

Dr. Muhammad Shahid Farid

Associate Professor

Department of Computer Science,

University of the Punjab,

Syed Kabir Ali Shah Road, Lahore - 54590, Pakistan

✉ shahid@pucit.edu.pk

☎ +92 42 3529 2946-47 (Office)

🌐 <http://faculty.pucit.edu.pk/~farid>

🆔 <https://orcid.org/0000-0002-8384-2830>

🌐 <https://www.linkedin.com/in/shahid-farid/>

Contents

| | | |
|-----------|--|-----------|
| 1 | Profile Summary | 2 |
| 2 | Education | 2 |
| 3 | Academic & Industry Career | 3 |
| 4 | Research & Publications | 4 |
| 5 | Research Grants | 10 |
| 6 | Schools, Conferences, Workshops & Trainings | 11 |
| 7 | Awards & Recognitions | 13 |
| 8 | Reviewing Activity & Community Services | 14 |
| 9 | Memberships of Professional Societies | 18 |
| 10 | Supervised Theses | 19 |
| 11 | Teaching | 22 |
| 12 | Foreign Countries Visited | 23 |
| 13 | Research IDs & Profiles | 23 |

Profile Summary

| | | | |
|----------------------------|------------------------|----------------------------|--------------------------|
| Research Publications: | 64 | Highest Qualification: | PhD (Italy) |
| Patents: | 2 | Postdoc: | Qatar University (Qatar) |
| Journal: | 40 | Research Grants: | 10 |
| Conference: | 22 | Supervised Theses (MPhil): | 29 |
| Citations: | 1100 | Supervised Theses (PhD): | 3 (In progress) |
| Publication Impact Factor: | 161*, 141 [†] | [i10-index, h-index]: | [34, 21] |

Brief Biography: Dr. Muhammad Shahid Farid received his B.S., M.Sc., and M.Phil. degrees in Computer Science from the University of the Punjab, Lahore, Pakistan, and later earned his Ph.D. from the University of Turin, Italy. He undertook a short-term postdoctoral research position at the Department of Computer Science and Engineering, Qatar University, Doha, Qatar. Currently, Dr. Farid serves as an Associate Professor at the Department of Computer Science, University of the Punjab, Lahore, Pakistan. Dr. Farid's research has contributed to the field of 3D television technology, focusing on the efficient representation and coding of multiview videos, novel view synthesis techniques, and quality assessment of 3D videos. His research interests extend to information fusion, biometrics, image segmentation, and medical image analysis. He has authored over 60 publications, including 40 journal articles, 22 international peer-reviewed conference papers, and holds 2 international patents. Throughout his career, Dr. Farid has secured numerous research grants, including two competitive and prestigious HEC NRPUR research grants. Most recently, he was awarded a research grant exceeding 14 million rupees from the Punjab Agricultural Research Board (PARB), Pakistan. His expertise has been recognized through his service on the Technical Program Committees of several conferences, including IEEE FIT, ICACS, and ICOSST. He served as Session Chair in ICACS'24. He has also held the role of Area Chair at the prestigious ACM SIGMM and ACM IMX conferences. Dr. Farid has served as a Research Project Proposal Reviewer for various grant-awarding agencies, including UK Research and Innovation (UKRI), Government of the United Kingdom; the National Research Program for Universities (NRPUR), Higher Education Commission (HEC), Pakistan; and the Punjab Agriculture Research Board (PARB), Government of Punjab. In addition to his research and academic duties, Dr. Farid is an Area Editor for *PLOS One* and *Mathematical Problems in Engineering*, associate editor of *IAES International Journal of Artificial Intelligence* and regularly reviews for numerous other journals. He is also an HEC Pakistan approved Ph.D. supervisor and an member of IEEE and ACM.

Education

| | |
|-----------|---|
| 12 / 2015 | Ph.D. Computer Science Università degli Studi di Torino, Torino, Italy |
| 9 / 2009 | M.Phil. Computer Science University of the Punjab, Lahore, Pakistan |
| 3 / 2006 | M.Sc. Computer Science [Distinction: Silver Medal] University of the Punjab, Lahore, Pakistan |
| 9 / 2003 | BS Computer Science [Distinction: Gold Medal] University of the Punjab, Lahore, Pakistan |

*Total publication impact factor calculated using the journal's latest impact factors.

[†]Total publication impact factor calculated using the journal's impact factors in year the paper was published.

Academic & Industry Career

| | |
|-------------------|--|
| since 05/2024 | Associate Professor Department of Computer Science, University of the Punjab, Lahore |
| 03/2021 – 05/2024 | Assistant Professor Department of Computer Science, University of the Punjab, Lahore |
| 12/2021 – 03/2023 | Program Coordinator of M.Phil. and Ph.D. Programs Department of Computer Science, University of the Punjab, Lahore |
| 11/2018 – 02/2019 | Program Coordinator of BS (Information Technology) Punjab University College of Information Technology (PUCIT), University of the Punjab, Lahore |
| 09/2018 – 11/2018 | Coordinator GIS Centre Centre of Geographical Information System (GIS Centre), Punjab University College of Information Technology, University of the Punjab, Lahore |
| 02/2018 | Postdoctoral Researcher Department of Computer Science and Engineering, Qatar University, Doha, Qatar |
| 11/2014 – 03/2021 | Assistant Professor Punjab University College of Information Technology, University of the Punjab, Lahore |
| 11/2008 – 11/2014 | Lecturer Punjab University College of Information Technology, University of the Punjab, Lahore |
| 09/2008 – 11/2008 | Lecturer (Contract) Punjab University College of Information Technology, University of the Punjab, Lahore |
| 03/2007 – 09/2008 | Lecturer (Visiting) Punjab University College of Information Technology, University of the Punjab, Lahore |

Industry Career

| | |
|-------------------|--|
| 06/2006 – 03/2007 | Software Engineer Information Technology (IT) section, Masood Textile Mills, Faisalabad I worked on Order Capturing Component (OCC), Rough Cut Capacity Planning (RCCP) modules in MRP-II, a project at Masood Textile Mills. |
|-------------------|--|

Research & Publications

Research Interests

My current research interests include:

- Information Fusion - Blur Segmentation - Gait Biometrics - Image Quality Assessment
- 3DTV Technologies - Remote Sensing - Object Segmentation - Medical Image Analysis

