Ayesha Maqbool

Associate Professor

School of Electrical Engineering and Computer Science

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About

Dr. Ayesha Maqbool is working as Associate Professor in the School of Electrical Engineering and Computer Science. Dr. Ayesha Maqbool has a PhD in Automatic Control And Systems Engineering. Dr. Ayesha Maqbool has published 41 research articles & conference papers having a citation count of 331, carried out 5 projects and filed 1 intellectual property.

Qualifications

PhD in Automatic Control And Systems Engineering   2008 - 2011
   University of Sheffield , England

MSc in Computer Science   2003 - 2005
   COMSATS, Abbottabad , Pakistan

BSc in Computer Science   1999 - 2002
   Allama Iqbal Open University , Pakistan

Experience

Associate Professor   2024- Present
   School of Electrical Engineering and Computer Science

Associate Professor   2024 - 2024
   Military College of Signals

Associate Professor   2022 - 2024
   Military College of Signals

Associate Professor   2022 - 2020
   NUST Balochistan Campus

Assistant Professor   2020 - 2022
   NUST Balochistan Campus

Assistant Professor   2017 - 2022
   Military College of Signals

Assist Prof   2014 - 2017
   Shaheed Benazir Bhutto Women Univ , Peshawar

Teaching Assistant   2008 - 2011
   The University of Sheffield , Sheffield UK

Lecturer   2006 - 2007
   COMSATS Abbottabad , Abbottabad

Design Engineer   2005 - 2006
   RWR Pvt , Design Engineer

Awards

Gold Medal   2005
   Chancellor and Campus Gold Medals by COMSATS

Research Projects

National Projects

PIE (Partnership in Equality) for UK-Pakistan Women in Robotics & AI
2023

Funding Agency: British Council
Amount: PKR 1,056,208,566.00
Status: Approved_inprocess

CubeSat mission for glacier monitoring and disaster prediction
2024

Funding Agency: APSCO
Amount: PKR 27,815,300.00
Status: Approved_inprocess

Bridging Gender Gap in STEM Pakistan: Workshop on Female Role Model Outreach
2021

Funding Agency: AlumNode Funding 2021. UK
Amount: PKR 876,945.00
Status: Completed

Transaction Integrity Assurance in ERP solution through Blockchain
2018

Funding Agency: Army
Amount: PKR 200,000.00
Status: Completed

Aurduino based controller for a Quadcopter
2019

Funding Agency: IGNITE
Amount: PKR 79,600.00
Status: Completed

International Projects

Research Articles

Automated categorization of software security requirements: an NLP and ML based approach
2025

Rizwana Batool Ayesha Naseer Ayesha Maqbool Maemoona Kayani

Requirements Engineering , Volume: 30, Pages:133-145

Impact Factor: 2.100 | **Quartile:** 2
DOI: https://doi.org/10.1007/s00766-025-00443-8

C2B: A Semantic Source Code Retrieval Model using CodeT5 and Bi-LSTM
2024

Nazia Bibi Ayesha Maqbool Tauseef Ahmad Rana Farkhanda Afzal Adnan Ahmed Khan

Applied Sciences , Volume 14(13), Article Number 5795

Impact Factor: 2.500 | **Quartile:** 1 | **Citations:** 2
DOI: https://doi.org/10.3390/app14135795

Multiple attribute group decision making approach for selection of robot under induced bipolar neutrosophic aggregation operators
2024

Farkhanda Afzal Ayesha Maqbool Saleem Abdullah Ali Akgül Abdul Bariq Muhammad Jamil

Complex & Intelligent Systems , Pages: 18

Impact Factor: 5.8 | **Quartile:** 2 | **Citations:** 8
DOI: 10.1007/s40747-023-01264-4

Enhancing source code retrieval with joint Bi-LSTM-GNN architecture: A comparative study with ChatGPT-LLM
2024

Nazia Bibi Ayesha Maqbool Tauseef Ahmed Rana

Journal of King Saud University - Computer and Information Sciences , Volume 36, Issue 2

Impact Factor: 6.9 | **Quartile:** 1 | **Citations:** 8
DOI: 10.1016/j.jksuci.2023.101865

