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CURRICULUM VITAE

Dr. Muhammad Usman Shahid Khan

June 3, 2023

Contents

Curriculum Vitae

MUHAMMAD USMAN SHAHID KHAN

Curriculum Vitae

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BIOGRAPHY

Muhammad Usman Shahid Khan is a **Tenured Associate Professor** at COMSATS University Islamabad, Abbottabad, Pakistan. He completed a Ph.D. in electrical and computer engineering at North Dakota State University, USA in 2015, on a COMSATS scholarship. Previously, he received a Master degree in Information Security from National University of Science and Technology (NUST), Pakistan in 2008 and a bachelor degree in computer science from Bahauddin Zakariya University, Pakistan in 2005. He is an IEEE Member. His research interests include Data Mining, Big Data, IoT, and Artificial Intelligence.

FORMAL EDUCATION

PhD, Electrical and Computer Engineering	Aug. 2012 – Aug 2015
North Dakota State University, Fargo, USA	
MS, Information Security	Nov. 2005 – Sept 2008
National University of Sciences and Technology (NUST), Pakistan	
Bachelor of Science in Computer Science (Hons)	Sept. 2000 – Jan. 2005
Bahauddin Zakariya University, Multan, Pakistan	

SCHOLARSHIPS/ GRANTS

2021	Ads and Malicious content observatory, Funding source: National Center of Cyber Security and HEC Pakistan, PKR 11.178 million.
2014	Cogi, Inc - Grad Assistant, Subcontract from NDSU Center of Excellence in Sensors, Communications, and Controls, Funding source: ND Centers of Excellence, FAR0022735, $19,776, Mar. 2014 – June 2015.

AWARDS

2021	Best Researcher Award at Department of Computer Science, COMSATS UI, Abbottabad
2021	Research Productivity Award at Department of Computer Science, COMSATS UI, Abbottabad
2017	Research Productivity Award at Department of Computer Science, COMSATS UI, Abbottabad

PROFESSIONAL EXPERIENCE

Tenured Associate Professor, CUI Abbottabad	May. 2023 – to date
Assistant Professor, CUI Abbottabad	Aug. 2015 – May 2023
Graduate Research Assistant, Software and System Group, NDSU, USA	March. 2014 – Jun 2015
Lecturer, CIIT, Abbottabad	Aug. 2008 – Aug. 2015
Visiting Lecturer, Institute of Communication Technology, Pakistan	April. 2008 – July. 2008
Web Developer, Innovative Research & e-Solutions, Pakistan	April. 2004 – Dec. 2005

Impact Factor Journal Articles

1. W. Afandi, S. M. A. H. Bukhari, **M. U. S. Khan**, T. Maqsood, M. A. B. Fayyaz, A. R. Ansari, "Explainable YouTube Video identification using Sufficient Input Subsets," *IEEE Access*, vol. 11, pp. 33178 - 33188, 2023 doi:10.1109/ACCESS.2023.3261562 ☑ **IF:3.367**

2. S. M.A.H. Bukhari, W. Afandi, **Muhammad U.S. Khan**, T. Maqsood, M. B Qureshi, M. A. B. Fayyaz, R. Nawaz, "E-Ensemble: A Novel Ensemble Classifier for Encrypted Video Identification," *Electronics*, vol. 11, pp. 4076, 2022 doi:10.3390/electronics11244076 ☑ **IF:2.690**

3. W. Afandi, S. M. A. H. Bukhari, **M. U. S. Khan**, T. Maqsood, S. U. Khan, "Fingerprinting Technique for YouTube Videos Identification in Network Traffic," *IEEE Access*, vol. 10, pp. 76731-76741, 2022 doi:10.1109/ACCESS.2022.3192458 ☑ **IF:3.367**

4. **M. U. S. Khan**, S. M. A. H. Bukhari, T. Maqsood, M. A.B. Fayyaz, D. Dancey, and R. Nawaz, "SCNN-Attack: A Side-Channel Attack to Identify YouTube Videos in a VPN and Non-VPN Network Traffic," *Electronics*, vol. 11, pp. 350, 2022 doi:10.3390/electronics11030350 ☑ **IF:2.397**

5. **M. U. S. Khan**, M. Jawad, and S. U. Khan, "Adadb: Adaptive Diff-batch Optimization Technique for Gradient Descent," *IEEE Access*, vol. 9, pp. 99581-99588, 2021 doi:10.1109/ACCESS.2021.3096976 ☑ **IF:3.367**

