

Résumé

Dr. Wajiha Shah

(Professor)

Department of Electronic Engineering,
Mehran University of Engineering &
Technology, Jamshoro

Phone # (Office) : 0092-22-2771334

E-mail: wajiha.shah@faculty.muet.edu.pk

Courier Mail: A-125, S.U.E.C.H.S, Phase-I, Jamshoro

Personal Note ▼

Full name: Wajiha Shah
N. I. C. # 41204-5426394-2
Husband's name: Syed Asif Ali Shah
Date of birth: 01 March 1971
Religion: Islam
Nationality: Pakistani
Marital status: Married

Salient Persona ▼

Quick learner, motivated, self-initiator, straightforward, leader, hard worker, devoted and Polite

Research Interest ▼

- Mobile & Wireless Communication
- Satellite communication
- Multimedia Communication.
- Teletraffic Theory
- Performance Modeling
- Data networks
- Embedded Systems Design
- Probability and Random Signals
- Artificial Intelligence
- Generative Artificial Intelligence
- Cyber Security
- Data Analysts

Professional Qualifications ▼	Passing Year/Marks
Ph.D (Performance Modeling of Telecommunication System) Vienna University of Technology (TUWien), Vienna, Austria.	2010 First Division (Distinction)
M.E (Telecommunication & Control Engineering) Mehran University of Engineering & Technology, Jamshoro, Pakistan.	2004 First Division 84.88%
B.E (Electronics Engineering) Mehran University of Engineering & Technology, Jamshoro, Pakistan.	1994 First Division (Second Position) 91.04 %

Thesis / Project ▼

PhD	Presentation Year
TITLE: Performance Modeling of Queueing Systems Using Matrix Geometric Method	2010

Supervised by: O. Univ. Prof. Dipl.-Ing. Dr. techn. Harmen R. van As Professor and Head of Department, Institute of Broadband Communications, Vienna University of Technology (TUWien), Vienna-Austria	
Master of Engineering (Telecommunication & Control Engineering)	Presentation Year
TITLE: Design of Pc Based Programmable I/O Devices Trainer	2004
Supervised by: Prof. Dr. B.S. Chowdhry, Professor, Department of Electronics Engineering, Mehran University of Engineering & Technology, Jamshoro.	
Bachelor of Engineering (Electronics Engineering))	Presentation Year
TITLE: Study and Implementation of Trouble shooting tools for modern Electronics & Electrical Equipments	1994
Supervised by: Prof. Dr. B.S. Chowdhry, Professor, Department of Electronics & Biomedical Engineering, Mehran University of Engineering & Technology, Jamshoro.	

Professional Experience ▼		
S. No.	Job Description/ Position held	Organization & Period
01	Demonstrator	Department of Electronics Engineering, Mehran University of Engineering & Technology, Jamshoro. From 08-03-2013 to Date
02	Lecturer	Department of Electronics Engineering, Mehran University of Engineering & Technology, Jamshoro. From 08-03-2013 to Date
03	Assistant Professor	Department of Electronics Engineering, Mehran University of Engineering & Technology, Jamshoro. From 08-03-2013 to Date
04	Associate Professor	Department of Electronics Engineering, Mehran University of Engineering & Technology, Jamshoro. From 08-03-2013 to Date
05	Professor (Research & Academics) Pay Scale-21	Department of Electronics Engineering, Mehran University of Engineering & Technology, Jamshoro. From 08-03-2013 to Date
06	Research Staff Member	Institute of Broadband Communication, Vienna University of Technology, Vienna, Austria. From 2005 to 2010.

Professional Membership/Affiliation ▼	
➤ Pakistan Engineering Council (PEC) Ataturk Avenue (East) Sector G-5/2, Islamabad (051) 2829296 - 2829348	1995
Life Membership, Registration # ELECTRO/3878	
➤ IEEE: Member No: 90629418	

Languages Proficiency ▼
English, Urdu, Sindhi, (Write, Read, Speak),
Research Supervision Affiliation ▼

Job Responsibilities ▼

- ✓ Currently Chairperson of the ES department
- ✓ Conducting Research
- ✓ Teaching (Delivering lectures)
- ✓ Conducting Practicals
- ✓ Students Counseling/Providing guidance
- ✓ Supervising students for undergraduate and Postgraduate thesis projects
- ✓ Team member to arrange technical field visits and guest lectures
- ✓ Team member for organizing technical seminars and exhibitions
- ✓ Time to time different administrative responsibilities
- ✓ Examination duties (Invigilation, Paper setting, Conduct of examination)
- ✓ Member of DMRC
- ✓ Member of BOS
- ✓ Member of BOF

