

Dr. Waqar Mehmood

Associate Professor
Department of IT & Computer Science
Pak-Austria Fachhochschule: Institute of Applied Sciences
and Technology, Mang, Haripur, KPK, Pakistan



Personal Info:

DoB: 15-03-1981
Gender: Male
Cel: +92 300-5220513
Off: +92 995-645112
Email: waqar.mehmood@fecid.paf-iast.edu.pk
drwaqar81@gmail.com
skype id: waqar_qe

Academic Qualifications

- **PhD Major in Software Engineering, University of Innsbruck, Austria, 2011.**
- **MS (Course Work) Major in Software Engineering, CUST Islamabad, 2004.**
- **MCS, CUST Islamabad, 2002.**
- **BSc in Mathematics and Statistic, University of Peshawar, Pakistan, 2000.**

Professional Experience

- ✚ 15 years Teaching and Research experience
- ✚ Member of HEC National Computing Education Accreditation Council (NCEAC) Accreditation Inspection Committee (AIC) for the accreditation of Universities BS (CS/SE) degree program
- ✚ 9 years Post-PhD experience as Assistant Professor, Computer Science Department, COMSATS University, Wah Campus.
- ✚ 2.5 years Pre-PhD experience as Lecturer, Computer Science Department, COMSATS University, Wah Campus.
- ✚ 16 International reputed refereed journals publications and 5 International conference publications till date.
- ✚ 1 year TA experience during MS studies at MAJU Islamabad Campus.

Distinctions

- ✚ Received Award of Honorarium for the devoted job performance in year 2016-17.
- ✚ Received COMSATS Research Productivity Awards for years 2014, 2015, 2016 and 2017.
- ✚ HEC fully funded scholarship holder in PhD.
- ✚ HEC Approved Supervisor.
- ✚ Supervised Two ICT Funded BS FYP Project under scheme of National Grassroots ICT Research Initiatives.
- ✚ CUST fully funded scholarship holder in MS and MCS.

Research Publication

Journal Publications

1. Islam Ali, Waqar Mehmood, et al., CMMI Compliant Workflow Model to Establish Software Configuration Management Integrity, Accepted in Intelligent Automation & Soft Computing (IF 1.26), Nov 2020.
2. Musawwer Khan, Waqar Mehmood, et al., CMMI Compliant Modernization Framework to Transform Legacy Systems, Accepted in Intelligent Automation & Soft Computing (IF 1.26), October 2020.
3. Mehmood, Waqar; Jari, Hassan; Tahir, Ali; Aslam, Waqar; Kamran, Muhammad, UCDiff: Difference Detection in Use Case Models of Healthcare System, Journal of Medical Imaging and Health Informatics, Volume 10, Number 10, 1st October 2020, pp. 2369-2377(9), (0.659) DOI: <https://www.ingentaconnect.com/content/asp/jmihi/2020/00000010/00000010/art00015>
4. Mehmood, Waqar; Shafiq, Muhammad; Saleem, Muhammad Qaiser; Alowayr, Ali Saeed; Aslam, Waqar, A Feature-Based Evaluation of Model Merge Methods for e-Health Solutions, Journal of Medical Imaging and Health Informatics, Volume 10, Number 10, 1st October 2020, pp. 2473-2480(8), IF (0.659) DOI: <https://www.ingentaconnect.com/content/asp/jmihi/2020/00000010/00000010/art00027>
5. Touseef Tahir, Ghulam Rasool, Waqar Mehmood, Cigdem Gencel, "An Evaluation of Software Measurement Processes in Pakistani Software

Industry”, IEEE Access, Vol 6, pp 57868 – 57896, October 2018. IF (3.24), ISSN: 2169-3536 DOI: [10.1109/ACCESS.2018.2872956](https://doi.org/10.1109/ACCESS.2018.2872956),
<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8488686>