6. K. S. Zaidi, S. Hina, M. Jawad, A. N. Khan, **M U. S. Khan**, H. B. Pervaiz, and R. Nawaz, "Beyond the horizon, backhaul connectivity for offshore IOT devices," *Energies*, vol. 14, no. 21, p. 6918, 2021 doi:10.3390/en14216918 ☑ **IF:3.004**

7. M. Jawad, M. B. Qureshi, **M. U. S. Khan**, S. M. Ali, A. Mehmood, B. Khan, X. Wang, and S. U. Khan, "A Robust Optimization Technique for Energy Cost Minimization of Cloud Data Centers," *IEEE Transactions on Cloud Computing*, vol. 9, no. 2, pp. 447-460, 2021 doi:10.1109/TCC.2018.2879948 **IF:5.938**

8. S. Sajid, M. Jawad, K. Hamid, **M. U.S. Khan**, S. M. Ali, A. Abbas, S. U. Khan, "Blockchain-based decentralized workload and energy management of geo-distributed data centers," *Sustainable Computing: Informatics and Systems*, Vol. 29, March 2021, 100461 doi:10.1016/j.suscom.2020.100461 ☑ **IF:4.028**

9. M. Ali, A. Abbas, **M. U. S. Khan**, S. U. Khan, "SeSPHR: A Methodology for Secure Sharing of Personal Health Records in the Cloud," *IEEE Transactions on Cloud Computing*, Vol. 9, no. 1, Jan.-March 1, 2021 doi:10.1109/TCC.2018.2854790 ☑ **IF:5.938**

10. **M.U. S. Khan**, A. Abbas, A. Rehman and R. Nawaz, "HateClassify: A Service Framework for Hate Speech Identification on Social Media," *IEEE Internet Computing*, Volume: 25, Issue: 1, pp. 40-49, Jan.-Feb. 1 2021 doi:10.1109/MIC.2020.3037034 ☑ **IF:4.231**

11. S. A. Ali, M. Jawad, **M. U. S. Khan**, K. Bilal, J. Glower, S. C. Smith, S. U. Khan, K. Li, and A. Y. Zomaya, "An Ancillary Services Model for Data Centers and Power Systems," *IEEE Transactions on Cloud Computing*, Vol. 8, Issue: 4, pp. 1176-1188, Oct.-Dec. 1 2020 doi:10.1109/TCC.2017.2700838 ☑ **IF:4.714**

12. W. Ahmed, H. Ansari, B. Khan, Z. Ullah, S.M. Ali, C. A. Mahmood, M. B. Qureshi, I. Hussain, M. Jawad, **M.U.S. Khan**, A. Ullah, and R. Nawaz, "Machine Learning Based Energy Management Model for Smart Grid and Renewable Energy Districts," *IEEE Access*, vol. 8, pp. 185059-185078, oct, 2020 doi:10.1109/ACCESS.2020.3029943 ☑ **IF:4.098**

13. M. Jawad, M. B. Qureshi, S. M. Ali, N. Shabbir, **M.U.S. Khan**, A. Aloraini, and R. Nawaz, "A Cost-Effective Electric Vehicle Intelligent Charge Scheduling Method for Commercial Smart Parking Lots Using a Simplified Convex Relaxation Technique," *Sensors*, vol. 20, no. 17, p. 4842, 2020 doi:10.3390/s20174842 ☑ **IF:3.03**

14. D. Iqbal, A. Abbas, M. Ali, **M.U.S. Khan**, and R. Nawaz, "Requirement Validation for Embedded Systems in Automotive Industry Through Modeling," *IEEE Access*, vol. 8, pp. 8697-8719, 2020 doi:10.1109/ACCESS.2019.2963774 ☑ **IF:4.098**

15. M. A. Rustam, B. Khan, S. M. Ali, C. A. Mahmood, **M.U.S. Khan**, and R. Nawaz, "An Adaptive Distributed Averaging Integral Control Scheme for Micro-Grids With Renewable Intermittency and Varying Operating Cost," *IEEE Access*, vol. 8, pp. 455-464, 2020 doi:10.1109/ACCESS.2019.2960855 ☑ **IF:4.098**