Funded Project

1. Enhancing Water Hygiene: Microplastic Surveillance in Aquatic Environment, IEEE Epic Project. 2024.
2. Design and Implementation of a Cost Effective Smart Heart Monitoring System, PEC award, 2023.
3. “*Self Driving and Driver relaxing Vehicle*”, National Grassroots ICT Research Initiative, 2014-2015, HEC, Pakistan

Seminars/Conference/ Workshops

- ICTECC'25 , MUET, Jamshoro, APRIL2025.
- Two days national workshop on FPGA design using Vivado, MUET, Jamshoro, Sep 2024.
- Seminar on Social Development with Time Management, MUET, Jamshoro, 07-09-2023.
- Seminar on OBE system and its regulations, MUET, Jamshoro, 18-08-2023.
- Seminar on Career Opportunities for Electronic Engineers at Engro Corporations, MUET, Jamshoro, 16-08-2023.
- Seminar on Getting Admission and Scholarship in Top-Ranked Saudi and Other Middle Eastern Universities, MUET, Jamshoro, 11-08-2023.
- Seminar on Recruitment in Industries, MUET, Jamshoro, 10-08-2023.
- Seminar on CPD Webinar on Optics and Photonics, MUET, Jamshoro, 09-08-2023.
- Workshop on Pak Swiss Training Center (PSTC) Workshop, MUET, Jamshoro, 17-07-2023.
- Seminar on Exploring the Potential of Compressive Sensing in Healthcare, MUET, Jamshoro, 26-06-2023
- Seminar on Digital Auscultation of the Cardiac and Respiratory System, MUET, Jamshoro, 26-06-2023.
- Seminar on Machine learning with Matlab, MUET, Jamshoro, 19-10-2022.
- ICTECC'22 , MUET, Jamshoro, Dec2022
- Workshop on PLC and SCADA Programming and Simulation for industrial Automation

- and Control Applications, MUET, Jamshoro, 23-24DEC-2021.
- Two day PCB Workshop, MUET, Jamshoro, 9-10th Feb 2016.
 - Robo-Intellect Workshop, MUET, Jamshoro, 2nd Nov 2016.
 - Matlab Workshop – Acquaint yourself with the language of technical Computing, , MUET, Jamshoro, 21-22 Sept 2016.
 - One day Seminar on Outcome Based Education and Accrediation System, MUET, Jamshoro, 2016
 - Two day Workshop on Strategic Management for HoDs under MUG program HEC, MUET, Jamshoro, 2015
 - International Workshop on Asian Regional School on FPGA Design for scientific Instrumentation, under ICTP, MUET, Jamshoro, 7 – 18 December, 2015
 - 1st International Workshop on Embedded System and its Applications, IWEMSA’15, MUET, Jamshoro, 2015
 - IMTIC’15, MUET, Jamshoro, 2015
 - IEEE explosion 2014, MUET, Jamshoro, 2014
 - 23rd IEEEEP Seminar, MUET, Jamshoro, 2014
 - IMTIC’13, MUET, Jamshoro, 2013
 - IEEE Pakistan Student, GOLD & WIE Congress 2013

Research Journal Publication

1. Noor Fatima, Tanveer Phulphoto, Wajiha shah, “ Densenet169-based Deep transfer Learning Techniquefor Rail Surface Defect Detection”, Journal of Xi’an Shiyu University, Natural Science Edition, VOLUME 19, NO. 06, SEPTEMBER, 2023 [257-262].
2. Kehkashan A. Memon, A. Waheed Umrani, Mukhtiar A. Unar, Wajiha Shah, “Design and Analysis of High-Speed Bottleneck-Free One-Dimensional OCDMA Based Gigabit Symmetric PON”, Wireless personal communications, Impact Factor(2.017), Issue 126, JULY, 2022 [3147-3165].
3. Kehkashan A. Memon, Ahmad Atieh, A. Waheed Umrani, Mukhtiar A. Unar, Wajiha Shah, "Design and performance analysis of GPON-employed two-dimensional multidagonal OCDMA code," Opt. Eng. 59(7) 076105 (10 July 2020)_
4. Wajiha Shah, Syed Asif Ali Shah, Ali Asghar Memon, “*Transient Analysis of Phase Type Hysteresis system with Dual Arrival Rate Through Matrix Geometric Method*”, Sindh Univ. Res. Jour. (Sci. Ser.), VOLUME 44, NO. 4, DECEMBER, 2012[ISSN 1813-1743].
5. Wajiha Shah, Syed Asif Ali Shah, U. A. Rind, “*Evaluation of Probability Mass Function Of Starting States of Flow Process of Hypogeometrical Early Arrival Discrete-Time DSR Load Management System*”, Sindh Univ. Res. Jour. (Sci. Ser.), VOLUME 44, NO. 4, DECEMBER, 2012[ISSN 1813-1743].
6. Wajiha Shah, Syed Asif Ali Shah, M.U.R.Maree, “*Flow Time Analysis of Phase Type Queueing System Using Matrix Geometric Method*”, Sindh Univ. Res. Jour. (Sci. Ser.), VOLUME 44, NO. 4, DECEMBER, 2012[ISSN 1813-1743].

