

Academic Resume



Waseem Ahmed Kareem Abdulkhayoom

Assistant Professor, Computer Science Department

Contact Information.

Room 142, wabdalkayom@kau.edu.sa.

Highest Degree.

2008, Ph.D., Computer Systems Engineering, Curtin University, Australia.

Academic and Professional Experiences.

1. **2013 - 2016**
Professor, Bangalore, India, HKBK College of Engineering, VT University.
2. **2011 - 2013**
Assistant Professor, Abha, Saudi Arabia, King Khalid University.
3. **2008 - 2011**
Professor, Mangalore, India, PA College of Engineering, VT University.
4. **2008 - 2008**
Head of Department, Senior Lecturer, Miri, Sarawak, Malaysia, Curtin University of Technology, Sarawak Campus.
5. **2003 - 2007**
Lecturer, Miri, Sarawak, Malaysia, Curtin University of Technology, Sarawak Campus.
6. **2001 - 2003**
Lecturer, Al Ain, UAE, Ajman University of Technology, Al Ain Campus.
7. **2000 - 2001**
Systems Analyst, Sharjah, UAE, Ebtikar Card Systems, Etisalat.
8. **1998 - 1999**
Systems Engineer, Houston, USA, Unidos Inc..
9. **1997 - 1997**
Unix Systems Administrator (Summer intern), Houston, USA, Houston Metropolitan Transport Authority.
10. **1996 - 1998**
Academic Support Assistant, Houston, USA, University of Houston, Main Campus.

Research Interests.

High Performance Computing (HPC), Embedded Systems, Data Science and Machine Learning.

Teaching Interests.

Competitive Programming, Data Structures and Algorithms, High Performance Computing.

Certifications and Trainings.

1. Corporate Trainer Certificate from Dale Carnegie Institute.
2. Leaders of Learning, Harvard University (HarvardX).
3. Removing Barriers to Change, Univ. of Pennsylvania (Coursera).

Social, Scientific and Professional Affiliation.

Funded Projects.

1. 2022, Is this software the best? Objectively measuring software performance, DSR-KAU, IFPIP-1535-611-1443.
2. 2021, Accelerating shared-memory algorithms on multiple distributed nodes, KAU, DF-403-611-1441.

Publications.

1. Sarker Shakiur Rahman Shuvo, Waseem Ahmed, "Relating Reported Speedup To Attainable Speedup In Hpc Applications Based On A Programmer'S Expertise", International Journal Of Research Publications, vol: 109, 2022.
DOI: [10.47119/IJRP1001091920223892](https://doi.org/10.47119/IJRP1001091920223892)
2. Maaz Ahmed, Waseem Ahmed, "State-Of-The-Art Power Management Techniques", Proceedings Of Second Doctoral Symposium On Computational Intelligence, Proceedings Of Second Doctoral Symposium On Computational Intelligence, vol: 1374, pp. 223-236, 2021.
DOI: [10.1007/978-981-16-3346-1_18](https://doi.org/10.1007/978-981-16-3346-1_18)
3. Muhammad Sheikh Sadi, Waseem Ahmed, Jan Jürjens, "Towards Tolerating Soft Errors For Embedded Systems", Sn Computer Science, vol: 2, 2021.
DOI: [10.1007/s42979-021-00497-9](https://doi.org/10.1007/s42979-021-00497-9)
4. Mohammad Nishat Akhtar, Waseem Ahmed, Muhammad Rafiq Kakar, Elmi Abu Bakar, A. R. Othman, Moises Bueno, Tayfun Dede, "Implementation Of Parallel K-Means Algorithm To Estimate Adhesion Failure In Warm Mix Asphalt", Advances In Civil Engineering, vol: 2020, pp. 1-26, 2020.
DOI: [10.1155/2020/8848945](https://doi.org/10.1155/2020/8848945)
5. Waseem Ahmed, "Extending Shared-Memory Computations To Multiple Distributed Nodes", International Journal Of Advanced Computer Science And Applications, vol: 11, 2020.
DOI: [10.14569/IJACSA.2020.0110882](https://doi.org/10.14569/IJACSA.2020.0110882)
6. Nazmul Ahasan Maruf, Waseem Ahmed, "Evaluate Metadata Of Sparse Matrix For Spmv On Shared Memory Architecture", International Journal Of Advanced Computer Science And Applications, vol: 10, 2019.
DOI: [10.14569/IJACSA.2019.0101182](https://doi.org/10.14569/IJACSA.2019.0101182)
7. , "Hpc Based Algorithmic Species Extraction Tool For Automatic Parallelization Of Program Code", International Journal Of Recent Technology And Engineering, vol: 8, pp. 1004-1009, 2019.
DOI: [10.35940/ijrte.B1188.0782S319](https://doi.org/10.35940/ijrte.B1188.0782S319)
8. Waseem Ahmed, Mohsin Khan, Adeel Ahmed Khan, Rashid Mehmood, Abdullah Algarni, Aiiad Albeshri, Iyad Katib, "A Framework For Faster Porting Of Scientific Applications Between Heterogeneous Clouds", Smart Societies, Infrastructure, Technologies And Applications, Smart Societies, Infrastructure, Technologies And Applications, vol: 224, pp. 27-43, 2018.
DOI: [10.1007/978-3-319-94180-6_5](https://doi.org/10.1007/978-3-319-94180-6_5)
9. Mohsin Khan, Waseem Ahmed, Touseef M. Golandaz, "Accelerating Dense Matrix Computations With Effective Workload Partitioning On Heterogeneous Architectures", Iete Journal Of Research, pp. 1-14, 2018.
DOI: [10.1080/03772063.2018.1436476](https://doi.org/10.1080/03772063.2018.1436476)
10. Mohsin Khan, Maaz Ahmed, Waseem Ahmed, Rashid Mehmood, Abdullah Algarni, Aiiad Albeshri, Iyad Katib, "Loop Block Profiling With Performance Prediction", International Journal Of Computer Trends And Technology, vol: 47, pp. 199-204, 2017.
DOI: [10.14445/22312803/IJCTT-V47P131](https://doi.org/10.14445/22312803/IJCTT-V47P131)
11. Maaz Ahmed, Mohsin Khan, Waseem Ahmed, Rashid Mehmood, Abdullah Algarni, Aiiad Albeshri, Iyad Katib, "Power Optimization Of Cfd Applications On Heterogeneous Architectures", International Journal Of Computer Applications, vol: 166, pp. 1-6, 2017.
DOI: [10.5120/ijca2017914148](https://doi.org/10.5120/ijca2017914148)
12. Waseem Ahmed, "Evaluating High Performance Computing (Hpc) Requirements Of Devices On The Smart Grid For Increased Cybersecurity", 2017 2nd International Conference On Anti-Cyber Crimes (Icacc), pp. 103-107, 2017.
DOI: [10.1109/Anti-Cybercrime.2017.7905272](https://doi.org/10.1109/Anti-Cybercrime.2017.7905272)