Patents

1. M. Grangetto, M. Lucenteforte, A. Basso, G. Ballocca, M.S. Farid, “Method and Device For Edge Shape Enforcement For Visual Enhancement of Depth Image Based Rendering of A Three-Dimensional Video Stream”, US Patent No. US10049502B2, Date of Patent: August 14, 2018
2. M.S. Farid, M. Grangetto, “Apparatus and Method For Image Segmentation”, EP Patent No. EP3018626B1, Date of Patent: October 17, 2018

Journal Publications

3. H.A.H. Chaudhry, M.S. Farid, A. Fiandrotti, M. Grangetto, “ A lightweight deep learning architecture for malaria parasite-type classification and life cycle stage detection,” *Neural Computing & Applications*, vol. , pp. , August 2024 [IF: 4.5]
4. S. Batool, M.H. Khan, M.S. Farid, “An ensemble deep learning model for human activity analysis using wearable sensory data,” *Applied Soft Computing*, vol. 159, pp. 111599, April 2024 [IF: 7.2]
5. M.S. Farid, B.Z. Babar, M.H. Khan, “Efficient representation of disoccluded regions in 3D video coding,” *Annals of Telecommunications*, vol. , pp. , March 2024 [IF: 1.8]
6. R. Fatima, M.H. Khan, M.A. Nisar, R. Doniec, M.S. Farid, M. Grzegorzec, “A Systematic Evaluation of Feature Encoding Techniques for Gait Analysis Using Multimodal Sensory Data,” *Sensors*, vol. 24, no. 1, article 75, December 2023 [IF: 3.4]
7. M. Sabih, M.S. Farid, M. Ejaz, M. Husam, M.H. Khan, U. Farooq “Raw Material Flow Rate Measurement on Belt Conveyor System Using Visual Data,” *Applied System Innovation*, vol. 6, no. 5, article 88, September 2023 [IF: 3.8]
8. M.H. Khan, H. Azam, M.S. Farid, “Automatic multi-gait recognition using pedestrian’s spatiotemporal features,” *The Journal of Supercomputing*, vol. 79, pp. 19254-19276, May 2023 [IF: 2.5]
9. M. Nasir, M.S. Farid, Z. Suhail, M.H. Khan, “Optimal Thresholding for Multi-Window Computed Tomography (CT) to Predict Lung Cancer,” *Applied Sciences*, vol. 12, no. 13, article 7256, June 2023 [IF: 2.5]
10. M. Usman, M. Ejaz, J.E. Nichol, M.S. Farid, S. Abbas, M.H. Khan, “A Comparison of Machine Learning Models for Mapping Tree Species Using WorldView-2 Imagery in the Agroforestry

Landscape of West Africa,” *ISPRS International Journal of Geo-Information*, vol. 12, no. 4, article 142, 2023. [IF: 2.8]

11. M.H. Khan, M.S. Farid, M. Grzegorzec, “A comprehensive study on codebook-based feature fusion for gait recognition,” *Information Fusion*, vol. 92, pp. 216–230, Dec. 2022 [IF: 18.6]
12. R. Mansoor, M.S. Farid, M.H. Khan, A. Maqsood, “A Layered Approach for Quality Assessment of DIBR-Synthesized Images,” *Wireless Communications and Mobile Computing*, vol. 2021, Article ID 8377936, pp. 1–14 pages, Nov. 2021 [IF: 2.146]
13. M.H. Khan, M.S. Farid, M. Grzegorzec, “Vision-based approaches towards person identification using gait,” *Computer Science Review*, vol. 42, pp. 100432, Nov. 2021 [IF: 8.757]
14. T. Fatima, M.S. Farid, “Quality assessment of 3D synthesized images based on structural and textural distortion,” *Multimedia Tools and Applications*, vol. 80, pp. 36443–36463, Sep. 2021 [IF: 2.577]
15. T. Haider, M.S. Farid, R. Mahmood, A. Ilyas, M.H. Khan, S.T.A. Haider, M.H. Chaudhry, M. Gul, “A Computer-Vision-Based Approach for Nitrogen Content Estimation in Plant Leaves,” *Agriculture*, vol. 11, no. 8, article 766, Aug. 2021 [IF: 3.408]
16. F. Amjad, M.H. Khan, M.A. Nisar, M.S. Farid, M. Grzegorzec, “A Comparative Study of Feature Selection Approaches for Human Activity Recognition using Multimodal Sensory Data,” *Sensors*, vol. 21, no. 7, article 2368, Mar. 2021 [IF: 3.847]
17. H.M.U.H. Alvi, M.S. Farid, M.H. Khan, M. Grzegorzec, “Quality Assessment of 3D Synthesized Images Based on Textural and Structural Distortion Estimation ,” *Applied Sciences*, vol. 11, no. 6, article 2666, Mar. 2021 [IF: 2.838]
18. A. Maqsood, M.S. Farid, M.H. Khan, M. Grzegorzec, “Deep Malaria Parasite Detection in Thin Blood Smear Microscopic Images,” *Applied Sciences*, vol. 11, no. 5, article 2284, Mar. 2021 [IF: 2.838]
19. M.H. Chaudhry, A. Ahmad, Q. Gulzar, M.S. Farid, H. Shahabi, N. Al-Ansari , “Assessment of DSM Based on Radiometric Transformation of UAV Data,” *Sensors*, vol. 21, no. 5, article 1649, Feb. 2021 [IF: 3.847]
20. A. Ilyas, M.S. Farid, M.H. Khan, M. Grzegorzec, “Exploiting Superpixels for Multi-Focus Image Fusion,” *Entropy*, vol. 23, no. 2, article 247, Feb. 2021 [IF: 2.738]
21. R. Zafar, M.S. Farid, M.H. Khan, “Multi-focus Image Fusion: Algorithms, Evaluation, and a Library,” *Journal of Imaging*, vol. 6, no. 7, article 60, July 2020 [HEC - X Category, CiteScore 4.8]
22. M.H. Khan, M. Zöller, M.S. Farid, M. Grzegorzec, “Marker-Based Movement Analysis of Human Body Parts in Therapeutic Procedure,” *Sensors*, vol. 20, no. 11, 3312, May 2020 [IF: 3.576]
23. M.H. Khan, M.S. Farid, M. Grzegorzec, “A non-linear view transformations model for cross-view gait recognition,” *Neurocomputing*, vol. 402, pp. 100–111, Apr. 2020 [IF: 5.719]