7. Wajiha Shah, Syed Asif Ali Shah, Faisal Karim Shaikh, “*Transient Analysis of Hysteresis Queueing Model Using Matrix Geometric Method*”, MURJET, VOLUME 30, NO. 4, OCTOBER, 2012 [ISSN 0254-7821].
8. Wajiha Shah, Ahsan Ahmed Ursani, B. S. Chowdhry, “*Design , Development & Implementation of PC –based Programmable Peripheral I/O device Trainer*”, MURJET, VOLUME 22, NO. 3, JULY, 2003 [ISSN 0254-7821].
9. Wajiha Shah, Syed Asif Ali Shah, Wanod Kumar, “*Performance Evaluation of Controlled Arrival Rate System Using Matrix Geometric Method Through Transient Analysis*”, MURJET, VOLUME 32, NO. 3, JULY, 2013 [ISSN 0254-7821].
10. Neelam Memon, Wajiha Shah, “3D Scene Modeling with the help of Time of Flight Camera”, Engineering Science and Technology International Research Journal (ESTIRJ), VOLUME 2, NO. 3, SEPTEMBER, 2018 [47-51].
11. Ali Asghar Memon, Syed Asif Ali Shah, Wajiha Shah, “ A Flexible Mathematical Model for Dissimilar Operating Modes of a Switched Reluctance Machine” IEEE Access, VOLUME 6, February, 2018[9643-9649].
12. Irshad Rahim Memon, Wajiha Shah, “ *Performance Evaluation of Routing Protocols in VANET on Highway: Police Cars Communication Scenarios*”, Engineering Science and Technology International Research Journal (ESTIRJ), VOLUME 1, NO. 3, SEPTEMBER, 2017 [16-22].
13. Syed Asif Ali Shah, Wajiha Shah, “ *Idle and Busy Period Analysis of Two Class Data Traffic through Queueing Technique*”, International Journal of Computer Application, , VOLUME 109, NO. 4, JANUARY, 2015 [0975-8887].
14. A. A Memon, I. Hussain, Wajiha Shah, M.S. Chandio, “*Modeling Of Switched Reluctance Motor*”, Sindh Univ. Res. Jour. (Sci. Ser.), VOLUME 44, NO. 4, DECEMBER, 2012[ISSN 1813-1743].
15. M. Zahid, Syed Asif Ali Shah, Wajiha Shah, “*Evaluation of Efficient Line Lengths for Better Readability*”, MURJET, VOLUME 31, NO. 1, JANUARY, 2012 [ISSN 0254-7821].
16. Syed Asif Ali Shah, Wajiha Shah, Faisal Karim Shaikh, “*Flow Time Analysis of Load Management Late Arrival Discrete-Time Queueing System With Dual Service Rate Using Hypogeometrical Distribution*”, MURJET, VOLUME 31, NO. 1, JANUARY, 2012 [ISSN 0254-7821].
17. Syed Asif Ali Shah, Wajiha Shah, Abdul Sattar Larik, “*Modelling and Performance Evaluation of Early Arrival Discrete Time Queueing System with Load Balancing Using Geometric Distribution*”, MURJET, VOLUME 30, NO. 4, OCTOBER, 2011 [ISSN 0254-7821].
18. Faisal Karim Shaikh, Wajiha Shah, Syed Asif Ali Shah, “*On Efficient Data Reduction for Network Partition Forecasting in WSNs*”, MURJET, VOLUME 30, NO. 2, APRIL, 2011 [ISSN 0254-7821].
19. Syed Asif Ali Shah, Wajiha Shah, Ahsan Ahmed Ursani, “*A Discrete time Queueing*

Approach to Model and Evaluate Slotted Ring Network Buffer using Matrix Geometric Method", MURJET, VOLUME 30, NO. 1, JANUARY, 2011 [ISS 0254-7821].

20. Ahsan Ahmed Ursani, Wajiha Shah, Syed Asif Ali Shah, "Texture Retrieval with Descriptors Based on Local Fourier Transform: Comparing the Rectangular and Circular Neighbourhoods", MURJET, VOLUME 30, NO. 1, JANUARY, 2011 [ISS 0254-7821].

