



Fiaz Gul Khan

Curriculum Vitae

Personal Details

Date of Birth November,22 1982
Place of Birth Abbottabad, Pakistan
Nationality Pakistan
Position **Associate Professor**, *Department of Computer Science, COMSATS University Islamabad, Abbottabad Campus*

Tertiary Education

2010–2013 **PhD Computer Science**, *Politecnico di Torino*
Italy
2008–2009 **Specialization master in wireless Systems and related technologies**, *Politecnico di Torino, Italy*
2006–2008 **MS Computer Science**, *COMSATS University Islamabad, Pakistan*
2002–2006 **BS Information Technology**, *COMSATS University Islamabad, Pakistan*

Experience

Academia Work Experience

June 2021- **Associate Professor**, DEPARTMENT OF COMPUTER SCIENCE, COMSATS
Till Now UNIVERSITY ISLAMABAD- ABBOTTABAD CAMPUS, Abbottabad, Pakistan
2013- June **Assistant Professor**, DEPARTMENT OF COMPUTER SCIENCE, COMSATS
2021 UNIVERSITY ISLAMABAD- ABBOTTABAD CAMPUS, Abbottabad, Pakistan
August 2022- **Graduate Program Coordinator**, DEPARTMENT OF COMPUTER SCIENCE,
Till Now COMSATS UNIVERSITY ISLAMABAD- ABBOTTABAD CAMPUS, Abbottabad,
Pakistan
2007–2008 **Visity Lecturer**, GOVERNMENT POST GRADUATE COLLEGE, Abbottabad,
Pakistan

Research Interest

, *Machinel and Deep Learning, Data Mining, Artificial Intelligence, High Performance Computing, GPU Computing, Cloud and Grid and Cloud Computing*

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Research Supervision

PhD

2020–in Progress **Yang**, *Generative Adversarial Network for Medical Image Synthesis*, COMSATS University Islamabad-Abbottabad Campus, Pakistan (Supervisor)

2020–in Progress **Ma Ying Hua**, *A Manifold Learning For Multi-omics Data Integration and Analysis*, COMSATS University Islamabad-Abbottabad Campus, Pakistan (Co-Supervisor)

MS Supervisions

2013–2014 **QAIMAT JAHAN**, *Identification and Development of Features for Accurate Urdu Word Spotting*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2014 (Supervisor)

2015–2016 **ROMANA SAEED**, *PCA-based Face Recognition with Eigenfaces on GPU using OpenCL*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2016 (Supervisor)

2015–2016 **ASIF UMER**, *Adaptive Market Oriented Double Auctioning Resource Allocation in cloud computing*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2016 (Supervisor)

2017–2018 **AYESHA JADOON**, *Linear Collaborative representation learning approach for dimensionality reduction*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2018 (Supervisor)

2019–2020 **SEHRISH QUMMAR**, *Diabetic Retinopathy Identification Using Deep Learning*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2020 (Supervisor)

2019–2020 **ASAD KHAN**, *Deep learning based Micro-RNA residues prediction in Protein*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2020 (Supervisor)

2016–2017 **ANUM KHURSHID**, *Device Oriented Security to Assist Information Flow Control Systems in the Cloud Environment*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2017 (Co-Supervisor)

2014–2015 **SHAZADA GULFAM**, *Face Recognition from Real Time Surveillance Video*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2015 (Co-Supervisor)

2016–2017 **ZAIN ARSHAD**, *Object Recognition using Semi Supervised Collaborative Representation Learning*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2017 (Co-Supervisor)