6. **Waqar Mehmood**, Nadir Shah, Zahoor-ur-din, Ehsan ullah Munir, “Fine-Granular Model Diff Solution in Model-based Version Control Systems”, Malaysian Journal of Computer Science, Vol. 28, No. 2, pp 152-165, June 2015. (IF 0.60)
<http://ejum.fsktm.um.edu.my/ArticleInformation.aspx?ArticleID=1536>
7. Mukhtiar Memon, **Waqar Mehmood**, et al., “Security modeling for service-oriented systems using security pattern refinement approach”, Software & Systems Modeling , Volume 13, Issue 2, pp 549-572, May 2014 (IF 1.65)
<http://link.springer.com/article/10.1007%2Fs10270-012-0268-6>
8. **Waqar Mehmood**, Nadir Shah, Majid Jamal Khan, Mukhtiar Memon, M Ikramullah. “Fine-granular model merge solution for model-based version control system”, Malaysian Journal of Computer Science. Vol. 29(3), pp 225-246. 2016. IF (0.60)
<http://mjcs.fsktm.um.edu.my/document.aspx?FileName=1641.pdf>
9. Zamir, A., Khan, H.U., Mehmood, W., Iqbal, T. and Akram, A.U. (2020), "A feature-centric spam email detection model using diverse supervised machine learning algorithms", The Electronic Library, Vol. 38 No. 3, pp. 633-657. 4 July 2020. (IF 0.954) <https://doi.org/10.1108/EL-07-2019-0181>
10. Saliha Zahoor, Ikram Ullah Lali, Muhammad Attique Khan*, Kashif Javed and Waqar Mehmood, “Breast Cancer Detection and Classification using Traditional Computer Vision Techniques: A Comprehensive Review”, Current Medical Imaging (2020) 16: 1. (IF 0.53)
<https://doi.org/10.2174/1573405616666200406110547>
11. Naz, Farah & Kamran, Muhammad & **Mehmood, Waqar** & Khan, Wilayat & Alkatheiri, Mohammed & Alghamdi, Ahmed & Alshdadi, Abdulrahman. (2019). Automatic identification of sarcasm in tweets and customer reviews. Journal of Intelligent & Fuzzy Systems. 37. 6815-6828. 10.3233/JIFS-190596.
12. Saleem Zahid, Nadir Shah, **Waqar Mehmood**, “Distributed Partition Detection with Dynamic Replication Management in DHT-based MANET”, IEEE Access, Vol: 6(1), March 2018. IF (3.24),
<https://ieeexplore.ieee.org/iel7/6287639/6514899/08314697.pdf>

13. Raza Ul Mustafa, M Saqib Nawaz, M Ikram Ullah Lali, Tehseen Zia, **Waqar Mehmood**, "Predicting The Cricket Match Outcome Using Crowd Opinions On Social Networks: A Comparative Study Of Machine Learning Methods." Malaysian Journal of Computer Science . Vol. 30 Issue 1, p 63-76. 14p. 2017, IF (0.6), <http://mjcs.fsktm.um.edu.my/document.aspx?FileName=1671.pdf>
14. Amin, Rashid; Shah, Nadir; **Mehmood, Waqar**, 2019. "Enforcing Optimal ACL Policies Using K-Partite Graph in Hybrid SDN." Electronics 8, no. 6: 604. <https://www.mdpi.com/2079-9292/8/6/604>
15. Waqar Aslam, Farah Ijaz, M. Ikramullah Lali, **Waqar Mehmood**, "Risk Aware and Quality Enriched Effort Estimation for Mobile Applications in Distributed Agile Software Development", Journal of Information Science and Engineering, Nov 2017, Vol. 33 No. 6, pp. 1481-1500. IF (0.47) <http://jise.iis.sinica.edu.tw/JISESearch/pages/View/PaperView.jsf?keyId=1592092>
16. Nadir Shah, Ayaz Ahmad, **Waqar Mehmood**, Depei Qian, Rui Wang "An Efficient and Scalable Routing for MANETs", Wireless Personal Communications, Springer, USA, vol. 75, no. 2, pp. 987-1004, March 2014, (IF= 0.95) <http://dl.acm.org/citation.cfm?id=2583897>
17. Majid Jamal Khan, Dildar Hussain, **Waqar Mehmood**, "Why do firms adopt enterprise risk management (ERM)? Empirical evidence from France", Management Decision, Vol. 54 Iss: 8, pp.1886 – 1907, 2016 (IF 2.5). <http://www.emeraldinsight.com/doi/pdfplus/10.1108/MD-09-2015-0400>
18. Nadir Shah, **Waqar Mehmood** "A survey of P2P content sharing in MANETs", Computer and Electrical Engineering, Elsevier, Volume 57, January 2017, Pages 55–68, IF (1.57) <http://www.sciencedirect.com/science/article/pii/S004579061631062X>
19. **W. Mehmood**, A. Ali, A. Qayyum, M. E. Quershi, "Model-based Version Management System Framework", Technical Journal, University of Engineering and Technology (UET) Taxila, April 2015, Vol. 20 No. IV-2015, PP 120-125, <http://web.uettaxila.edu.pk/techjournal/2015/No4/16.Model-based%20Version%20Management%20System%20Framework.pdf>
20. Mussarat Yasmin, Muhammad Sharif, Isma Irum, **Waqar Mehmood**, Steven Lawrence Fernandes, "Combining Multiple Color And Shape Features For Image Retrieval", IIOABJ, Vol. 7, No. 3, pp: 97-110. http://www.iioab.org/articles/IIOABJ_7.3_97-110.pdf