24. N. Khehrah, M.S. Farid, S. Bilal, M.H. Khan, "Lung nodule detection in CT images using statistical and shape-based features," *Journal of Imaging*, vol. 6, no. 2, article 6, Feb. 2020 [HEC - X Category, CiteScore 4.8]
25. M. Saleem, M.S. Farid, S. Saleem, M.H. Khan, "X-ray image analysis for automated knee osteoarthritis detection," *Signal, Image and Video Processing*, vol. 14, Issue 6, pp. 1079–1087, Feb. 2020 [IF: 2.157]
26. T. Fatima, M.S. Farid, "Automatic Detection of *Plasmodium* Parasites from Microscopic Blood Images," *Journal of Parasitic Diseases*, vol. 44, Issue 1, pp. 69–78, Sep. 2019 [HEC - Y Category, CiteScore 1.8]
27. M.S. Farid, M. Lucenteforte, M. Grangetto, "No-Reference Quality Metric for HEVC Compression Distortion Estimation in Depth Maps," *Signal, Image and Video Processing*, vol. 14, Issue 1, pp. 195–203, Jul. 2019 [IF: 1.794]
28. M.H. Khan, M.S. Farid, M. Grzegorzec, "A Generic Codebook based Approach for Gait Recognition," *Multimedia Tools and Applications*, vol. 74, Issue 24, pp. 35689–35712, Jul. 2019 [IF: 2.313]
29. M.H. Khan, M.S. Farid, M. Grzegorzec, "Spatiotemporal features of human motion for gait recognition," *Signal, Image and Video Processing*, vol. 13, Issue 2, pp. 369–377, Sep. 2018 [IF: 2.157]
30. M.H. Khan, M. Schneider, M.S. Farid, M. Grzegorzec, "Detection of infantile movement disorders in video data using deformable part-based model," *Sensors*, vol. 18, no. 10, pp. 3202, Sep. 2018 [IF: 3.031]
31. M.H. Khan, J. Helsper, M.S. Farid, M. Grzegorzec, "A computer vision-based system for monitoring vojta therapy," *International Journal of Medical Informatics*, vol. 113, pp. 85–95, Feb. 2018 [IF: 2.731]
32. M.S. Farid, A. Mahmood, S.A. Al-maadeed, "Multi-focus image fusion using Content Adaptive Blurring," *Information Fusion*, vol. 45, pp. 96–112, Jan. 2018 [IF: 13.669]
33. M.S. Farid, M. Lucenteforte, M. Grangetto, "DOST: a distributed object segmentation tool," *Multimedia Tools and Applications*, vol. 77, Issue 16, pp. 20839–20862, Dec. 2017 [IF: 2.01]
34. M.S. Farid, M. Lucenteforte, M. Grangetto, "Evaluating virtual image quality using the side-views information fusion and depth maps," *Information Fusion*, vol. 43, pp. 47–56, Nov. 2017 [IF: 10.716]
35. H. Tazeem, M.S. Farid, A. Mahmood, "Improving security surveillance by hidden cameras," *Multimedia Tools and Applications*, Volume 76, Issue 2, pp. 2713–2732, Jan. 2017 [IF: 1.541]
36. M.S. Farid, A. Mahmood, M. Grangetto, "Image De-fencing Framework with Hybrid Inpainting Algorithm," *Signal, Image and Video Processing*, vol. 10, Issue 7, pp. 1193–1201, Oct. 2016 [IF: 1.102]
37. N. Samad, M.H. Chaudry, M. Ashraf, M. Saleem, Q. Hamid, U. Babar, H. Tariq, M.S. Farid, "Sediment Yield Assessment and Identification of Check Dam Sites for Rawal Dam Catchment," *Arabian Journal of Geosciences*, vol.9, no.6, pp. 1–15, May 2016 [IF: 0.955]

38. Q. Hamid, M.H. Chauhdry, S. Mahmood, M.S. Farid, "Arc GIS and 3D Visualization of Land Records," *National Academy Science Letters*, Volume 39, Issue 4, pp 277–281, Aug. 2016 [IF: 0.369]
39. M.S. Farid, M. Lucenteforte, M. Grangetto, "Panorama View With Spatiotemporal Occlusion Compensation for 3D Video Coding," *IEEE Transactions on Image Processing*, Volume 24, no. 1, pp. 205–219, Jan. 2015 [IF: 3.735]
40. M.S. Farid, A. Mahmood, "An Image Composition Algorithm for Handling Global Visual Effects," *Multimedia Tools and Applications*, Volume 71, Issue 3 (2014), pp. 1699–1716, Aug. 2014 [IF: 1.346]
41. M.S. Farid, A. Mahmood, "Image Morphing in Frequency Domain," *Journal of Mathematical Imaging and Vision*, Volume 42, Number 1, 50–63, Jan. 2012 [IF: 1.767]
42. T. Mahmood, M.S. Farid, "A Multi-agent Architecture for Task Scheduling In University Environment," *IAES International Journal of Artificial Intelligence (IJ-AI)*, volume 1, Number 4, pp. 193–200, Dec. 2012 [HEC - Y Category, CiteScore 0.5]