16. H. Ahmed, I. Ullah, U. Khan, M. B. Qureshi, S. Manzoor, N. Muhammad, **M.U.S. Khan**, and R. Nawaz, "Adaptive Filtering on GPS-Aided MEMS-IMU for Optimal Estimation of Ground Vehicle Trajectory," *Sensors*, Vol.19 No. 24 p.5357, 2019 doi:10.3390/s19245357 ☑ **IF:3.03**

17. K. S Awaisi, A. Abbas, M. Zareei, H. A. Khattak, **M.U.S. Khan**, M. Ali, I. U. Din, and S. Shah, S, "Towards a Fog Enabled Efficient Car Parking Architecture," *IEEE Access*, vol. 7, pp.159100-159111, 2019 doi:10.1109/ACCESS.2019.2950950 ☑ **IF:4.098**

18. R. Irfan, O. Khalid, **M.U.S. Khan**, F. Rehman, A. U. Khan, R. Nawaz, "SocialRec: A Context-Aware Recommendation Framework With Explicit Sentiment Analysis," *IEEE Access*, vol. 7, pp 116295-308, 2019 doi:10.1109/ACCESS.2019.2932500 ☑ **IF:4.098**

19. H. Qadir, O. Khalid, **M.U.S. Khan**, A. U. R. Khan and R. Nawaz, "An Optimal Ride Sharing Recommendation Framework for Carpooling Services," *IEEE Access*, vol. 6, pp. 62296-62313, 2018 doi:10.1109/ACCESS.2018.2876595 ☑ **IF:3.557**

20. **M.U.S. Khan**, M. Ali, A. Abbas, S. U. Khan, and A. Y. Zomaya, "Segregating spammers and unsolicited bloggers from genuine experts on twitter," *IEEE Transactions on Dependable and Secure Computing*, vol. 15, no. 4, pp. 551–560, 2018 doi:10.1109/TDSC.2016.2616879 ☑ **IF:2.926**

21. **M.U.S. Khan**, A. Abbas, M. Ali, M. Jawad, S. U. Khan, K. Li, and A. Y. Zomaya, "On the correlation of sensor location and human activity recognition in body area networks (bans)," *IEEE Systems Journal*, vol. 12, no. 1, pp. 82–91, 2018 doi:10.1109/JSYST.2016.2610188 ☑ **IF:3.882**

22. M. A. Al-ghardi, K. D. Varathan, S. D. Ravana, E. Ahmed, G. Mujtaba, **M.U.S. Khan**, and S. U. Khan, "Analysis of Online Social Network Connections for Identification of Influential Users: Survey and Open Research Issues," *ACM Computing Surveys*, Volume 51, no. 1, pp. 16-37, 2018 doi:10.1145/3155897 ☑ **IF:6.748**

23. **M.U.S. Khan**, O. Khalid, Y. Huang, F. Zhang, R. Ranjan, S. U. Khan, J.Cao, K. Li, B. Veeravalli, and A. Zomaya, "MacroServ: A Route Recommendation Service for Large-Scale Evacuations," *IEEE Transaction of Service Computing* vol. 10, no. 4, pp. 589 - 602, July-Aug. 1 2017 doi:10.1109/TSC.2015.2497241 ☑ **IF:3.52**

24. R. Irfan, O. Khalid, **M.U.S. Khan**, C. Chira, R. Ranjan, F. Zhang, S. U. Khan, B. Veeravalli, K. Li, and A. Zomaya, "MobiContext: A Context-aware Cloud-based Recommendation Framework," *IEEE Transactions on Cloud Computing*, vol. 5, no. 4, pp. 712-724, October-December, 2017 doi:10.1109/TCC.2015.2440243 ☑ **IF:7.928**

25. A. Abbas, M. Ali, **M.U.S. Khan**, and S. U. Khan, "Personalized Healthcare Cloud Services for Disease Risk Assessment and Wellness Management using Social Media," *Pervasive and Mobile Computing* , vol. 28, pp. 81-99, 2016 doi:10.5555/2938785.2938895 ☑ **IF:2.349**

26. O. Khalid, **M.U.S. Khan**, Y. Huang, S. U. Khan, and A. Zomaya, "EvacSys: A Cloud-based Route Recommendation Framework for Large-Scale Emergency Evacuations," *IEEE Cloud Computing* vol. 3, no. 1, pp. 60-68, 2016 doi:10.1109/MCC.2016.10 ☑ **IF:0.929**

