Arbab Waseem Abbas
Curriculum Vitae

Personal information

First name / Surname	**Dr. Arbab Waseem Abbas**
Father Name	Arbab Liaqat Ali Khan
Address (Residential/Postal)	Mohallah Arbaban P-O #25140, P-O Tehkal Bala Peshawar, Pakistan.
Address (Official/Postal)	Institute of Computer Sciences and Information Technology, The University of Agriculture Peshawar, Khyber Pakhtunkhwa, Pakistan, 25120.
Telephone	Work: +92 (0) 91216463 Mobile:+92 (0) 301 922642
E-mail	aristocratarbab@yahoo.com, aristocratarbab@aup.edu.pk
Nationality	Pakistani
Date of birth	24 April, 1986
Gender	Male
C-N-I-C Number	17301-9417390-3
Passport Number	GJ1013902
PEC Reg. Number	COMP/6328
PCD Number	23125
Google scholar and LinkedIn link	https://scholar.google.com/citations?user=-u1d8nAAAAAJ&hl=en, https://www.linkedin.com/in/arbab-waseem-abbas-abb6b0286/

Work experience

Dates	September 2011 – present
Position held	**Lecturer**
Name and address of employer	Faculty of Management and Computer Sciences, The University of Agriculture Peshawar, Khyber Pakhtunkhwa, Pakistan, 25120. www.aup.edu.pk
Main activities and responsibilities	Teaching courses at undergraduate and postgraduate level.
Type of business or sector	Public Sector University
Additional Responsibility	Post graduate Co-ordinator, Member BoS, Advisor post-graduate and under-graduate studies; duties include guiding students in the selection of their projects, and coordination of the overall research and co-curricular activities carried out in the department.
Dates	July 2009 – September 2011
Occupation or position held	**Web-Master, Trainee and Transmission-Engineer**
Main activities and responsibilities	Web-designing & development, Networking, News-letter design, Computer Lab Administration, computer programming and Control of BTS & BSC using NETACT software.
Name and address of employer	Directorate of Science & Technology (DoST) Govt. Of KPK, Ample Software Solution and Telenor.

Education and training

Dates	March 2015 – May 2021
Title of qualification awarded	**Ph.D. in Computer Systems Engineering, UET Peshawar**
Main area of research	Cyber security, Internet of Things, Smart Logistics, Simulation and modelling.
Thesis Title	Cyber Secured Framework for Control and Monitoring of IoT Devices in Smart Logistics
Name of organisation	Department of Computer Systems Engineering, University of Engineering & Technology Peshawar, Pakistan
Dates	September 2010 – January 2013
Title of qualification awarded	**Master of Science in Computer Systems Engineering**
Main area of research	Artificial Intelligence and Machine Learning
Thesis Title	Automatic Digit Recognition in Pashto Language
Name of organisation	Department of Computer Systems Engineering, University of Engineering & Technology Peshawar.
Dates	September 2005 – September 2009

Title of qualification awarded	**Bachelor of Science in Computer Systems Engineering**
Principal subjects	Visual Computing, Pattern Recognition, Image Processing, Digital System Design, Web Engineering
FYP	Implementation of an Efficient Digital Image Processor Using CORDIC & SVD on FPGA
Name of organisation	University of Engineering and Technology, Peshawar Pakistan

Personal skills

Mother tongue	**Pashto**

Self-assessment

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent User	C2	Proficient User	C2	Proficient User	B2	Independent User	C1	Proficient User
C2	Proficient User	C2	Proficient User	C2	Proficient User	C2	Proficient User	C2	Proficient User

English (first data row), **Urdu** (second data row)

Social skills and competences	Good at making new friends, adjustment with new teammates. By participating in a different debating contests/conferences and interaction with, I have the experience to interact with different people.
Organisational skills and competences	Leadership abilities and the ability to work under stresses and strict deadlines. I realize not to get irritated if provoked by peers and sub ordinates. Working as graduate and undergraduate advisor and leader of debating societies at university, college and school level, I have the experience to manage and coordinate people with different interests and conflicting work manners and timings.
Technical skills and competences	Being the focus of my research and teaching, I have good understanding of concepts related to Cyber Security, HCI, IoT, Smart Logistics, Pattern Recognition, Automatic Speech Recognition, Artificial intelligence, Digital Image and Signal Processing, Web Technologies, Operating System, Remote Sensing, computer architecture and Project Management. Courses designed: HCI, Professional Practices, AI, DSP, Adv. OS, Adv. Computer Architecture, IoT