Conference Publications

43. T. Arshad, M.H. Khan, M.S. Farid, "An Efficient Framework to Recognize Deepfake Faces using a Light-weight CNN," in *Proc. 9th International Conference on Multimedia Systems and Signal Processing (ICMSSP)*, Bangkok, Thailand, pp. 1–8, 24-26 May 2024
44. U.B. Muslim, M.H. Khan, M.S. Farid, "Exploiting Spatiotemporal Features for Action Recognition," in *Proc. IEEE International Bhurban Conference on Applied Sciences & Technology (IBCAST)*, Islamabad, Pakistan, pp. 1–7, 12-16 Jan. 2021
45. M.H. Khan, M.S. Farid, M. Zahoor, M. Grzegorzec, "Cross-view Gait Recognition using Non-linear View Transformations of Spatiotemporal Features," in *Proc. IEEE International Conference on Image Processing (ICIP)*, Athens, Greece, pp. 773–777, 7-10 Oct. 2018
46. M.H. Khan, M.S. Farid, M. Grzegorzec, "Using a Generic Model for Codebook-based Gait Recognition Algorithms," in *Proc. 6th IAPR/IEEE International Workshop on Biometrics and Forensics*, Sassari, Italy, pp. 1–7, 7-8 June 2018
47. M. Saleem, M.S. Farid, M.S. Saleem, "Automated Knee Replacement Detection using Radiological Symptoms," in *Proc. Conference on Microbiology and Molecular Genetics (MMG 2018)*, Lahore, Pakistan, pp. 300, 7-9 Feb. 2018
48. N. Khehrah, S. Bilal, M.S. Farid, "Lung Segmentation in CT Scans for Lung Nodule and Cancer Detection," in *Proc. Conference on Microbiology and Molecular Genetics (MMG 2018)*, Lahore, Pakistan, pp. 161, 7-9 Feb. 2018
49. M.H. Khan, M.S. Farid, M. Grzegorzec, "Person Identification using Spatiotemporal Motion Characteristics," in *Proc. 2017 IEEE International Conference on Image Processing (ICIP)*, Beijing, China, pp. 166–170, 17-20 Sept. 2017
50. M.S. Farid, M. Lucenteforte, M. Grangetto, "Perceptual Quality Assessment of 3D Synthesized Images," in *Proc. IEEE International Conference on Multimedia and Expo (ICME)*, Hong Kong, China, pp. 505–510, 10-14 July 2017

51. M.S. Farid, M. Lucenteforte, M.H. Khan, M. Grangetto, "Semi-automatic Segmentation of Scattered and Distributed Objects," in *Kurzynski M., Wozniak M., Burduk R. (eds) Proceedings of the 10th International Conference on Computer Recognition Systems (CORES) 2017. Advances in Intelligent Systems and Computing*, vol 578. Chapter 12, pp. 110-119, 22-24 May 2017, Polanica Zdroj, Poland, Springer, Cham, ISBN=978-3-319-59162-9
52. M.H. Khan, F. Li, M.S. Farid, M. Grzegorzec, "Gait Recognition using Motion Trajectory Analysis," in *Kurzynski M., Wozniak M., Burduk R. (eds) Proceedings of the 10th International Conference on Computer Recognition Systems (CORES) 2017. Advances in Intelligent Systems and Computing*, vol 578. Chapter 8, pp. 73-82, 22-24 May 2017, Polanica Zdroj, Poland, Springer, Cham, ISBN=978-3-319-59162-9
53. M.H. Khan, K. Shirahama, M.S. Farid, M. Grzegorzec, "Multiple Human Detection in Depth Images," in *Proc. Multimedia Signal Processing (MMSP), 2016 IEEE 18th International Workshop on*, Montreal, QC, Canada, pp. 1-6, 21-23 Sept. 2016
54. M.S. Farid, M. Lucenteforte, M. Grangetto, "Objective Quality Metric for 3D Virtual Views," in *Proc. Image Processing (ICIP), 2015 IEEE International Conference on*, Quebec City, QC, Canada, pp.3720-3724, 27-30 Sept. 2015
55. M.S. Farid, M. Lucenteforte, M. Grangetto, "Blind Depth Quality Assessment using Histogram Shape Analysis," in *Proc. 3DTV-Conference: The True Vision - Capture, Transmission and Display of 3D Video (3DTV-CON)*, Lisbon, Portugal, pp. 1-5, 8-10 July 2015
56. M.S. Farid, M. Lucenteforte, M. Grangetto, "Edge enhancement of depth based rendered images," in *Proc. Image Processing (ICIP), 2014 IEEE International Conference on*, Paris, France, pp. 5452-5456, 27-30 Oct. 2014
57. M.S. Farid, M. Lucenteforte, M. Grangetto, "A panoramic 3D video coding with directional depth aided inpainting," in *Proc. Image Processing (ICIP), 2014 IEEE International Conference on*, Paris, France, pp. 3233-3237, 27-30 Oct. 2014
58. M.Y. Qazi, M.S. Farid, "Content Based Image Retrieval using Localized Multi Texton Histogram," in *Proc. Frontiers of Information Technology (FIT), 2013 IEEE 11th International Conference on*, Islamabad, Pakistan, pp. 107-112, 16-18 Dec. 2013
59. M.S. Farid, M. Lucenteforte, M. Grangetto, "Depth image based rendering with inverse mapping," in *Proc. Multimedia Signal Processing (MMSP), 2013 IEEE 15th International Workshop on*, Pula, Italy, pp. 135-140, 30 Sept.-2 Oct. 2013
60. M.S. Farid, M. Lucenteforte, M. Grangetto, "Edges shape enforcement for visual enhancement of depth image based rendering," in *Proc. Multimedia Signal Processing (MMSP), 2013 IEEE 15th International Workshop on*, Pula, Italy, pp. 406-411, 30 Sept.-2 Oct. 2013
61. M.M. Mubasher, M.S. Farid, A. Khaliq, M.M. Yousaf, "A Parallel Algorithm for Change Detection," in *Proc. Multitopic Conference (INMIC), 2012 15th International*, Islamabad, Pakistan, pp. 201-208, 13-15 Dec. 2012
62. M.S. Farid, H. Khan, A. Mahmood, "Image Inpainting using Cubic Hermit Spline," in *Proc. SPIE 8285, International Conference on Graphic and Image Processing (ICGIP 2011)*, Cairo, Egypt, 82854R, 1-3 October 2011

63. M.S. Farid, H. Khan, A. Mahmood, “Image Inpainting based on Pyramids,” in *Proc. Signal Processing (ICSP), 2010 IEEE 10th International Conference on*, Beijing, China, pp. 711–715, 24-28 Oct. 2010
64. M.S. Farid, H. Khan, “Image Inpainting using Dynamic Weighted Kernels,” in *Proc. Computer Science and Information Technology (ICCSIT), 2010 3rd IEEE International Conference on*, Chengdu, China, pp. 252–255, 9-11 July 2010