27. A. Abbas , M. Ali , A. Fayyaz , A. Ghosh , A. Kalra , S. U. Khan , **M.U.S. Khan** , T. D. Menezes , S. Pattanayak , A. Sanyal , S. Usman, "A survey on energy-efficient methodologies and architectures of network-on-chip," *Computers and Electrical Engineering*, vol. 40, no. 8, pp. 333-347, 2014 doi:10.1016/j.compeleceng.2014.07.012 ☑ **IF:2.189**

28. O. Khalid, **M.U.S. Khan**, S. U. Khan, and A. Y. Zomaya, "OmniSuggest: A Ubiquitous Cloud based Context Aware Recommendation System for Mobile Social Networks," *IEEE Transactions on Services Computing*, vol. 7, no. 3, pp. 401-414, 2014 https://doi.org/10.1109/TSC.2013.53 ☑ **IF:3.131**

29. K. Bilal, S. U. R. Malik, O. Khalid, A. Hameed, E. Alvarez, V. Wijaysekara, R. Irfan, S. Shrestha, D. Dwivedy, M. Ali, **U.S. Khan**, A. Abbas, N. Jalil, and S. U. Khan, "A Taxonomy and Survey on Green Data Center Networks," *Future Generation Computer Systems*, vol. 36, pp. 189-208, 2014 doi:10.1016/j.future.2013.07.006 ☑ **IF:5.768**

International Peer-Reviewed Conference Publications

1. R. N. B. Rais, O. Khalid, J. Nazar, **M. U. S. Khan**, "*Analysis of Intrusion Detection Using Ensemble Stacking-Based Machine Learning Techniques in IoT Networks*,"2023 International Conference on Advances in Computing Research (ACR'23), Orlando, FL, United States, May 8-10, 2023 doi:10.1007/978-3-031-33743-7_27 ⤴

2. S. M. A. H. Bukhari, W. Afandi, T. Maqsood, **M. U. S. Khan**, "*Encrypted video identification – Normalization and activation function perspective.*," 3rd International Conference on Communication, computing, and digital systems (CCODE), Islamabad, 17-18 May 2023 doi:10.1109/C-CODE58145.2023.10139861 ⤴

3. F. Nazir, **M. U. S. Khan**, N. Khan, A. Fayyaz, "*Examining Malware Patterns in Android Platform using Sufficient Input Subset (SIS)*," 2023 International Multi-disciplinary Conference in Emerging Research Trends (IMCERT), Karachi, 4-5 January 2023 doi:10.1109/IMCERT57083.2023.10075203 ⤴

4. W. Afandi, S. M. A. H. Bukhari, **M. U. S. Khan**, T. Maqsood, and S. U. Khan, "*A Bucket-Based Data Pre-Processing Method for Encrypted Video Detection*," 35th International Conference on Computer Applications in Industry and Engineering (CAINE), Minneapolis, MN, USA, October 2022 doi:https://easychair.org/publications/download/P2Tp ⤴

5. S. S. Hassan, S. M. A. H. Bukhari, **M. U. S. Khan**, and T. Maqsood, "*YouTube Video Identification in Encrypted Network Traffic -A Case of Attacking Assumptions*," 19th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Burban, Pakistan, August 2022 doi:10.1109/IBCAST54850.2022.9990455 ⤴

6. A.S. Kamal, S. M. A. H. Bukhari, **M. U. S. Khan**, T. Maqsood, and M. A. B. Fayyaz, "*Traffic Pattern Plot: Video Identification in Encrypted Network Traffic*," 6th World Conference on Smart Trends in Systems, Security and Sustainability (WorldS4), London, UK, August 2022 doi:10.1007/978-981-19-7663-6 ⤴

7. **M. U. S. Khan**, S. M. A. H. Bukhari, S. A. Khan and T. Maqsood, "*ISP can identify YouTube videos that you just watched*," 2021 International Conference on Frontiers of Information Technology (FIT), Islamabad, Pakistan, pp.1-6, 2021 doi:10.1109/FIT53504.2021.00011 ⤴

8. S. M. A. H. Bukhari, **M. U. S. Khan**, T. Khan and M. Ali, "*Social media, AI, and political affiliation*," 2021 International Conference on Innovative Computing (ICIC), 2021, pp. 1-6, Pakistan, 2021 doi:10.1109/ICIC53490.2021.9709624 ⤴