- 2015–2016 **OMAR IQBQL**, *Robust face image classification via collaborative representation framework under limited number of samples and partially noised conditions*, COMSATS Institute of Information Technology, Abbottabad, Pakistan
Completed 2016 (Co-Supervisor)
- 2019–2021 **Sajjad ul Mulk**, *Gene expression prediction using deep learning based on histone modification on chromatin*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2021 (Supervisor)
- 2019–2021 **Urooj Tariq**, *Identification of CirRNA using Deep Learning*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2021 (Supervisor)
- 2020–2022 **Sobia Zaheer**, *Single Image Depth Estimation Using Deep Adversarial Training*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2022 (Supervisor)
- 2021–2022 **Ehtisham Khan Jadoon**, *Breast Cancer Prognosis Using Deep Learning with Stacking*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2022 (Supervisor)
- 2022–2023 **Muhammad Abu Bakar**, *Skin Cancer Classification Using Deep Learning Techniques*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2023 (Supervisor)
- 2023–2024 **Aisha**, *Hate Speech Detection in Roman Urdu and English code mixed social media communication*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2023 (Co-Supervisor)
- 2023–2024 **Rashid Ali**, *Semi-Supervised Diabetic Retinopathy Detection Using Similarity and Contrastive Learning*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
Completed 2024 (Supervisor)
- 2023–2024 **Tayyiba Bibi**, *Region Guided Unified Model for Chest X-Ray and Report Generation*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
In-Progress 2025 (Supervisor)
- 2024–2025 **Mashaim Rehman**, *TOWARDS EXPLAINABLE DIABETIC RETINOPATHY CLASSIFICATION WITH MULTIMODALITY FOR EARLY DETECTION*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
In-Progress 2025 (Supervisor)
- 2024–2025 **Laiba Noor**, *Road Crack Segmentation with Multi-Scale Feature Fusion and Dynamic Attention Mechanism*, COMSATS University Islamabad, Abbottabad Campus, Pakistan
In-Progress 2025 (Supervisor)

Publications (Selected)

Journal Articles

1. Ma Yinghua, Ahmad Khan, Yang Heng, **Fiaz Gul Khan**, Farman Ali, Yasser D Al-Otaibi, Ali Kashif Bashir, "A Deep Contrastive Multi-Modal Encoder for Multi-Omics Data Integration and Analysis",

Information Sciences, vol. 700, pp. 121864, 2025, **2025** <https://doi.org/10.1016/j.ins.2024.121864>
IF: 8.1