Research Grants

| | |
|-------------|--|
| 2022 – 2025 | Development and optimization of android smartphone imaginary application for real-time nitrogen management in wheat, rice and maize crops Role: Team Leader-I (Co-Principal Investigator) Funding Agency: Punjab Agriculture Research Board (PARB) Project No.: 21-140 Grant Amount: Rs. 14.004 million |
| 2022 – 2025 | HumCare: Human Activity Analysis in Healthcare Role: Co-Principal Investigator Funding Agency: HEC National Research Program for Universities (NRPU) Project No.: NRPU-15041 Grant Amount: Rs. 11.32 million |
| 2019 – 2022 | 3DViCoQa: Advanced Techniques for 3D Video Coding and Quality Assessment Role: Principal Investigator Funding Agency: HEC National Research Program for Universities (NRPU) Project No.: NRPU-7389 Grant Amount: Rs. 3.12 million |
| 2020 – 2021 | A Computer Vision Based System to Monitor Crop Health Role: Principal Investigator Funding Agency: National Grassroots ICT Research Initiative (NGIRI), IG-NITE National Technology Fund Project No.: NGIRI-2021-6555 Grant Amount: Rs. 63,928 |

Intra-University Grants

| | |
|-------------|---|
| 2021 – 2022 | Pneumonia Detection from Chest X-ray Image Role: Principal Investigator Funding Agency: University of the Punjab, Lahore, Pakistan Grant Amount: Rs. 200,000 |
| 2021 – 2022 | Efficient Disocclusions Handling in 3D Video Role: Principal Investigator Funding Agency: University of the Punjab, Lahore, Pakistan Grant Amount: Rs. 200,000 |
| 2019 – 2020 | Person Identification using Gait Biometric Role: Principal Investigator Funding Agency: University of the Punjab, Lahore, Pakistan Grant Amount: Rs. 150,000 |
| 2017 – 2018 | Compression Distortion Estimation of Depth Maps Role: Principal Investigator Funding Agency: University of the Punjab, Lahore, Pakistan Grant Amount: Rs. 150,000 |

| | |
|-------------|--|
| 2016 – 2017 | Perceptual Quality Assessment of 3D Synthesized Images Role: Principal Investigator Funding Agency: University of the Punjab, Lahore, Pakistan Grant Amount: Rs. 150,000 |
| 2011 – 2012 | An Image Composition Technique to Handle Global Effects of Local Content Manipulations Role: Principal Investigator Funding Agency: University of the Punjab, Lahore, Pakistan Grant Amount: Rs. 125,000 |

Schools, Conferences, Workshops & Trainings

Schools Attended

| | |
|-----------------|--|
| 16 – 20/06/2014 | <i>Visione delle Macchine (VisMac 2014): Summer School on Computer Vision and Pattern Recognition for Homeland Security</i> “Gruppo Italiano Ricercatori in Pattern Recognition” (GIRPR) affiliated to International Association for Pattern Recognition (IAPR) Marina di Ascea (Salerno), Italy |
| 07 – 09/05/2013 | <i>Second Short Spring School in Surveillance S5</i> University of Modena and Reggio Emilia, Italy |
| 03 – 09/03/2013 | <i>Bertinoro International Spring School (BISS)</i> University Residential Center, Bertinoro (Forli-Cesena), Italy |

Conferences Attended

| | |
|--------------------|--|
| 30/09 – 02/10/2013 | <i>IEEE International Workshop on Multimedia Signal Processing (MMSP)</i> Pula, Sardinia, Italy, Sep 30 - Oct 2, 2013 |
| 27 – 30/10/2014 | <i>IEEE International Conference on Image Processing (ICIP)</i> Paris, France, Oct 27 - Oct 30, 2014 |
| 08 – 10/07/2015 | <i>IEEE 3DTV-Conference: The True Vision - Capture, Transmission and Display of 3D Video (3DTV-CON)</i> Lisbon, Portugal, July 8 - 10, 2015 |
| 29/06 – 03/07/2015 | <i>IEEE International Conference on Multimedia and Expo (ICME)</i> Torino, Italy, June 29 - July 3, 2015 |
| 29 – 31/12/2010 | <i>2nd International Conference on Machine Vision</i> Islamabad, Pakistan, December 29-31, 2010 |
| 25 – 28/10/2020 | <i>IEEE International Conference on Image Processing (ICIP)</i> Abu Dhabi, UAE, (Virtual Mode), October 25-28, 2020 |

| | |
|-----------------|---|
| 16 – 17/01/2020 | <i>14th IEEE International Conference On Open Source System and Technologies (ICOSST)</i> Lahore, Pakistan, December 16-17, 2020 |
| 12 – 16/01/2021 | <i>18th IEEE International Bhurban Conference on Applied Sciences & Technology (IBCAST)</i> Islamabad, Pakistan, January 12–16, 2021 |
| 16 – 17/03/2022 | <i>5th International Conference on Energy Conservation and Efficiency (ICECE)</i> Lahore, Pakistan, March 16–17, 2022 |

Trainings & Workshop Courses

| | |
|-----------------|---|
| 01 – 02/02/2024 | <i>Intellectual Property Rights & Patent Filing</i> Two-day Training by Punjab Higher Education Commission (PHEC), Punjab, Pakistan |
| 04/01/2024 | <i>Use of Generative Artificial Intelligence in Higher Education</i> Training by Punjab Higher Education Commission (PHEC), Punjab, Pakistan |
| 22/06/2023 | <i>NCEAC Webinar training on Orientation and Discussion of newly developed Curriculum Model of Computing Programs 2023</i> Training by Higher Education Commission (HEC) Pakistan |
| 11/05/2023 | <i>Incorporating IEEE Xplore Resources Into Your Teaching: A Dedicated Session for Lecturers</i> Training organized by IEEE (Asia) and Higher Education Commission (HEC) Pakistan |
| 21 – 24/02/2023 | <i>Research Capacity Building Programme for Grant Reviewers</i> A four-day training course by organized British Council and Higher Education Commission (HEC) Pakistan in collaboration with Coventry University, UK. Lahore, Pakistan |
| 22/06/2022 | <i>IEEE Standards: What, Why & How?</i> Training organized by IEEE (Asia) |
| 18/05/2022 | <i>IEEE New Resource For Your Technical Research</i> Training organized by IEEE (Asia) |
| 03/03/2022 | <i>How to Improve/ Implement HEC-QAA Parameters?</i> One day seminar organized by Quality Enhancement Cell (QEC), University of the Punjab, Lahore |
| 18/06/2019 | <i>How to Approach and Manage Funded Research Projects?</i> Office of Research Innovation & Commercialization (ORIC), University of the Punjab, Lahore, June 18, 2019 |
| 21 – 25/11/2016 | <i>4th In Service Faculty Training Program</i> University of the Punjab, Lahore, Pakistan |