9. N. Khan, D. Baig, **M. U. S. Khan**, A. Abbas and M. Ali, "*Malware Detection in Android via Neural Network using Entropy Features*," 2021 International Conference on Frontiers of Information Technology (FIT), Islamabad, Pakistan, pp.240-245, 2021 doi:10.1109/FIT53504.2021.00052 ⤴

10. D. Baig, **M. U. S. Khan**, D. Dancey, A. Abbas, M. Ali and R. Nawaz, "*Malware Detection and Classification along with Trade-off Analysis for Number of Features, Feature Types, and Speed*," 2021 International Conference on Frontiers of Information Technology (FIT), Islamabad, Pakistan, pp.246-251, 2021 doi:10.1109/FIT53504.2021.00053 ↗

11. S.A.H. Bukhari, T. Khan, **M.U. S. Khan**, and M. Ali, "*Social media, AI, and political affiliation*," 4th International Conference on Innovative Computing (ICIC 2021), Lahore, 9-10 November, 2021

12. M. Khan, D. Baig, **U. S. Khan**, and A. Karim, "*Malware Classification Framework using Convolutional Neural Network*," 2020 International Conference on Cyber Warfare and Security (ICCWS), Islamabad, Pakistan, pp. 1-7, 2020 doi:10.1109/ICCWS48432.2020.9292384 ↗

13. W. Khan, S. Ali, **M. U. S. Khan**, M. Jawad, M. Ali and R. Nawaz, "*AdaDiffGrad: An Adaptive Batch Size Implementation Technique for DiffGrad Optimization Method*," 2020 14th International Conference on Innovations in Information Technology (IIT), Al Ain, pp. 209-214, 2020 doi:10.1109/IIT50501.2020.9299013 ↗

14. A. Khan, S. Rehman, **M. U. S. Khan**, and M. Ali, "*Synonym-based Attack to Confuse Machine Learning Classifiers Using Black-box Setting*," 2019 4th International Conference on Emerging Trends in Engineering, Sciences and Technology (ICEEST), Karachi, Pakistan, 2019 doi:10.1109/ICEEST48626.2019.8981685 ↗

15. S. Sajid, M. Jawad, M. B. Qureshi, **M. U. S. Khan**, S. M. Ali and S. U. Khan, "*A Conditional-Constraint Optimization for Joint Energy Management of Data Center and Electric Vehicle Parking-Lot*," 2019 Tenth International Green and Sustainable Computing Conference (IGSC), Alexandria, VA, USA, 2019 doi:10.1109/IGSC48788.2019.8957214 ↗

16. S. u. Rehman, **M. U. S. Khan**, and M. Ali, "*Blockchain-Based Approach for Proving the Source of Digital Media*," 2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET), Sukkur, Pakistan, 2020 doi:10.1109/iCoMET48670.2020.9073820 ↗

17. M. Qazi, **M. U. S. Khan**, and M. Ali, "*Detection of Fake News Using Transformer Model*," 2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET), Sukkur, Pakistan, 2020 doi:10.1109/iCoMET48670.2020.9074071 ↗

18. S. I. Rai, **M. U. S. Khan**, and M. Waqas Anwar, "*English to Urdu: Optimizing Sequence Learning in Neural Machine Translation*," 2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET), Sukkur, Pakistan, 2020 doi:10.1109/iCoMET48670.2020.9074098 ↗

19. H. Khalil, **M. U. S. Khan**, and M. Ali, "*Feature Selection for Unsupervised Bot Detection*," 2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET), Sukkur, Pakistan, 2020 doi:10.1109/iCoMET48670.2020.9074131 ↗

20. S. Mohammad, **M. U. S. Khan**, M. Ali, L. Liu, M. Shardlow, and R. Nawaz, "*Bot detection using a single post on social media*," in Proc. WorldS4, 2019 doi:10.1109/WorldS4.2019.8903989 ↗

21. **M. U. S. Khan**, A. Abbas, M. Jawad, M. Ali, and S. U. Khan, "*Convolutional Neural Networks as Means to Identify Apposite Sensor Combination for Human Activity Recognition*," in 3rd IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE), Washington D.C., USA, September 2018 doi:10.1145/3278576.3278594 ↗