A novel hybrid CNN-LSTM approach for assessing StackOverflow post quality
2023

Zeeshan Anwar Hammad Afzal Ali Ahsan Naima Altaf Ayesha Maqbool

Journal of Intelligent Systems , Pages 1-21

Impact Factor: 2.100 | **Quartile:** 3 | **Citations:** 9
DOI: https://doi.org/10.1515/jisys-2023-0057

Enhancing Semantic Code Search with Deep Graph Matching
2023

Nazia Bibi Ayesha Maqbool Tauseef Rana Farkhanda Afzal Ali Akgul Sayed M. El Din

Reusable Component Retrieval: A Semantic Search Approach for Low Resource Languages
2023

Nazia Bibi Tauseef Ahmad Rana Ayesha Maqbool Tamim Alkhalifah Wazir Zada Khan Yousaf Bin Zikria

Volume of Fluid Simulations of Heat Transfer in Liquid-Liquid Segmented Flows in Microfluidic channel
2023

Shazia Bashir Saad Shaukat Mustafa Inc Muhammad Bashir Ayesha Maqbool Muhammad Sajid Iqbal Farkhanda Afzal

An Intelligent Platform for Software Component Mining and Retrieval
2023

Nazia Bibi Tauseef Rana Ayesha Maqbool Farkhanda Afzal Ali Akgul Manuel De la Sen

Web semantics and ontologies-based framework for software component selection from online repositories
2023

Nazia Bibi Tauseef Ahmed Rana Ayesha Maqbool Alina Mirza Zeshan Iqbal Muhammad Attique Khan Majed Alhaisoni Usman Tariq Robertas Damaševičius

Achieving Stepwise Construction of Cyber Physical Systems in EX-MAN Component Model
2022

Tauseef Ahmad Rana Ayesha Maqbool Toqir A.Rana Alina Mirza Zeeshan iqbal Muhammad Attique Khan Majed Alhaisoni Abdullah Alqahtani Ye Jin Kim Byoungchol Chang

Einstein Aggregation Operators under Bipolar Neutrosophic Environment with Applications in Multi-Criteria Decision-Making
2022

Muhammad Jamil Farkhanda Afzal Ali Akgul Saleem Abdullah Ayesha Maqbool Abdul Razzaque Muhammad Bilal Riaz Jan Awrejcewicz

System-Level Performance Analysis of Cooperative Multiple Unmanned Aerial Vehicles for Wildfire Surveillance Using Agent-Based Modeling
2022

Ayesha Maqbool Alina Mirza Farkhanda Afzal Tajamul shah Wazir Zada Khan Yousaf Bin Zikria Sung Won Kim

DepTSol: An Improved Deep-Learning- and Time-of-Flight- Based Real-Time Social Distance Monitoring Approach under Various Low-Light Conditions
2022

Adina Rahim Ayesha Maqbool Alina Mirza Farkhanda Afzal Ikram Asghar

Development of an Improved Frequency Limited Model Order Reduction Technique and Error Bound for Discrete-Time System
2021

Sammana Batool Muhammad Imran Muhammad Imran Ehsan Elahi Ayesha Maqbool Syed Amer Ahsan Gilani

A comparative analysis of consensus protocols for dealing power theft issue in Pakistan.

Ayesha Maqbool Sumaera Sattar Amna Naheed Sana Khalid Tauseef Ahmad Rana Farkhanda Afzal Murat Cacan

2021

Blockchain Based Enhanced ERP Transaction Integrity Architecture and PoET Consensus

Iqra Shahzad Ayesha Maqbool Maham Akhtar Alina Mirza Muhammad Anees Khan Wazir Zada Khan Shadab Alam

2021

FxRLS Algorithms Based Active Control of Impulsive Noise with Online Secondary Path Modeling

Fareeha Jabeen Alina Mirza Ayesha Zeb Muhammad Imran Farkhanda Afzal Ayesha Maqbool

2021

A Model-Driven Framework for the Development of MVC-Based (Web) Application

Sheikh Israr Ahmad Tauseef Ahmad Rana Ayesha Maqbool

2021

Blockchain-based green big data visualization: BGbV

Iqra Shehzad Ayesha Maqbool Tauseef Rana Alina Mirza Wazirzada Khan Sung Won Kim Yousaf Bin Zikria Sadia Din