Awards & Recognitions

| | |
|------|--|
| 2021 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 137,833 |
| 2020 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 54,167 |
| 2019 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 30,000 |
| 2018 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 124,167 |
| 2017 | HEC Approved PhD Supervisor Recognized as a PhD Supervisor by High Education Commission, Pakistan |
| 2016 | International Travel Grant awarded from Punjab Higher Education Commission (PHEC) to present a research paper in the 10th International Conference on Computer Recognition Systems (CORES) 2017 in Polanica Zdroj, Poland Award Amount: Rs. 201,898 |
| 2016 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 53,000 |
| 2015 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 21,000 |
| 2014 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 20,000 |
| 2012 | Research Incentive Award University of the Punjab, Lahore, Pakistan Award Amount: Rs. 50,000 |
| 2012 | Scholarship for PhD Studies Scholarship for PhD study at Università degli Studi di Torino, Italy (Jan. 2013 - Dec. 2015) from University of the Punjab, Lahore, Pakistan |
| 2006 | Merit Scholarship awarded merit scholarships in three semesters in M.Sc (Computer Science) degree from University of the Punjab, Lahore |
| 2006 | Silver Medal in M.Sc (Computer Science) degree from University of the Punjab, Lahore |
| 2003 | Gold Medal in BS (Computer Science) degree from University of the Punjab, Lahore |

Reviewing Activity & Community Services

Advisor, Member of Boards and Panels

| | |
|------------|--|
| since 2022 | IPE Review Panel at Quality Assurance Agency, Higher Education Commission (HEC), Islamabad. |
| since 2022 | Examiner (Computer Science) at Punjab Public Service Commission (PPSC), Government of Pakistan. |
| since 2022 | Advisor/Subject Expert (Computer Science) at Punjab Public Service Commission (PPSC), Government of Pakistan. |
| since 2021 | Subject Expert (Computer Science) at Federal Public Service Commission (FPSC), Government of Pakistan. |
| since 2020 | Subject Expert (Computer Science) in Selection Board Panel at University of Engineering and Technology (UET), Lahore. |

Research Grant Reviewer

| | |
|------|---|
| 2024 | Research Project Proposal Reviewer for UK Research and Innovation (UKRI), Government of the United Kingdom. |
| 2022 | Research Project Proposal Reviewer for National Research Program for Universities (NRPU), Higher Education Commission (HEC), Pakistan. |
| 2021 | Research Project Proposal Reviewer for Punjab Agriculture Research Board (PARB), Government of The Punjab. |

Editorial Board Member

| | |
|-------------------|---|
| since 02/2023 | Editor Board Member , PLOS ONE |
| since 11/2020 | Area Editor , Mathematical Problems in Engineering |
| since 2021 | Associate Editor , IAES International Journal of Artificial Intelligence |
| 11/2011 – 01/2021 | Academic Editor , IAES International Journal of Artificial Intelligence |

Technical Reviewer of Journals

- | | |
|--|--|
| - IEEE Transactions on Multimedia | - IEEE Access |
| - IEEE Transactions on Circuits and Systems for Video Technology | - Information Fusion |
| - IEEE Signal Processing Letters | - Pattern Recognition |
| | - Signal Processing: Image Communication |

- Journal of Visual Communication and Image Representation
- Multimedia Systems
- Signal, Image and Video Processing
- Circuits, Systems, and Signal Processing
- Digital Signal Processing
- Mathematical Problems in Engineering
- IET Image Processing
- International Journal of Imaging Systems and Technology
- Infrared Physics and Technology
- Journal of Intelligent Systems
- Journal of Visual Communication and Image Representation
- Neural Processing Letters
- Journal of Circuits, Systems, and Computers
- ISPRS International Journal of Geo-Information
- PLOS One
- Symmetry
- Remote Sensing
- Electronics
- Applied Sciences
- Sensors
- Journal of Imaging

Conference Reviewer/TPC Member

| | |
|-------------|--|
| 2021 – 2023 | Area Chair (AC) , ACM Multimedia (ACM SIGMM) |
| 2024 | Area Chair (AC) , ACM International Conference on Interactive Media Experiences (IMX) |
| 2024 | Session Chair , International Conference on Advancements in Computational Sciences (ICACS 2024) |
| 2024 | Technical Program Committee (TPC) Member , IEEE Conference on Artificial Intelligence (IEEE CAI 2024) |
| 2024 | TPC Member , ACM International Conference on Interactive Media Experiences (IMX) |
| 2024 | TPC Member , International Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISIGRAPP) |
| 2024 | TPC Member , International Conference on Advancements in Computational Sciences (ICACS 2024) |
| 2023 – 2024 | TPC Member , IEEE Congress on Evolutionary Computation (IEEE CEC) |
| 2023 – 2024 | TPC Member , International Conference on Advancements in Computational Sciences (ICASE), IEEE |
| 2023 – 2024 | TPC Member , International Joint Conference on Neural Networks (IJCNN) |
| 2023 | TPC Member , 18th IEEE International Conference on Emerging Technologies (ICET 2023) |
| 2023 | TPC Member , International Conference on IT and Industrial Technologies (ICIT 2023) |

| | |
|-------------|--|
| 2023 | TPC Member , International Conference on Open Source Systems and Technologies (ICOSST), IEEE |
| 2022 – 2023 | TPC Member , International Conference on Frontiers of Information Technology (FIT), IEEE |
| 2022 | TPC Member , IEEE World Congress on Computational Intelligence (IEEE WCCI) |
| 2019 | TPC Member , International Conference on Advancements in Computational Sciences (ICACS), IEEE |
| 2018 – 2021 | TPC Member , International Conference on Open Source Systems and Technologies (ICOSST), IEEE |
| 2017 – 2019 | TPC Member , International Conference on Frontiers of Information Technology (FIT), IEEE |

Thesis & Project Examiner

| | |
|------------|---|
| 08/09/2022 | Project Judge in computer science projects in Central Zonal Science Exhibition Competition, Fazaia Intermediate College, Lahore |
| 14/05/2022 | External Examiner in Final Year Projects of BS Computer Science at Department of Computer Science, IBA Sukkur University, Sukkur, Pakistan |
| 02/2019 | Project Judge in computer science projects in Central Zonal Science Exhibition Competition, Fazaia Intermediate College, Lahore |
| since 2017 | External Examiner 07 MPhil Thesis 02 BS Thesis/Project |