2. Yang Heng, Ma Yinghua, **Fiaz Gul Khan**, Ahmad Khan, Farman Ali, Ahmad Ali AlZubi, Zeng Hui, "Survey: application and analysis of generative adversarial networks in medical images", Artificial Intelligence Review, vol. 58, issue 2 pp. 39, 20-12-2024, **2024** <https://doi.org/10.1007/s10462-024-10992-z> **IF: 11.7**
3. Yang Heng, **Fiaz Gul Khan**, Ma Yinghua, Ahmad Khan, Zeng Hui, "HLSNC-GAN: Medical Image Synthesis using Hinge Loss and Switchable Normalization in CycleGAN", IEEE Access, vol. 12, pp. 55448-55464, 2024, **2024** 10.1109/ACCESS.2024.3390245 **IF: 4.098**
4. Faiza Qazi, Daehan Kwak, **Fiaz Gul Khan**, Farman Ali, Sami Ullah Khan, "Service Level Agreement in cloud computing: Taxonomy, prospects, and challenges", Internet of Things, Vol 25 pages 101126, **2024** 10.1016/j.iot.2024.101126 **IF: 5.9**
5. Ehtesham Khan Jadoon, **Fiaz Gul Khan**, Sajid Shah, Ahmad Khan, Mohammed ELAffendi, "Deep Learning-Based Multi-Modal Ensemble Classification Approach for Human Breast Cancer Prognosis", IEEE Access, Vol 11 pages 85760 - 85769, **2023** 10.1109/ACCESS.2023.3304242 **IF: 4.098**
6. Haleema Attique, Sajid Shah, Saima Jabeen, **Fiaz Gul Khan**, Ahmad Khan, Mohammed ELAffendi, "Multiclass Cancer Prediction Based on Copy Number Variation Using Deep Learning", Computational Intelligence and Neuroscience, Vol 22, **2022** 10.1155/2022/4742986 **IF: 4.098**
7. Sajid Shah, Altaf Ur Rahman, Saima Jabeen, Ahmad Khan, **Fiaz Gul Khan**, Mohammed ELAffendi, "DNA methylation prediction using reduced features obtained via Gappy Pair Kernel and Partial Least Square", IEEE Access, vol 10 pages 53265-53274, **2022** 10.1109/ACCESS.2022.3174260 **IF: 4.098**
8. Muhammad Faisal Aziz, Abdul Nasir Khan, Junaid Shuja, Iftikhar Ahmed Khan, **Fiaz Gul Khan**, Atta ur Rehman Khan "A lightweight and compromise-resilient authentication scheme for IoTs", Transactions on Emerging Telecommunications Technologies, **2022** doi: 10.1002/ett.3813, **IF:1.594**
9. Umair Yousaf, Ahmad Khan, Hazrat Ali, **Fiaz Gul Khan**, Zia Ur Rehman, Sajid Shah, Farman Ali, Sangheon Pack, Safdar Ali, "A Deep Learning Based Approach for Localization and Recognition of Pakistani Vehicle License Plates", Sensors, pp. 7696, Vol 21, **2021** doi:doi.org/10.3390/s21227696 **IF: 3.576**
10. Zubair Khan, **Fiaz Gul Khan**, Ahmad Khan, Zia Ur Rehman, Sajid Shah, Sehrish Qummar, Farman Ali, Sangheon Pack "Diabetic Retinopathy Detection Using VGG-NIN a Deep Learning Architecture", IEEE Access Vol 9 **2021** <https://ieeexplore.ieee.org/abstract/document/9409084> **IF: 4.098**
11. Gao Jinfeng, Sehrish Qummar, Zhang Junming, Yao Ruxian, and **Fiaz Gul Khan**, "Ensemble Framework of Deep CNNs for Diabetic Retinopathy Detection", Computational Intelligence and Neuroscience, Hindawi **2020** <https://doi.org/10.1155/2020/8864698> **IF: 2.284**
12. Arshia Rehman and **Fiaz Gul Khan**, "A deep learning based review on abdominal images", Multimedia Tools and Applications, Springer **2020** doi:10.1007/s11042-020-09592-0 **IF: 2.600**
13. Usman Ali Khan, Iftikhar Ahmed Khan, Ahmad Din, Waqas Jadoon, Rab Nawaz Jadoon, Muhammad Amir Khan, **Fiaz Gul Khan** and Abdul Nasir Khan "Towards a Complete Set of Gym Exercises Detection Using Smartphone Sensors", Scientific Programming, Hindawi, **2020** doi:10.1155/2020/6471438 **IF: 0.963**.
14. S Qummar, **Fiaz Gul Khan**, S Shah, A Khan, A Din and J Gao, "Deep Learning Techniques for Diabetic Retinopathy Detection" Current medical imaging, **2020** doi:10.2174/1573405616666200213114026