2021

Thermodynamics Inspired Co-operative Self-Organization of Multiple Autonomous Vehicles

Farkhanda Afzal Tauseef Rana Alina Mirza Ayesha Maqbool

2021

Design and Implementation of Novel LMI-Based Iterative Learning Robust Nonlinear Controller

Saleem Riaz Hui Lin Farkhanda Afzal Ayesha Maqbool

2021

Modified 2-Way Wavefront (M2W) Algorithm for Efficient Path Planning

Ayesha Maqbool Alina Mirza Farkhanda Afzal

2021

Monitoring social distancing under various low light conditions with deep learning and a single motionless time of flight camera

Adina Raheem Ayesha Maqbool Tausseef Rana

2021

A study of right zero divisor graph of 3 × 3 matrices over $\mathbb{Z}2$

Abdul Jalil M. Khalaf Farkhanda Afzal Ayesha Maqbool Minhas Mahsud Deeba Afzal Faiza Khan Sherwani

2020

Right zero divisor graph of 2×2 matrices over Z 3

Abdul Jalil M. Khalaf Farkhanda Afzal Ayesha Maqbool Hina Dilawer Deeba Afzal Faryal Chaudhry

2020

Algorithm for computing differential char sets efficiently

Ayesha Maqbool Murat Cancan Farkhanda Afzal Deeba Afzal

Journal of Discrete Mathematical Sciences and Cryptography, Volume 23, No. 6, Pages 1203–1216

Some new topological indices of silicate network via M-polynomial

Murat Cancan Ayesha Maqbool Murat Cancan Farkhanda Afzal Deeba Afzal Sabir Hussain

Journal of Discrete Mathematical Sciences and Cryptography, Volume 23, No. 6, Pages 1157–1171

M-Polynomial and topological indices of book graph

Abdul Jalil M. Khalaf Ayesha Maqbool Abdul Jalil M. Khalaf Farkhanda Afzal Sabir Hussain Deeba Afzal

Journal of Discrete Mathematical Sciences and Cryptography, Volume 23, No. 6, Pages 1217–1237

Disaster Mitigation in Urban Pakistan Using Agent Based Modeling with GIS

Zain ul Abdain Usmani Farkhanda Afzal Alia Razia Zain ul Abdain Usmani Ayesha Maqbool

International Journal of Geo-Information , Volume 9(4), Article Number 203

A Blockchain-Based Solution to Control Power Losses in Pakistan

Sana Khalid Ayesha Maqbool Amna Naheed Tauseef Rana

Arabian Journal for Science and Engineering, Pages 1-13

Optimization of Cylindrical Pin-Fin Heat Sinks Using Genetic Algorithms

Sajjad Mohsin Ayesha Maqbool Waqar Ahmed Khan

IEEE Transactions on Components and Packaging Technologies, Volume 32, Issue 1, Pages 44-52

Conference Proceedings

A Pragmatic Decision Making Mechanism for Reusable Source Code Snippets Retrieval using Semantic Approach 2023

Nazia Bibi Tauseef Ahmed Rana Ayesha Maqbool Qurat-ul-Ain

International Bhurban Conference on Applied Sciences & Technology, res.country(177,)

Citations: N/A

DOI: Nil

Exploring the Effectiveness of Joint Bi-LSTM-GNN vs ChatGPT-LLM in Source Code Retrieval 2023

Nazia Bibi Ayesha Maqbool Tauseef Ahmed Rana

International Bhurban Conference on Applied Sciences & Technology, res.country(177,)

Citations: N/A

DOI: Nil

Enhancing source code retrieval with joint Bi-LSTM-GNN architecture: A comparative study with ChatGPT-LLM 2023

Nazia Bibi Tauseef Ahmad Rana Ayesha Maqbool

2023 20th International Bhurban Conference on Applied Sciences and Technology (IBCAST), res.country(177,)

Citations: N/A

DOI: 10.1109/IBCAST59916.2023.10712910

Bi-Directional LSTM-Based Search Engine for Source Code Retrieval 2023

Nazia Bibi Tauseef Ahmad Rana Ayesha Maqbool

4th International Conference on Communication Technologies, ComTech 2023, res.country(177,)