Computer skills and competences

I am good at;
Adobe Audition, Joomla, Contiki, Cooja, Matlab, PHP, Programming in C and C++, MS Office and MS Project, LaTeX, Electronics Workbench, Verilog Modelsim, HTK, NS2 and LMS.

Distinctions

- Selected in All Pakistan by Hec and visited Scotland for Research Exposure Tour (march 2018).
- HEC Approved PhD Supervisor
- PhD Scholar at National Centre of Cyber Security, UET Peshawar.
- PhD Scholar at Pak France PERIDOT Research Program, UET, Peshawar
- Invited talk at International workshop in University of Malakand, GIKI and Agriculture University
- Organized, hosted as Stage secretary and published 8 papers in ICTAPP'23 (international conference)
- Coordinator CS/IT Post-graduate programs, FMCS The University of Agriculture Peshawar.
- Member **Board of Study** for ICS/IT, FMCS The University of Agriculture Peshawar.
- Member **QEC,** ICS/IT, The University of Agriculture Peshawar.
- Member **Accreditation Committee** for CS/IT programs FMCS
- Member **Supervisory Committee for Web Development** BS(CS/IT)
- 2 FYPs as Supervisor in **Web Development** funded by National Grassroots ICT Research Initiative (NGIRI) program.
- Remained Focal Person HEC for Microsoft IT Academy Program
- Certified Microsoft Office Specialist in Office Word 2013
- Produced 26 MS Scholars in which 6 are gold medallists
- Supervised more than 40projects in BS CS/IT, in web development, Visual Computing and AI.
- Developer & Designer of **1st official online Ideas Bank in Pakistan** for Directorate of Science and Technology (DoST)
- **Merit scholarship in Phd, M.Sc and B.Sc** from HEC and UET Peshawar.

Projects

- Best **Debater** and Compere at School, College, University and All Pakistan level (English).
- Classification of Remotely Sensed Data through ENVI 5.0
- Automatic Digit Recognition in Pashto Language.
- Development of **dynamic websites** in JOOMLA, PHP & MYSQL.
- Implementation of an Efficient Digital Image Processor using CORDIC & SVD on FPGA.
- Multiprocessor Environment in Embedded C.
- Delta to Sigma Conversion in Verilog and Canny Edge Detection in Matlab.

Research Publications
Journals Papers

- Sahibzada Abdur Rehman Abid, Nasir Ahmad, Muhammad Akbar Ali Khan, **Arbab Waseem Abbas and** Muhammad Waqas, "Formant based Pashto Digits and Numbers Synthesizer" (*Sindh University Research Journal (Science Series) vol. 46 (1), page # 47-52, March 2014*).

- Zakir Ali**, Arbab Waseem Abbas,** Thasleema, Burhan ud din, Tanzeela and Sahibzada Abid**, "**Database Development and Automatic Speech recognition of Isolated Pashto spoken Digits using MFCC and K-NN" (International Journal of Speech Technology(Springer Science+ Business Media Newyork) DOI 10.1007/s10772-014-9267-z, January 8, 2015l)

- **Arbab Waseem Abbas,** NasruminAllah, Nasir Ahmad,Akbar Ali and Sahibzada abid**,** "K-Means and ISODATA Clustering Algorithms for Landcover Classification using remote sensing" (*Sindh University Research Journal (Science Series) vol. 48 (2), page # 315-318, june 2016*).

- Khan, A., Saeed, K., Khan, H., **Abbas, A. W.**, & Shah, S. (2017). IMPACT OF SLEEPING NODES ON THE PERFORMANCE OF PROACTIVE AND REACTIVE ROUTING PROTOCOLS IN MOBILE AD HOC NETWORK. Science International, 29(2), 447-452.