22. R. Nawaz, W. Zhou, **M. U. S. Khan**, and O. Khalid, "*A Qualitative Comparison of Popular Middleware Architectures used in Grid Computing Environment*," International Conference on Computer and Communication Systems (ICCCS 2017), Poland, July 2017 doi:10.1109/CCOMS.2017.8075262 ↗

23. H. Qadir, O. Khalid, S. S. Hussain, and **M. U. S. Khan**, "*Carpooling services: A comparative study*," in Ist International Conference on Emerging Trends in Science and Technology (ICETST), Pakistan, Sept. 2016

24. A. Abbas, **M. U. S. Khan**, M. Ali, S. U. Khan, and L. T. Yang, "*A Cloud Based Framework for Identification of Influential Health Experts from Twitter*," in 15th International Conference on Scalable Computing and Communications (ScalCom), Beijing, China, Aug. 2015 doi:10.1109/UIC-ATC-ScalCom-CBDCom-IoP.2015.163 ↗

25. Z. Mahmood, **M. U. S. Khan**, M. Jawad, S. U. Khan, and L. T. Yang, "*A Parallel Framework for Object Detection and Recognition for Secure Vehicle Parking*," in 17th IEEE International Conference on High Performance Computing and Communications (HPCC), New York, NY, USA, Aug. 2015 doi:10.1109/HPCC-CSS-ICESS.2015.18 ↗

26. A. Fayyaz, **M. U. S. Khan**, and S. U. Khan, "*Energy Efficient Resource Scheduling through VM Consolidation in Cloud Computing*," in 13th International Conference on Frontiers of Information Technology (FIT), Islamabad, Pakistan, Dec. 2015 doi:10.1109/FIT.2015.8 ↗

27. H. Afzal, **U. S. Khan**, I. Awan, and M. R. Mufti, "*A Simple Greedy Algorithm for Cognitive Radio Networks*" in 29th Annual UK Performance Engineering Workshop (UKPEW), 2013

28. **U. S. Khan**, and T. Maqsood. "*CRN Survey and A Simple Sequential MAC Protocol for CRN Learning*," In COCORA 2012, The Second International Conference on Advances in Cognitive Radio, pp. 22-27. 2012.

29. T. Maqsood, **U. S. Khan**, S. Khan, and S. Madani, "*Application of industrial informatics to electrical energy networks*," IEEE International Conference on Energy Systems Engineering (ICESE - 2010), Islamabad, Pakistan, October 2010

30. **U. S. Khan**, S. A. Khan, "*Converting an existing communication system into SCA compliant SDR*", In 7th WSEAS International Conference on Electronics, Hardware, Wireless and Optical Communications, p.187-191, Cambridge, UK, February 2008

Conference Poster

1. Y. Sadikaj, A. Abbas, **U. S. Khan**, A. Yusoff, J. Ashley, and S. U. Khan, "*Personalized Health Insurance Services using Big Data*," in ND EPSCoR State Conference, Grand Forks, ND, USA, April 2016.

Book Chapters

1. **M.U.S Khan**, SU Khan, AY Zomaya, "Introduction to big data-enabled Internet of Things", Big Data-Enabled Internet of Things, IET Press, London, UK, 2019, XIII, 488 p., ISBN 978–1–78561–636–5, Chapter 1

2. S. Mughal, K. S. Awaisi, A. Abbas I. Rehman, **M. U. S. Khan**, M. Ali , "A Reliable and Efficient Fog-Based Architecture for Autonomous Vehicular Networks", fog Computing: Theory and Practice, Wiley-IEEE Computer Society Press, New Jersey, USA, 2020, XXIX, 608 p., ISBN: 978-1-119-55169-0, Chapter 18

3. **U. S. Khan** and S. U. Khan, "Smart Data Centers," in Handbook on Data Centers, S. U. Khan and A. Y. Zomaya, Eds., Springer-Verlag, New York, USA, 2015, ISBN 978-1-4939-2091-4, Chapter 7.

4. M. Ali, **M. U. S. Khan**, A. Abbas, and S. U. Khan, "Software Piracy Control Framework in Mobile Cloud Computing Systems," in Advances in Mobile Cloud Computing Systems, R. Yu and V. C. M. Leung, Eds., CRC Press, New York, USA, 2015, ISBN: 978-1-498-71509-6, Chapter 7

5. K. Bilal, O. Khalid, S. U. R. Malik, **M. U. S. Khan**, S. U. Khan, and A. Y. Zomaya, "Fault Tolerance in the Cloud," in Encyclopedia on Cloud Computing, S. Murugesan and I. Bojanova, Eds., John Wiley & Sons, Hoboken, NJ, USA, 2015, ISBN: 978-1-1188-2197-8, Chapter 24.