21. Junaid Rashid, **Waqar Mehmood**, "A Survey of Model Comparison Strategies and Techniques in Model Driven Engineering", International Journal of Computer, Electrical, Automation, Control and Information Engineering Vol:9, No:6, PP 1377-1385, 2015.
<http://waset.org/publications/10002316/a-survey-of-model-comparison-strategies-and-techniques-in-model-driven-engineering>
22. **Waqar Mehmood**, Arshad Ali, "Conflict Detection and Merging in Model based SCM Systems", Research Journal of Applied Sciences, Engineering and Technology, Vol. 8, No.4, pp: 471-480, 2014,
<http://maxwellsci.com/print/rjaset/v8-471-480.pdf> (ISI Indexed).
23. **Waqar Mehmood**, Nadir Shah, Ehsan Munir, "Versioning and Evolution Control of Models in Software Configuration Management System" Research Journal of Information Technology. Vol. 5, No. 3. Pp: 72-80, Sep 2013.
<http://maxwellsci.com/print/rjit/v5-72-80.pdf>
24. **Waqar Mehmood**, Arshad Ali, "Model Versioning In Context Of Living Models", International journal of Software Engineering & Applications, Vol. 6, No. 4, pp. 41-48, July 2015. <http://airccse.org/journal/ijsea/papers/6415ijsea04.pdf>
25. **Waqar Mehmood**, Arshad Ali, A Fine-granular Data Model for UML-compliant Models in a Model-based Software Configuration Management Systems, Research Journal of Applied Sciences, Engineering and Technology 11(3): 235-244, 2015. <http://maxwellsci.com/msproof.php?doi=rjaset.11.1712>

Book Chapter:

Signal Processing Techniques in Smart Grids,
Zahoor Uddin, Nadir Shah, Ayaz Ahmad, **Waqar Mehmood**, Farooq Alam, April 2016.
Book: Smart Grid as a Solution for Renewable and Efficient Energy, IGI Global 2015. DOI: 10.4018/978-1-5225-0072-8.ch012
<http://www.igi-global.com/chapter/signal-processing-techniques-in-smart-grids/150325>

Conference Publication

1. A. Arshad, M. F. Bin Noordin, R. Bint Othman and W. Mehmood, "Designing Healthcare Knowledge Management Systems – Development of an Integrated Component-Based KM Model for Effective Governance," 2018 International

Conference on Information and Communication Technology for the Muslim World (ICT4M), Kuala Lumpur, Malaysia, 2018, pp. 317-322. doi: 10.1109/ICT4M.2018.00065

URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8567141&isnumber=8567076>

2. Waqar Mehmood, Junaid Rashid, Muhammad Asim, "Softlinked – A Project Management and Collaboration Web Tool" International Symposium on Mathematical Sciences & Computing Research (iSMSC) 19th - 20th May 2015 (iSMSC' 15), Ipoh, Malaysia.
3. Waqar Mehmood , Junaid Rashid, A Survey of Model Comparison Strategies and Techniques in Model Driven Engineering, ICSETA 2015 : 17th International Conference on Software Engineering, Technology and Applications, July, 13-14, 2015 at Stockholm, Sweden
4. Mukhtiar Memon, Akhtar Jalbani and Waqar Mehmood, Security Service Composition for Healthcare Systems in SECOMA Security Architecture, International Conference on Computer Science, Engineering & Technology (ICCSET) June 02 – 03 , 2012, Zurich, Switzerland.
5. Badri Munir, Muhammad Aleem, Waqar Mehmood, "A Fast Implementation of Minimum Spanning Tree method and Applying it to Kruskal's and Prim's Algorithms", International Conference on Computing and Mathematical Sciences (ICCMS) Feb 25-26 2017, Sukkur IBA.
6. Waqar Mehmood, A Generic Approach for Model Diff, Merge and Evolution Control Mechanisms, accepted at Doctoral Symposium Modellierung 2010, March 24-26, Klagenfurt, Austria.
7. Waqar Mehmood, Amir Nadeem, Malik Junaid, Automated Test Data Generation – A Linked List Approach, accepted at 4th International Conference on Computer Science and its Applications (ICCSA-2006) June 27-29, 2006, San Diego, California, USA