- Sadiq Shah, **Arbab Waseem Abbas,** Hameed Hussain and Huma Israr,(2017)"Minimizing information asymmetry interference in multi-radio multi-channel wireless mesh networks",Kuwait J. Sci. 44 (3) pp. 30-39, 2017.

- Sadiq Shah, Khalid Saeed, Mustafa, Rafiullah, Mohibullah, Misbah Daud and **Arbab Waseem Abbas**, (2018), Minimization of Information Asymmetry Interference using Partially Overlapping Channel Allocation in Wireless Mesh Networks" International Journal of Advanced Computer Science and Applications (IJACSA) - Volume 9 No 8 August 2018.

- **Abbas, A. W.**, Saeed, K., Marwat, S. N. K., Abid, S. A. R., Khan, M. A. A. & Shah, S., "Evaluation of Optimal Edge Detection Operator for Localization of License Plate of Vehicles with Different Orientation", J. Mech. Cont.& Math. Sci., Vol.-14, No.-3, May-June (2019) pp 445-453.

- Sajjad, M., Saeed, K., Hussain, T., **Abbas, A. W.,** Khalil, I., Ali, I., & Gul, N. "Impact of Jelly Fish Attackonthe Performance of DSR Routing Protocol in MANETs". JOURNAL OF MECHANICS OF CONTINUA AND MATHEMATICAL SCIENCES, Vol.-14, No.-4, July-August (2019) pp 132-140.

- **A. W. Abbas** and S. N. K. Marwat, "Scalable Emulated Framework for IoT Devices in Smart Logistics Based Cyber-Physical Systems: Bonded Coverage and Connectivity Analysis," in IEEE Access, vol. 8, pp. 138350-138372, 2020, doi: 10.1109/ACCESS.2020.3012458. (IF of 3.745)

- Rafi Ullah, **Arbab Waseem Abbas**, Mohib Ullah, Rafi Ullah Khan, Irfan Ullah Khan, Nida Aslam, Sumayh S. Aljameel, "EEWMP: An IoT-Based Energy-Efficient Water Management Platform for Smart Irrigation", Scientific Programming, vol. 2021, Article ID 5536884, 9 pages, 2021. https://doi.org/10.1155/2021/5536884

- farman ali, sadia khan, **Arbab Waseem Abbas** etal, (2022), "A Two-Tier Framework Based on GoogLeNet and YOLOv3 Models for Tumor Detection in MRI", Computers, Materials and Continua, 1546-2226, 72(1), 73-92. DOI:10.3260 4/cmc.2022.0 24103

Conference Papers

- **Arbab Waseem Abbas,** Nasir Ahmad and Hazrat Ali, **(2012),** "Pashto Spoken Digits Database for Automatic Speech Recognition Research", *Proceedings of the 18th International Conference on Automation & Computing, Loughborough University, Leicestershire, UK, 8 September 2012 pp. 363-366.*

- Afzaal Ahmad, Noorullah and **Arbab Waseem Abbas (2013),**" PHP+MySQL based Online Examination System With Power Failure Handling and Dropbox Capability", *Proceedings of International Workshop on Trustworthy Computing co-located workshop of 7th Iinternational conference on software security and reliability,* Washington, D.C., USA, 18-20 June 2013.

- Tanzeela, **Arbab Waseem Abbas,** Zakir Ali and Burhan ud din, **(2014),** "Analyzing the Impact of MFCC and LDA for the Development of Isolated Pashto Spoken Numbers ASR" presentation in the 12th International Conference on Frontiers of Information Technology (FIT 2014),Islamabad,December 17-19 2014

- Shahab-Ul-Islam, **A. W. Abbas**, A. Ahmad, S. Shah and K. Saeed, "Parameter investigation of Artificial Neural Network and Support Vector Machine for image classification," 2017 14th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Islamabad, 2017, pp. 795-798. doi: 10.1109/IBCAST.2017.7868146

- Saeed, K., Khalil, W., Ahmed, S., **Abbas, A. W.,** & Khattak, M. N. K. (2019, January). Analysis of Different Packet Size Optimization Techniques for TWSNs. In 2019 2nd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET) (pp. 1-6). IEEE.