Service to the Department/University

| | |
|-------------------|---|
| since 02/2022 | Member <i>Departmental Doctoral Program Committee (DDPC)</i> The committee deals with the matters relating to MS/M.Phil/Ph.D or equivalent programs of the department. |
| 02/2022 – 03/2023 | Member/Secretary <i>Departmental Doctoral Program Committee (DDPC)</i> The committee deals with the matters relating to MS/M.Phil/Ph.D or equivalent programs of the department. |
| since 12/2020 | Member <i>Ph.D. Comprehensive Examination Committee</i> The committee is responsible for conducting the Ph.D. (Computer Science) Comprehensive Examination, in all aspects. |

- 03/2019 – 01/2021 **Member Departmental Doctoral Program Committee (DDPC)**, Centre of Geographical Information System (GIS Centre), University of the Punjab, Lahore
- 09/2020 – 10/2022 **Chair**
Campus Management Committee (CMC)
 The committee is responsible to verify and justify the requisitions regarding the repair and maintenance of college infrastructure and installations.
- 08/2021 – 02/2022 **Member**
Departmental Doctoral Programme Committee (DDPC)
 The committee deals with the matters relating to MS/M.Phil/Ph.D or equivalent programs of the department.
- 10/2020 – 03/2021 **Member**
College Purchase Committee
 The committee is responsible to review and approve the requisitions related to college infrastructure and installations purchases.
- 2017 – 2018 **Chairman**
Admission Committee
 Served as the Chairman Admission Committee for admissions in BS and MSc degree programs of the college in year 2017 and 2018
- 03/2019 – 03/2021 **Chairman**
Computer Society (CS)
 The Society prepares the students for the upcoming challenges of the computer world through organizing seminars, workshops, competitions and study tours.
- 2017 – 2019 **Chairman**
Pre Admission Entrance Test Registration Committee
 Served as the Chairman Pre Admission Entrance Test Registration Committee for BS and MSc admissions in years 2017, 2018, and 2019
- 09/2018 – 02/2019 **Member**
College Council
 The council looks after all the academic matters of the college.
- 06/2018 – 08/2019 **Secretary/Member**
PUCIT Graduate Financial Support Review Committee (GFSRC)
 The committee is responsible for allocation of financial aid to graduate students.
- 05/2018 – 03/2021 **Secretary/Member**
PUCIT Research Advisory Committee (PRAC)
 The committee is responsible to provide recommendations for the promotion of research activities in the college, including development of enabling infrastructure and culture.
- 06/2016 – 05/2018 **Member**
PUCIT Research Advisory Committee (PRAC)
 The committee is responsible to provide recommendations for the promotion of research activities in the college, including development of enabling infrastructure and culture.

- 04/2010 – 11/2023 **Secretary/Member**
PUCIT Migration Committee
 The committee is responsible for all BS/MSc migration cases.
- 09/2016 – 12/2018 **Member**
Disciplinary Committee (DC)
 The committee deals with cases of students involved in disciplinary matters.
- 09/2016 – 02/2019 **Member**
Event Management Society (EMS)
 The Society plans and organizes different co-curricular and extra-curricular activities for the students of college.

Graduate Research Lab Established

Image & Vision Computing Lab

I established the ‘Image & Vision Computing Lab,’ a graduate research laboratory in the Department of Computer Science (then PUCIT), in 2017. The aim of the IVC Lab is to train resources and conduct research on various image processing and computer vision problems and their applications. To date, the lab has produced more than 27 MPhil graduates, and more than 7 graduate students are conducting research on problems in biometrics, 3D video coding, image quality assessment, malaria parasite detection, lung nodule detection, and crop health monitoring, etc.

Memberships of Professional Societies

- | | |
|-------------|--|
| since 2015 | Member, IEEE |
| since 2012 | Member, International Association of Computer Science and Information Technology (IACSIT) |
| since 2010 | Member, International Association of Engineers (IAENG) |
| 2013 – 2014 | Graduate Member, IEEE |

Supervised Theses

PhD Candidates

- **Tazeem Haider**
Ontology based Human Activity Recognition using Sensory Data
[As a co-supervisor with Dr. Muhammad Hassan Khan]
- **Mahrukh Saleem**
Deep Learning-based Liver Cancer Diagnosis using Computed Tomography Images
- **Rabia Zafar**
Deep Learning-based Approaches for Nitrogen Nutrition Estimation in Cereal Crops Using RGB Images

MPhil Candidates

- **Samia Mustafa**
Nitrogen Nutrient Estimation In Wheat Crops Using RGB Data
- **Rooman Azam**
Image Processing For Maize Crop Health
- **Mahrukh Arif**
A Statistical Approach For Pneumonia Detection From Chest X-Ray Images
- **Mahira Zainab**
Nitrogen Nutrient Estimation In Rice Crops Using Rgb Images

MPhil Theses

- | | |
|------------|---|
| 11/05/2018 | Noor Kherah <i>Lung Cancer Diagnosis using CT Scan Images</i> |
| 18/05/2018 | Rabia Zafar <i>Fusion LIB: A Multi-focus Image Fusion Library</i> |
| 19/07/2018 | Tehreem Fatima <i>Synthesis Error Estimation in DIBR Images</i> |
| 19/11/2018 | Mahrukh Saleem <i>X-ray Image Analysis for Automated Knee Replacement Detection</i> |
| 19/11/2018 | Maryiam Zahoor <i>Multiview Gait Recognition using Spatiotemporal Motion Characteristics</i> Co-supervisor: Dr. Muhammad Hassan Khan |
| 23/08/2019 | Tazeem Haider <i>A Vision-based Approach for Nitrogen Estimation in Crops</i> |

