karachi jointly organize this conference.
- Participated in conference as Nominee of NED University: **"Conference on Hacking and Security (CHASE-2007)"** held on 1st-3rd February 2008 at Lahore.
- Attended **"Microsoft Pakistan Developer Conference (PDC)"** held on 17th – 19th June 2003 at Marriott and Pearl Continental Hotel, Karachi.

COUNTRIES VISITED

- United Kingdom
- France
- United Arab Emirates