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15. Sehrish Qummar, **Fiaz Gul Khan**, Sajid Shah , Ahmad Khan, Shahaboddin Shamshirband, Zia ur Rehman, Iftikhar Ahmed Khan, Waqas Jadoon, "A Deep Learning Ensemble Approach for Diabetic Retinopathy Detection", IEEE Access, pp. 150530–150539, Vol 7, **2019** doi:10.1109/ACCESS.2019.2947484 **IF: 4.098**
16. Iftikhar Ahmed Khan, Ahmad Khan, Babar Nazir, Syed Sajid Hussain, **Fiaz Gul Khan**, Imran Ali Khan "Urdu Translation: the Validation and Reliability of the 120-Item Big Five IPIP Personality Scale", Current Psychology, **2019** doi:10.1007/s12144-017-9706-5 **IF:1.910**
17. Anum Khurshid, Abdul Nasir Khan, **Fiaz Gul Khan**, Mazhar Ali, Junaid Shuja, Atta ur Rehman Khan "Secure-CamFlow: A device-oriented security model to assist information flow control systems in cloud environments for IoTs", Concurrency and Computation: Practice and Experience, **2019** doi:10.1002/cpe.4729 **IF: 1.447**
18. Omer Iqbal, Waqas Jadoon, Zia ur Rehman, **Fiaz Gul Khan**, Babar Nazir, Iftikhar Ahmed Khan "Robust Face Recognition under Limited Training Sample Scenario using Linear Representation", KSII Transactions on Internet & Information Systems, Volume 12, Issue 7, TIIS, **2018** doi:10.3837/tiis.2018.07.011 **IF: 0.611**
19. Muhammad Imran, Helmut Hlavacs, Fakhri Alam Khan, Saima Jabeen, **Fiaz Gul Khan**, Sajid Shah, Mafawez Alharbi "Aggregated provenance and its implications in clouds", Future Generation Computer Systems, **2018** doi:10.1016/j.future.2017.10.027 (**IF 6.125**).
20. Abdul Nasir Khan, Mazhar Ali, Atta Ur Rehman Khan, **Fiaz Gul Khan**, Iftikhar Ahmed Khan, Waqas Jadoon, Shahab Shamshirband, Anthony T Chronopoulos "A comparative study and workload distribution model for re-encryption schemes in a mobile cloud computing environment", International Journal of Communication Systems, **2017** doi:10.1002/dac.3308(**IF:1.319**).
21. Asad Khan, Sajid Shah, Fazli Wahid, **Fiaz Gul Khan**, Saima Jabeen "Identification of microRNA precursors using reduced and hybrid features.", Molecular bioSystems, **2017** doi: 10.1039/C7MB00115K (**IF: 2.830**).
22. **Fiaz Gul Khan**, Bartolomeo Montrucchio, Bilal Jan, Abdul Nasir Khan, Waqas Jadoon, Shahaboddin Shamshirband, Anthony Theodore Chronopoulos, Iftikhar Ahmed Khan "An optimized magnetostatic field solver on GPU using open computing language", Concurrency and Computation: Practice and Experience, **2017** doi:10.1002/cpe.3981 (**IF:1.447**).
23. Bilal Jan, **Fiaz Gul Khan**, Bartolomeo Montrucchio, Anthony Theodore Chronopoulos, Shahaboddin Shamshirband, Abdul Nasir Khan. "Introducing ToPe-FFT: An OpenCL-based FFT library targeting GPUs", Concurrency and Computation: Practice and Experience , **2017** doi:10.1002/cpe.4256 (**IF:1.447**).
24. Omar Khan, Carlo Ragusa, **Fiaz Gul Khan**, "Computation of Demagnetization Tensors by Utilizing Fourier Properties", IEEE Transactions on Magnetics, **2014** doi:10.1109/TMAG.2014.2329703 (**IF:1.626**).
25. Omar Khan, **Fiaz Gul Khan** , Carlo Ragusa and Bartolomeo Montrucchio "Review of parallel and distributed architectures for micromagnetic codes", COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, **2013** doi:10.1108/COMPEL-10-2012-0271(**IF:0.900**).
26. Omar Khan, Carlo Ragusa, **Fiaz Gul Khan**, Bartolomeo Montrucchio "A mutual demagnetizing tensor for n-body magnetic field modeling", IEEE Transactions on Magnetics, **2013** doi:10.1109/TMAG.2013.2245869(**IF:1.626**).
27. Kalim Qureshi, **Fiaz Gul Khan**, Paul Manuel, Babar Nazir "A hybrid fault tolerance technique in grid computing system", The Journal of Supercomputing, **2011** doi:10.1007/s11227-009-0345-

y(IF:2.469).