| | |
|------------|--|
| 21/05/2020 | Areeba Ilyas <i>Multi-focus Image Fusion Using Superpixels</i> |
| 21/05/2020 | Usairam Bin Muslim <i>Motion Descriptor Based Action Recognition</i> Co-supervisor: Dr. Muhammad Hassan Khan |
| 02/10/2020 | Hafiz Muhammad Usama Hassan Alvi <i>Quality Assessment of 3D Videos</i> |
| 02/10/2020 | Asma Maqsood <i>Malaria Parasite Detection From Microscopic Blood Images</i> |
| 26/01/2021 | Anam Farooq <i>The effect of Hudiara drain effluents on adjacent biome using GIS</i> [Co-supervisor: Dr. Muhammad Usman, Assistant Professor at Centre for Geographical Information Systems (CGIS), University of the Punjab, Lahore] |
| 08/02/2021 | Rafia Mansoor <i>3D Image Quality Assessment</i> |
| 27/04/2021 | Badi uz zaman Babar <i>Efficient 3D Video Coding</i> |
| 27/04/2021 | Bilal Mehdi <i>Estimation of Snowmelt Runoff of Tarbela Catchment Using SRM for Kharif Season</i> |
| 26/05/2022 | Ali Masood <i>Development, Calibration, and use of Remote Sensing and GIS-based Monitoring System for Soil Salinity Management in Jhang District</i> [Co-supervisor: Dr. Muhammad Hamid Ch., Assistant Professor at Centre for Geographical Information Systems (CGIS), University of the Punjab, Lahore] |
| 02/09/2022 | Hashaam Ashraf <i>Intersecting Longest Paths</i> [As a Co-supervisor, Primary Supervisor: Dr. Mehvish Irfan Poshni] |
| 02/09/2022 | Mahnoor Ejaz <i>Tree Detection and Classification in Multispectral Data</i> [Co-supervisor: Dr. Muhammad Hassan Khan, Assistant Professor, Department of Computer Science, University of the Punjab, Lahore] |
| 02/09/2022 | Muhammad Sabih <i>Raw Materila Flow Rate Measurement on Belt Conveyer System</i> |
| 02/09/2022 | Marriam Aslam <i>Applications of Optical Coherence Tomography in Diagnosis of Diabetic Retinopathy, Age Related Maculopathy Degenration, and Glaucoma</i> [Co-supervisor: Dr. Muhammad Hassan Khan, Assistant Professor, Department of Computer Science, University of the Punjab, Lahore] |

| | |
|------------|--|
| 09/09/2022 | Aneesa Amjad <i>Soccer Video Analytics of Commentary Generation</i> [As a Co-supervisor, Primary Supervisor: Dr. Muhammad Hassan Khan, Assistant Professor, Department of Computer Science, University of the Punjab, Lahore] |
| 09/09/2022 | Tania Arshad <i>Deep Fake Detections</i> [As a Co-supervisor, Primary Supervisor: Dr. Muhammad Hassan Khan, Assistant Professor, Department of Computer Science, University of the Punjab, Lahore] |
| 14/06/2023 | Muhammad Ijlal <i>Nitrogen Estimation in Maiz Plants by Color Analysis of Leaf Images</i> |
| 14/06/2023 | Sahar Shahzadi <i>Classification of Pneumonia by Chest X-ray Images</i> [Co-supervisor: Dr. Muhammad Hassan Khan, Assistant Professor, Department of Computer Science, University of the Punjab, Lahore] |
| 07/08/2023 | Faiza Saleem <i>Plant Leaf Detection</i> |
| 07/08/2023 | Hafiz Mubashar Islam <i>A Statistical Approach For Image Brightness Enhancement</i> |
| 07/08/2023 | Maira Ismail <i>Computer Vision For Detection Of Glaucoma Using OCT</i> |
| 17/08/2023 | Muhammad Saad Sheikh <i>Computer Vision For AMD Detection</i> |
| 22/09/2023 | Maryam Nazir <i>A Computer Vision-Based Approach for Nitrogen Nutrient Estimation in Maize Plants</i> |
| 22/09/2023 | Hafiz Abdul Ghani <i>Reduced Reference Approach for Quality Assessment of DIBR Images</i> |

BS Theses/Projects

| | |
|-------------|--|
| Development | BS final year development projects supervised: 68 M.Sc. final year development projects supervised: 2 |
| Research | BS final year development research projects supervised: 8 |

Teaching

Department of Computer Science

University of the Punjab

since Spring 2021 *Digital Image Processing*
Analysis of Algorithms
Theory of Automata
Advanced Analysis of Algorithms
Operating Systems
Discrete Structures

Punjab University College of Information Technology

University of the Punjab

| | |
|--|------------------------|
| <i>Digital Image Processing</i> | 03/2007 – 03/2021 |
| <i>Analysis of Algorithms</i> | |
| <i>Theory of Automata</i> | |
| <i>Advanced Analysis of Algorithms</i> | |
| <i>Multimedia System Development</i> | Spring 2010 |
| <i>Software Project Management</i> | Spring 2007, 2009 |
| <i>Software Quality Assurance</i> | Spring 2007, Fall 2007 |

Institute of Business Administration

University of the Punjab

| | |
|---|-------------|
| <i>Introduction to Computer Concepts & Applications</i> | Fall 2023 |
| <i>Database Management System</i> | Spring 2023 |

Institute of Business and Information Technology

University of the Punjab

| | |
|-----------------------------------|-------------------------|
| <i>Analysis of Algorithms</i> | Fall 2023 |
| <i>Theory of Automata</i> | Spring 2022, 2023, 2024 |
| <i>Software Quality Assurance</i> | Fall 2022, 2023 |
| <i>Operating Systems</i> | Spring 2024 |

Department of Philosophy
University of the Punjab

Introduction to Computer Science

Fall 2020

Centre For Geographical Information Systems
University of the Punjab

Digital Image Processing

Fall 2012

Department of Computer Science
Kinnaird College For Women University


Digital Image Processing

Spring 2011


Foreign Countries Visited


- | | | | |
|---------|-----------|------------|----------------------|
| - Italy | - France | - Germany | - Portugal |
| - Spain | - Austria | - Slovakia | - The Czech Republic |
| - Qatar | - Hungary | | |


Research IDs & Profiles

 <https://scholar.google.com.pk/citations?user=IzMRwQkAAAAJ&hl=en>


 https://www.researchgate.net/profile/Muhammad_Shahid_Farid


 <https://orcid.org/0000-0002-8384-2830>

 <https://www.webofscience.com/wos/author/record/AAF-1825-2019>

 AAF-1825-2019

 <https://www.mendeley.com/authors/56005002100/>

 <https://www.scopus.com/authid/detail.uri?authorId=56005002100>

 <https://www.linkedin.com/in/shahid-farid/>