Book

1. **M. U. S. Khan**, S. U. Khan, and A. Y. Zomaya, Big Data-Enabled Internet of Things, IET Press, London, UK, 2019, XIII, 488 p., ISBN 978–1–78561–636–5. doi:10.1049/PBPC025E

MS-Thesis Supervised

1. Tariq Khan, "Detecting political affiliation using cnn", July 2021

2. Naseem Khan, "Malware Classification using reinforcement learning", Dec 2020

3. Ayesha Aslam, "Deepfake Detection: Extracting Facial Features to Detect Deepfake Videos", Dec 2020

4. Wajid Khan, "An Adaptive Batch Size Implementation Technique for Diffgrad optimization methods", Dec 2020

5. Hania Khalil, "Feature Selection for Unsupervised Bot Detection", Dec 2019

6. Shahid Rai, "English to Urdu: Optimizing Sequence Learning in Neural Machine Translation", Dec 2019

7. Momina Qazi, "Detection of Fake News Using Transformer Model", Dec 2019

8. Safi ur Rehman, "Blockchain-Based Approach for Proving the Source of Digital Media", Dec 2019

9. Ashir Khan, "Synonym-based Attack to Confuse Machine Learning Classifiers Using Black-box Setting", Dec 2019

10. Shad Mohammad , "Bot Detection Using a Single Post on Social Media", Jan 2019

11. Muhammad Naeem, "Predicting Sentiment Bias using Personality Traits of Users on YouTube", COMSATS UI, July 2018

12. Duua Baig, "Detection and Classification of Windows-Based Malware Samples," COMSATS UI, July 2018

13. Qurat-ul-ain, "A Network-aware Hierarchy-based Fog Computing Architecture," COMSATS IIT, February 2017

Teaching Feedback from Students

Table 8.1: Student's Feedback

Session	Course Title	PhD / Master / Undergrad	Students Feedback in %age
Fall 2015:	Design and Analysis of Algorithm	Undergrad	81.4
	Data Mining	Undergrad	79.8
	Data Mining	Undergrad	74.6
Spring 2016	Advance Algorithm Analysis	PhD/Master	94.2
	Design and Analysis of Algorithm	Undergrad	93.8
Fall 2016	Advance Algorithm Analysis	PhD/Master	96
	Data Mining	Undergrad	67.2
	Data Mining	Undergrad	70.8
Spring 2017	Digital Content Analysis	PhD/Master	96.6
	Introduction to Computer Programming	Undergrad	88.4
Fall 2017	Advance Algorithm Analysis	PhD/Master	98.6
	Digital Content Analysis	PhD/Master	86.2
	Data Mining	Undergrad	87.6
Spring 2018	Data Mining	Undergrad	89.4
	Digital Content Analysis	PhD/Master	100
Spring 2019	Artificial Intelligence	Undergrad	66.4
	Data Mining	Undergrad	66.4
Fall 2019	Artificial Intelligence	Undergrad	87.4
	Data Mining	Undergrad	73.2
Spring 2020	Artificial Intelligence	Undergrad	81.4
Fall 2020	Artificial Intelligence	Undergrad	58.4
	Design and Analysis of Algorithm	Undergrad	84.6
Spring 2021	Artificial Intelligence	Undergrad	75
	Machine Learning	Undergrad	75
Fall 2021	Advanced Algorithm Analysis	PhD/Master	80
	Data Structure	Undergrad	75
Spring 2022	Artificial Intelligence	Undergrad	79
	Artificial Intelligence	Undergrad	72
	Artificial Intelligence	Undergrad	73

Research Funding as PI

1. Ads and Malicious content observatory, Funding source: National Center of Cyber Security and HEC Pakistan, PKR 11.178 million,2021

Miscellaneous Awards

1. Best Researcher Award 2021, Department of Computer Science, CUI, Abbottabad.

2. CUI Research Productivity Award 2021.

3. CUI Research Productivity Award 2017.

Additional Services

1. Remains head of sub-committee for evaluation of undergraduate final year projects

2. Served as a reviewer in many journals and conferences.