Research Thesis Supervision:

#	Student Name	Thesis Title	MS/PhD	Supervisor / Co-Supervisor	Status with date: Registered/Completed

1	Islam Ali	Model-based Software Configuration Management	PhD	Co-Supervisor	Registered (SP 2016)
2	Musawwer Khan	Reengineering of legacy information system to an enterprise solution-A practical roadmap	PhD	Co-Supervisor	Registered (SP 2016)
3	Arfan Arshad	Knowledge Management in Public Health Care Pakistan	PhD	Co-Supervisor	Registered at International Islamic University Malaysia, synopsis submitted. (Nov. 2017)
4	Waqas Ahmad	SDN Management	PhD	Supervisor	Registered (FA 2018)
5	Wajidullah Khan	SDN Management	PhD	Supervisor	Registered (FA 2018)
6	Arshad Ali	Search based (Meta heuristics) optimized Automated test data generation	MS	Supervisor	Degree Completed FA 2015
7	Zeeshan Ahmad	Enhanced Optic Disc Segmentation Method from Retinal Fundus Images	MS	Supervisor	Degree Completed FA 2015
8	Ammara Zameer	Email Spam Classification through Diverse Features using Ensemble Learning Algorithms	MS	Supervisor	Degree Completed SP 2018
9	Usama Khalid	Cross-Site Scripting Attacks in Android Hybrid Applications	MS	Supervisor	Registered FA-2018, expected date of graduation Dec. 2018
10	Nadia Shoukat	Configuration Management System for User Interfaces	MS	Supervisor	Registered at Virtual University Pakistan, Synopsis submitted , expected date of graduation

					July 2018.
11	Muhammad Ijaz	Fine-granular Difference Detection of Use Case Models in Model-based SCM	MS	Co-Supervisor	Registered at Federal Urdu University Pakistan, Synopsis submitted , expected date of graduation August 2018.

Funded Research/Development Project

- ✚ Supervised two ICT Funded Final Year Project (FYP) under scheme of **National Grassroots ICT Research Initiatives**
 - ✚ Project Title : Project Management And Collaboration Tool
 1. Project Fund: 40,000 PKR
 2. Student Supervision : Muhammad Asim, SP09-BS(CS)-003
 3. Session 2012-13
 - ✚ Project Title : An Android Based Pharmaceutical Inventory System
 1. Project Fund: 43,000 PKR
 2. Student Supervision : Shah Faisal, FA10-BS(CS)-050
 - Session 2013-14

PI for NRPV 2020 Funded Project Submitted:

- Project Title: CMMI Compliant Workflow Model for the Implementation of Configuration Management Process in Small and Medium Sized Software Development Organizations in Pakistan
- Fund requirements : 8 Million

CoPI for NRPV 2016 Funded Project:

- Project Title: Fault Localization In Term Of Security And Management Policy In Software Defined Networks
- Project No: 5372/Federal/NRPV/R&D/HEC/2016
- Fund requirements : 3.7 Million

PhD Thesis

- ✚ Title: "A Generic Model Configuration Management Approach for MOF-Compliant Metamodels" Supervised By Prof. Dr. Ruth Breu, Head Quality

Engineering Research Group, Department of Computer Science, University of
Innsbruck, Austria.