- **A. W. Abbas**, S. Nawaz Khan Marwat, S. Ahmed, A. Hafeez, K. Ullah and I. U. Khan, "Proposing Model for Security of IoT Devices in Smart Logistics: A Review," 2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET), Sukkur, Pakistan, 2020, pp. 1-4, doi: 10.1109/iCoMET48670.2020.9073916. IEEE

MS Research Students Supervised

S.No.	Student Name	Thesis Title	Year
1	Tanzeela	Automatic Speech Recognition of Isolated Pashto Numbers by using MFCC and LDA **(Gold Medalist)**	2015
2	Zakir Ali	Database Development and Automatic Speech Recognition of Isolated Pashto Spoken Numbers using MFCC and K-NN **(Gold Medalist)**	2015
3	Chahat Nisar	Analyzing the Impact of Proposed Algorithm on Vehicle Number Plate	2016
4	Shahab-ul-Islam	Performance Analysis of Artificial Neural Network and Support Vector Machine for Image Classification **(Gold Medalist)**	2016
5	Huda Nauman	Segmentation of Pashto Text into Characters	2017
6	Abi Zar	A Novel Trust Based Optimization Model to Enhance the Location Privacy in VANETS	2017
7	Junaid Bukhari	A Novel Hybrid Metaheuristic Based Functional Link Neural Network Model for Medical Data Classification **(Gold Medalist)**	2017
8	Inayat Ullah	A Novel Water Cycle Based Back Propagation Algorithm with Magnified Activation Function for Data Classification	2017
9	Burhan Uddin	Development of Automatic Speech Recognition System for Pashto Isolated Spoken Numbers using Discrete Wavelet Transform (DWT) and Linear Discrimnent Analysis (LDA)	2017
10	Fazeen Akhtar	Identification and verification of Fingerprint Image Critical Frequency Band Using Discrete Wavelet Transform	2017
11	Ehsan Ullah	Performance Evaluation of K-Nearest Neighbor, Decision Tree and Naïve Bayesian Technique base on Student Data	2018
12	Nida Gul	Real Time Isolated Automatic Speech Recognition System for Limited Pashto Numbers (0-1) series **(Gold Medalist)**	2018
13	Salman Haider	Simulating Blood Vessel Network for Intelligent Analysis Based on Skeletonization and Graph Representation	2018
14	Shakir Shahab	Design and Implementation of An Effective Algorithm for Enterprise Resource Planning Based Systems	2019
15	Irshad Ahmad	Business Process Re-Engineering Algorithm for Bills Cancellation Process of Enterprise Resource Planning	2019
16	M. Farooq Hussain	Detection and Classification of Snow-Covered Region Using Parallelepiped and Support Vector Machine **(Gold Medalist)**	2019
17	Sadia Khan	Automatic Detection of Tumor in MRI Images Using Convolutional Neural Network	2020
18	Nauman Riaz	An Efficient Approach for Smart Irrigation System Based on Water Meter	2020
19	Kashif Ali	Need-Based Optimal Model for Selection of Virtualization Technologies in Data Centers	2020
20	Maliha Tahir Butt	Performance Analysis of Supervised and Unsupervised Classification for LU/LC Area Via Remote Sensing	2020
21	Kanwal Lodhi	Identification and Classification of Deforestation in the Northern Pakistan using ANN	2020
22	Rafiullah	Energy Efficient Water Management Platform (EEWMP) For Precise Irrigation by using IoT	2021
23	Atta Ullah	Sentiment Classification of Pashto Roman Using Multi-Layer Perceptron	2021
24	Akhtar Mulk	Multi-Class Classification for the Identification of Covid19 in Xray Images Using Convolutional Neural Network (CNN)	2022
25	Rehan Nawaz	Bug Prediction in Software Development Using K-Fold Based Random Forest Algorithm	2022
26	Musadaq Habib	Classification of Artistic Images Authenticity Using Siamese Neural Network	2023