Publications.

13. M. Basthikodi and W. Ahmed, "Automatic Parallelization Tool: Classification Of Program Code For Parallel Computing", Journal On Systemics, Cybernetics And Informatics (Jsci), 2016.
14. M. Basthikodi and W. Ahmed, "Species Generation For Parallel Code By Classifying The Algorithms", The Iiaob Journal, 2016.
15. Adeel Ahmed Khan, Mohsin Khan, Waseem Ahmed, "Improved Scheduling Of Virtual Machines On Cloud With Multi-Tenancy And Resource Heterogeneity", 2016 International Conference On Automatic Control And Dynamic Optimization Techniques (Icacadot), pp. 815-819, 2016.
DOI: [10.1109/ICACDOT.2016.7877700](https://doi.org/10.1109/ICACDOT.2016.7877700)
16. Maaz Ahmed, Imaad Ali Khan, Salim Ahmed Ali, Danny Saeed, Suresh Kumar, Waseem Ahmed, "Phoenix: A Software Tool To Measure Power Consumption And Identify The Power Profiles Of Applications", 2016 International Conference In Information Science (Icis), pp. 239-244, 2016.
DOI: [10.1109/INFOSCI.2016.7845334](https://doi.org/10.1109/INFOSCI.2016.7845334)
17. S. Ahmed J., W. Banu RSD, W. Ahmed, "Multi Contextual Qr Code For Spatial And Temporal Information Retrieval", International Journal Of Applied Engineering Research, 2015.
18. M. Basthikodi and W. Ahmed, "Parallel Algorithm Performance Analysis Using Openmp For Multicore Machines", International Journal Of Advanced Computer Technology (Ijact), 2015.
19. Mustafa B., Waseem Ahmed, "Extended Species For Code Parallelization Through Algorithmic Classification", 2015 Ieee International Advance Computing Conference (Iacc), pp. 1035-1039, 2015.
DOI: [10.1109/IADCC.2015.7154862](https://doi.org/10.1109/IADCC.2015.7154862)
20. Mustafa B., Rafiya Shahana, Waseem Ahmed, "Parallel Implementation Of Doolittle Algorithm Using Openmp For Multicore Machines", 2015 Ieee International Advance Computing Conference (Iacc), pp. 575-578, 2015.
DOI: [10.1109/IADCC.2015.7154772](https://doi.org/10.1109/IADCC.2015.7154772)
21. W. Ahmed, "Building Intelligent Source-To-Source Transformers With Intent-Based Compilation", International Journal Of Computer Applications, 2014.
22. M. Basthikodi and W. Ahmed, "Parallelization Approaches Using Openmp For Strassen???S Matrix Multiplication And Canny Edge Detector", International Journal Of Information Processing (Ijip), 2014.
23. Mohsin Khan, N. Priyanka, Waseem Ahmed, N. Radhika, M. Pavithra, K. Parimala, "Understanding Source-To-Source Transformations For Frequent Porting Of Applications On Changing Cloud Architectures", 2014 International Conference On Parallel, Distributed And Grid Computing (Pdgc), pp. 350-354, 2014.
DOI: [10.1109/PDGC.2014.7030769](https://doi.org/10.1109/PDGC.2014.7030769)
24. Waseem Ahmed, "Bridging The Performance Gap Between Manual And Automatic Compilers With Intent-Based Compilation", International Journal Of Computer Applications, vol: 86, pp. 1-7, 2014.
DOI: [10.5120/15010-3303](https://doi.org/10.5120/15010-3303)
25. Waseem Ahmed, "Addressing The Idiosyncrasies Of Context-Dependent Parallelization", 2013 National Conference On Parallel Computing Technologies (Parcomptech), pp. 1-5, 2013.
DOI: [10.1109/ParCompTech.2013.6621393](https://doi.org/10.1109/ParCompTech.2013.6621393)
26. Waseem Ahmed, Mohammed Mufasir Muthaher, Jamshid M. Basheer, "Introducing High Performance Computing (Hpc) Concepts In Institutions With An Absence Of Hpc Culture", 2013 Sixth International Conference On Contemporary Computing (Ic3), pp. 274-277, 2013.
DOI: [10.1109/IC3.2013.6612203](https://doi.org/10.1109/IC3.2013.6612203)
27. Zahid Ansari, A. Vinaya Babuy, Waseem Ahmed, Mohammad Fazle Azeemz, "A Fuzzy Set Theoretic Approach To Discover User Sessions From Web Navigational Data", 2011 Ieee Recent Advances In Intelligent Computational Systems (Raics), pp. 879-884, 2011.
DOI: [10.1109/RAICS.2011.6069435](https://doi.org/10.1109/RAICS.2011.6069435)