28. **Fiaz Gul Khan**, Kalim Qureshi, Babar Nazir "Performance evaluation of fault tolerance techniques in grid computing system", Computers and Electrical Engineering, **2010** doi:10.1016/j.compeleceng.2010.04.004 (IF:2.663).

International Conference Publications

1. M. A. Khan, R. N. B. Rais, O. Khalid and **Fiaz Gul Khan**, "A Comparative Analysis of Federated and Centralized Machine Learning for Intrusion Detection in IoT," 2023 24th International Arab Conference on Information Technology (ACIT), Ajman, United Arab Emirates, 2023, pp. 1-7, doi: 10.1109/ACIT58888.2023.10453751.10.1109/ACIT58888.2023.10453751
2. Farah Jabeen, **Fiaz Gul Khan**, Sajid Shah, Bilal Ahmad, Saima Jabeen "Exploration of Epidemic Outbreaks Using Machine and Deep Learning Techniques", Advances in Cybersecurity, Cyber-crimes, and Smart Emerging Technologies 2023 publishers: Springer International Publishingdoi: 10.1007/978-3-031-21101-0-23
3. Bilal Jan, Bartolomeo Montrucchio, Carlo Ragusa, **Fiaz Gul Khan**, Omar Khan "Parallel butterfly sorting algorithm on GPU", Proceedings of the IASTED International Conference Parallel and Distributed Computing and Networks (PDCN 2013) February 11 - 13, 2013 Innsbruck, Austria.doi: 10.2316/P.2013.795-026
4. **Fiaz Gul Khan**, Omar Usman Khan, Bartolomeo Montrucchio, "A Study of Odd-Even and Rank Parallel Sorting Algorithms for GPU" Proceedings of the International Workshop "Innovation Information Technologies: Theory and Practice" Dresden, Germany September 06-10, 2010 <https://hzdr.qucosa.de/api/qucosa%3A22110/attachment/ATT-0/>
5. **Fiaz Gul Khan**; Omar Usman Khan; Bartolomeo Montrucchio; Paolo Giaccone. "Analysis of Fast Parallel Sorting Algorithms for GPU Architectures". 9th International Conference on Frontiers of Information Technology, Islamabad (Pakistan), 19-21 December 2011. pp. 173-178. doi:10.1109/FIT.2011.39
6. **Fiaz Gul Khan**; Moiso Corrado; Bartolomeo Montrucchio; Aamir Saeed. "Gossip-Based Supervision for Wireless Autonomic Networks and Services", IEEE, 6th International Conference on Emerging Technologies, Oct, 2010, Islamabad, Pakistan, October, 2010. pp. 376-381 doi:10.1109/ICET.2010.5638456
7. **Fiaz Gul Khan**; Aamir Saeed; Babar Nazir; Kashif Bilal; Nouhman Ayub "Improved IP Network for Emergency Services", International Conference on Emerging Technologies, Islamabad 12-13 Nov. 2007 doi:10.1109/ICET.2007.4516311
8. O. Khan, B. Jan, C. Ragusa, A. Rahim, **Fiaz Gul Khan**, B. Montrucchio, "Optimization of a Mult-Dimensional FFT Library for Accelerating Magnetostatic Field Computations", 10th European Conference on Magnetic Sensors and Actuators, Vienna, Austria, July 6-9, 2014. p. 250 <https://core.ac.uk/download/pdf/76523427.pdf>

Awards and Scholarships

- 2010-2013 Scholarship for Ph.D. from Politecnico di Torino, Italy by HEC Pakistan under Project UESTP
- 2008-2009 Scholarship for Specialization Master from Politecnico di Torino, Italy by HEC Pakistan under Project UESTP
- 2006-2008 Scholarship from COMSATS for Masters in Computer Science
- 2002-2006 Scholarship for Bachelor of Science in Information Technology from COMSATS

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References

Ragusa Carlo Stefano

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Bartolomeo Montrucchio

Designation: Associate Professor

University: Politecnico di Torino

Department: Dipartimento di Automatica e Informatica - DAUIN

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