International Conference Publications

1. "Matrix Geometric Solution of Single Stage Queueing System with Time-Varying Customers", WorldComp09, MSV'09, July13-16, 2009. Las Vegas, Nevada, USA.
2. "Performance Evaluation of Multisatge Service System Using Matrix Geometric Method", 2009 Fourth International Conference on Systems and Networks Communications (ICSNC), Porto, Portugal, September 20- 25, 2009.
3. "Discrete-Time Queueing Analysis of Communication Buffer With Multiserver", SCORed 2009, IEEE Student Conference On Research and Development, 16th-18th Nov 2009, Malaysia.
4. "Flow Time Analysis of An Early Arrival System Using Discrete-Time Hypogeometrical Distribution", AMS2010, May 26 - 28, ,Kota Kinabalu, Malaysia.
5. "Flow Time Process Calculation of Late Arrival Discrete-Time System Using Hypogeometrical Distribution", 2010 International Conference on Computer Communications and Networks (CCN-10), Orlando, FL, USA , July 12-14, 2010.
6. "Throughput and Outage for Block-Markov Encoding Implementation with Network Coding for Cooperative Communications", Wireless VITAE'09, Alborg, Denmark.
7. "Performance Comparison of Network Through Continuous and Discrete time Queueing Models", WICT/V – Workshop on Information and Communication Technologies V, SoftCOM 2009, September 24 & 25, 2009, Croatia.
8. "Comparison and Analysis of Early and Late Arrival System For Finite and Infinite Discrete Time Queueing", Second International Conference on Communication Software and Networks (ICCSN 2010) , 26-28 February, Singapore, 2010.
9. "Analysis of Networks Buffer Using Discrete-Time Queueing Models", SCORed 2009 IEEE Student Conference On Research and Development, 16th-18th Nov 2009, Malaysia.
10. "Modelling Finite Buffer Slotted Ring Network Using Matrix Geometric Method", 2009 Third UKSim European Symposium on Computer Modeling and Simulation, Athens, Greece, November 25- 27, 2009.
11. "Outlier Detection in Common Spatial Pattern", WorldComp09, IPCV09, July13-16, 2009.

Las Vegas, Nevada, USA.

12. *“Fault Localization Models Using Dependences”*, Intech, October, 2009.
13. *“Localize Faults from Alias-Free Programs using Verification based Model”*, Artificial Intelligence and soft Computing, ASC 2008.
14. *“Area Performance Analysis of Hamming Code on 90-nm CMOS Technology”*, IMTIC’15, February, MUET, Jamshoro, 2015.

National Conference Publications

Authored:

1. *“Design & Development of PC –based I/O device Trainer”*, One Day National Conference, Feb 10, 2002, University of Sindh, Jamshoro.

Book Chapters

Co-authored:

1. *“Renewable Energy Scenario of Pakistan for Sustainable Development”*, Global Sustainable Development and Renewable Energy Systems , IGI Global, Information Science Reference, 2012.
2. *“Fault Localization Models Using Dependences”*, Engineering the Computer Science and IT, 2009.

Trainings

1. Aspire Pakistan Founder Edge Cohort 2, Three months training in Entrepreneurship, June-August, 2025
2. Generative AI training, June-July, 2025, Pak Angels Pakistan
3. Pak Angels Essential Generative AI training, Oct-Nov, 2024, Pak Angels Pakistan
4. Two days workshop on Strategic Management for HoDs HEIs of Pakistan , May 25-26, 2015 at MUET, Jamshoro.
5. Leadership training program for female HOD of public sector HEIs of Pakistan at Malaysia, NOV 16-26, 2015.

Courses/ Certificates

1. Google Prompting Essentials, Google, Coursera , Sept 2025.
2. Start Writing Prompts like a Pro, course authorized by Google and offered through

Courser, Aug 29,2025.

3. Design Prompts for Everyday Work, course authorized by Google and offered through Coursera, Sept 1, 2025
4. Speed Up Data Analysis and Presentation Building, course authorized by Google and offered through Coursera, Sept 1, 2025.
5. Use AI as a Creative or Expert Partner, course authorized by Google and offered through Coursera, Sept 1, 2025.
6. Discover the Art of Prompting, course authorized by Google and offered through Coursera, June 26, 2025.
7. Use AI Responsibly, course authorized by Google and offered through Coursera, June 28, 2025.
8. Introduction to AI, course authorized by Google and offered through Coursera, June 23, 2025.
9. Google AI Essential Specialization course, June 28, 2025.
10. Google Cyber Security course, 2025.
11. Google Data Analysts course, 2025.