Research Interests

- ✚ Software Engineering
- ✚ Model Versioning,
- ✚ Model-based Software Configuration Management,
- ✚ Model Diff,
- ✚ Model Merge,
- ✚ Evolution Control Mechanisms,
- ✚ Software Testing,
- ✚ Web Engineering

Professional Experience

Courses Taught at graduate and undergrad level

- ✚ Advanced Topics in Software Quality Assurance
- ✚ Advanced Topics in Software Engineering Technologies
- ✚ Advanced Topics in Software Engineering
- ✚ Software Engineering I
- ✚ Software Engineering II
- ✚ Software Testing
- ✚ Web Engineering
- ✚ Analysis and Design of Algorithms
- ✚ Introduction to Programming

Journal/Conference Reviewer

- ✚ Since 2012 I am on the review panel of Frontier of Information Technology (FIT) International Conference organized by COMSATS Institute of Information Technology (CIIT) technically sponsored by IEEE Islamabad Chapter, IEEE Computer Society and IEEE Industrial Electronics Society.
- ✚ Reviewer of Sukkur IBA Journal of Computing and Mathematical Sciences-SJCMS

- ✦ Conference on Information Assurance and Cyber Security - 2015 (CIACS-2015) organized by Military College of Signals (MCS), National University of Science & Technology (NUST) technical co-sponsorship of IEEE Computer Society and IEEE Communications Society.

Administration Experience

- ✦ Member Board of Studies, Khawaja Fareed University of Engineering & Information Technology (KFUEIT), 2018.
- ✦ External Examiner for evaluation of MS thesis entitled “Evaluation of Bibliometrics and Altmetrics on Large Scale Dataset” at CUST Islamabad.
- ✦ Graduate thesis supervision and evaluation related to Software Engineering
- ✦ Undergraduate BS/MCS FYP project supervision
- ✦ Class counselor for graduate/undergraduate students
- ✦ Committee member of ABET accreditation of Computer Science program.
- ✦ Examiner Phd comprehensive exam 2017 for the core course of Adv. Analysis of Algorithm.
- ✦ Invigilator PhD comprehensive exam help in 6th December 2016.
- ✦ Member Graduate Program SoPs creation.
- ✦ Member Graduate Advisory committee.
- ✦ Class counselor for graduate/undergraduate students
- ✦ Reviewer for BITA award project December 2016
- ✦ Convener undergrad team for CUST ExcITe Cup on November 26, 2016.
- ✦ Member FYP Internal Evaluation Committee for Undergraduate Projects.
- ✦ MS synopsis review of different COMSATS campuses.
- ✦ Incharge On-Spot Programming Competition Committee;
Responsibilities performed:
 - Preparation/arranging of question and answers.
 - Preparation of Judges Folder for On-Spot Programming Competition.
 - Preparation of candidates list
 - Compilation of On-Spot Programming Competition result
- ✦ Member of Departmental Admission Committee;
Responsibilities performed:
 - Scrutiny of admission applications at graduate level

- Conduct structured interviews from all the candidates and preparation of merit list by incorporating interviews score
- Ensuring that the candidate is fulfilling the required admission criteria, i.e., NTS result, minimum educations and grades etc.
- ✚ Technical Program Committee (TPC) of Software Engineering track of the 14th International Conference on Frontiers of Information Technology (FIT 2016).
- ✚ Technical Program Committee (TPC) of Tutorial track of the 14th International Conference on Frontiers of Information Technology (FIT 2016)

Social Work

- ✚ Conducted three seminar talks on the impact of using “Social media for the promotion of cultural heritage of Khyber Pukhtunkhwa” under the RICH project of **Directorate of Culture Govt. of KPK.**

Professional Knowledge

- ✚ C/C++
- ✚ Java2 SE/ Java2 EE
- ✚ PHP/ASP/JSP
- ✚ Java script/ VB script
- ✚ HTML/CSS
- ✚ SQL/MySQL/Oracle8i Server
- ✚ IIS/PWS Server/Tomcat/Apachi Server
- ✚ Strong background in Software Engineering, Web Development, Database/Application Development and Object Oriented Analysis and Design.

Languages:

- ✚ Urdu, English, Pushto, Hindko, Punjabi

World Exposure:

- ✚ Austria
- ✚ UK
- ✚ Saudi Arabia
- ✚ Sweden

- ✚ Italy
- ✚ Germany
- ✚ Switzerland

Personal Information

- ✚ Father Name: Abdul Qadir
- ✚ Date of Birth: 15-03-1981
- ✚ CNIC : 13302-1879209-5
- ✚ Marital status: Married
- ✚ Permanent address: District & Tehsil Haripur, Village Basso Maira. KPK.
Pakistan

References:

- ✚ Will be provided on demand