Citations: N/A

DOI: 10.1109/ComTech57708.2023.10165061

Categorization of User Experience and Usability Issues (UXUIs) and their Prioritization w.r.t Categorization for Improving the UXU of Interactive System (IS) 2021

Tayyba Farooqui Tauseef Ahmad Rana Ayesha Maqbool

2021 International Conference on Communication Technologies (ComTech), res.country(177,)

Citations: N/A

DOI: 10.1109/ComTech52583.2021.9616799

Capturing Users Requirements Using a Data Mining Approach 2021

Muhammad Zeeshan Qureshi Anique Azhar Qazi Abubakar Tauseef Ahmad Rana Ayesha Maqbool

International Conference on Communication Technologies (ComTech), res.country(177,)

Citations: 2

DOI: 10.1109/ComTech52583.2021.9616939

A Comparative Analysis of Consensus Protocols for Dealing Power Theft Issue in Pakistan 2021

Ayesha Maqbool Amna Naheed Sana Khalid Tauseef Ahmad Rana Farkhanda Afzal

Communications in Combinatorics, Cryptography & Computer Science, res.country(107,)

Citations: N/A

DOI: 10.13140/RG.2.2.36495.51364

Editorial Activities

Symmetry 2025

Reviewed Papers for Journals

Impact Factor: 2.2

Symmetry 2025

Reviewed Papers for Journals

Impact Factor: 2.2

Symmetry 2025

Reviewed Papers for Journals

Impact Factor: 2.2

IEEE Canadian Journal of Electrical and Computer Engineering 2025

Reviewed Papers for Journals

Impact Factor: 0.5

PloS one 2023

Edited Journal Issue / Proceeding / Book
Impact Factor: 3.5

Sustainability   2023
Reviewed Papers for Journals
Impact Factor: 3.8

Risks   2023
Reviewed Papers for Journals
Impact Factor: 2.2

Applied Sciences   2023
Reviewed Papers for Journals
Impact Factor: 2.7

Sensors   2023
Reviewed Papers for Journals
Impact Factor: 3.9

Sensors   2023
Reviewed Papers for Journals
Impact Factor: 3.9

Sensors   2023
Reviewed Papers for Journals
Impact Factor: 3.9

Electronics   2023
Reviewed Papers for Journals
Impact Factor: 2.9

Sensors   2022
Reviewed Papers for Journals
Impact Factor: 3.9

Applied Sciences   2022
Reviewed Papers for Journals
Impact Factor: 2.7

CMC-Computers Materials & Continua   2022
Reviewed Papers for Journals
Impact Factor: 3.1

Computers, Materials & Continua   2022
Reviewed Papers for Journals
Impact Factor: 3.1

Plos One   2022
Edited Journal Issue / Proceeding / Book
Impact Factor: 3.7

Applied Sciences   2022
Reviewed Papers for Journals
Impact Factor: 2.2

CMC-Computers Materials & Continua   2022
Reviewed Papers for Journals
Impact Factor: 3.1

Applied Sciences   2022
Reviewed Papers for Journals
Impact Factor: 2.7

Sensors   2022
Reviewed Papers for Journals
Impact Factor: 3.9

Complexity   2022
Reviewed Papers for Journals
Impact Factor: 2.12

Reviewed Papers for Journals
Impact Factor: 1.5

Reviewed Papers for Journals
Impact Factor: 3.458

Reviewed Papers for Journals
Impact Factor: 2.659

Reviewed Papers for Journals
Impact Factor: 2.93

Reviewed Papers for Journals
Impact Factor: 3.458

Reviewed Papers for Journals
Impact Factor: 1.851

Reviewed Papers for Journals

Reviewed Papers for Journals

Reviewed Papers for Journals

Intellectual Property

Copyrights

Patents

Solar Infinity (SI-1) – Critical Load Management for Optimal use of Green Energy/an Adaptive Optimal Green Energy Solution
  Status: Filed
2021

Industrial Designs

Trademarks

Trainings

Distributed Artificial Intelligence"(https://mcs.nust.edu.pk/events/webinar-distributed-artificial-intelligence/)
  Partner: 0
  Duration: 22-Sep-2021 to 22-Sep-2021
2021