Publications.

28. Zahid Ansari, Johannes Herrmann, Matin Abdullah, Waseem Ahmed, "A Looking-Out Portal (Lop) Approach To Enhance Qualitative Aspects Of Bandwidth Utilisation In Academic Networks", International Journal Of Networking And Virtual Organisations, vol: 9, pp. 317, 2011.
DOI: [10.1504/IJNVO.2011.043802](https://doi.org/10.1504/IJNVO.2011.043802)
29. Dr. Waseem Ahmed, Suma Bhat, Mohammed Isham, M. K Ramis, Shamsheer Ahmed, "Pre-Parallelization Exercises In Budget-Constrained Hpc Projects: A Case Study In Cfd", International Journal Of Computer Applications, vol: 1, pp. 103-105, 2010.
DOI: [10.5120/474-780](https://doi.org/10.5120/474-780)
30. Waseem Ahmed, Douglas Myers, "Concept-Based Partitioning For Large Multidomain Multifunctional Embedded Systems", Acm Transactions On Design Automation Of Electronic Systems, vol: 15, pp. 1-41, 2010.
DOI: [10.1145/1754405.1754407](https://doi.org/10.1145/1754405.1754407)
31. Waseem Ahmed, Douglas Myers, "Maintainable Embedded System Design To Accommodate Incremental Change", 2007 International Symposium On Integrated Circuits, pp. 158-161, 2007.
DOI: [10.1109/ISICIR.2007.4441821](https://doi.org/10.1109/ISICIR.2007.4441821)
32. Waseem Ahmed, Adrus Mohamad Tazuddin, Wong Ming Ming, Liaw Tzy Renn, Douglas Myers, "Partitioning For A Concept-Based Soc Design To Address Product Evolution", 2007 International Conference On Intelligent And Advanced Systems (Icias), pp. 1335-1339, 2007.
DOI: [10.1109/ICIAS.2007.4658601](https://doi.org/10.1109/ICIAS.2007.4658601)
33. W. Ahmed, D. Myers, "Faster Exploration Of High Level Design Alternatives Using Uml For Better Partitions", 2006 Design, Automation And Test In Europe, pp. 1-2, 2006.
DOI: [10.1109/DATE.2006.243971](https://doi.org/10.1109/DATE.2006.243971)
34. W. Ahmed, D. Myers, "Design Refinement For Efficient Clustering Of Objects In Embedded Systems", Design, Automation And Test In Europe, pp. 718-719, 2005.
DOI: [10.1109/DATE.2005.117](https://doi.org/10.1109/DATE.2005.117)