

# Muhammad Ali Tahir

Assistant Professor

School of Electrical Engineering and Computer Science

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## About

Dr. Muhammad Ali Tahir is working as Assistant Professor in the School of Electrical Engineering and Computer Science. Dr. Muhammad Ali Tahir has a PhD in Computer Science. Dr. Muhammad Ali Tahir has published 24 research articles & conference papers having a citation count of 74, carried out 0 projects and filed 1 intellectual property.

## Qualifications

<b>PhD in Computer Science</b> Rheinisch Westfälische Technische Hochschule Aachen , Germany	2008 - 2015
<b>MSc in Computer Science</b> Rheinisch Westfälische Technische Hochschule Aachen , Pakistan	2005 - 2008
<b>BE in Computer Engineering</b> NUST, Islamabad , Pakistan	1999 - 2003

## Experience

<b>Assistant Professor</b> School of Electrical Engineering and Computer Science	2023- Present
<b>Assistant Professor</b> School of Electrical Engineering and Computer Science	2021 - 2021
<b>Assistant Professor</b> School of Electrical Engineering and Computer Science	2021 - 2021
<b>Assistant Professor</b> School of Electrical Engineering and Computer Science	2020 - 2021
<b>Assistant Professor</b> School of Electrical Engineering and Computer Science	2017 - 2020
<b>Assistant Professor</b> School of Electrical Engineering and Computer Science	2016 - 2017
<b>Research assistant</b> RWTH Aachen , Templergraben 55, Aachen, Germany	2011 - 2015
<b>Design Engineer</b> CARE Pvt Ltd , 19 Ataturk Ave Sector G51 Islamabad	2003 - 2005

## Professional Memberships

PEC	Since 2003
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Research Articles

**Data-Driven Spatial Analysis of Reforestation in Pakistan: Identifying Optimal Locations for Sustainable Forest Growth and Climate Change Mitigation**

*Amna Faisal Rafia Mumtaz Muhammad Deedahwar Mazhar Qureshi Muhammad Ali Tahir N. Z. Jhanjhi Mehedi Masud Mohammad Shorfuzzaman*

*IEEE ACCESS*, Volume 12, Pages 190375-190388

**Impact Factor:** 3.400 | **Quartile:** 2 | **Citations:** 1

**DOI:** 10.1109/ACCESS.2024.3510565

2024

**Neural Machine Translation Models with Attention-Based Dropout Layer**

*Huma Israr Safdar Abbas Khan Muhammad Ali Tahir Muhammad Khuram Shahzad Muneer Ahmed Mohamad Zain*

*Computers, Materials and Continua*, Volume 75, Issue 2, Pages 2981-3009

**Impact Factor:** 3.860 | **Quartile:** 2 | **Citations:** 13

**DOI:** <https://doi.org/10.32604/cmc.2023.035814>

2023

**Natural language understanding of map navigation queries in Roman Urdu by joint entity and intent determination**

*Javeria Hassan Muhammad Ali Tahir Adnan Ali*

*PeerJ Computer Science*, Volume 7, Article Number e615

**Impact Factor:** 2.411 | **Quartile:** 2

**DOI:** <https://doi.org/10.7717/peerj-cs.615>

2021

**Secure Route-Obfuscation Mechanism with Information-Theoretic Security for Internet of Things**

*Abid Rauf Zhaohong Wang Hasan Sajid Muhammad Ali Tahir*

*Sensors*, Volume 20(15), Article Number 4221

**Impact Factor:** 3.576 | **Quartile:** 2 | **Citations:** 3

**DOI:** <https://doi.org/10.3390/s20154221>

2020

**Incorporating Noise Robustness in Speech Command Recognition by Noise Augmentation of Training Data**

*Ayesha Pervaiz Fawad Hussain Huma Israr Muhammad Ali Tahir Fawad Riasat Raja Naveed Khan Baloch Farruh Ishmanov Yousaf Bin Zikria*

*Sensors*, Volume 20(8), Article Number 2326

**Impact Factor:** 3.576 | **Quartile:** 2 | **Citations:** 44

**DOI:** <https://doi.org/10.3390/s20082326>

2020

**Training of reduced-rank linear transformations for multi-layer polynomial acoustic features for speech recognition**

*Muhammad Ali Tahir Heyun Huang Albert Zeyer Ralf Schlüter Hermann Ney*

*Speech Communication*, Volume 110, Pages 56-63

**Impact Factor:** 1.417 | **Quartile:** 3 | **Citations:** 10

**DOI:** 10.1016/j.specom.2019.03.006

2019

Conference Proceedings

**A Survey of Sentiment Analysis of Internet Textual Data and Application to Pakistani YouTube User Comments**

*Mehwish Rani Seemab Latif Muhammad Ali Tahir Rafia Mumtaz*

*IEEE International Conference on Digital Futures and Transformative Technologies (ICoDT2)*, res.country(177,)

**Citations:** 3

**DOI:** <https://doi.org/10.1109/ICoDT252288.2021.9441524>

2021

**A review of the prevalent ICT techniques used for COVID-19 SOP violation detection**

*Talha Ikram Abdullah Saeed Noor Ul Ayn Muhammad Ali Tahir Rafia Mumtaz*

*2020 IEEE 17th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET)* res.country(233,)

**Citations:** N/A

**DOI:** 10.1109/HONET50430.2020.9322821

2020

**A Survey of Artificial Intelligence and Internet of Things (IoT) based approaches against Covid-19**

*Osama Nadeem Muhammad Shajee Saeed Muhammad Ali Tahir Rafia Mumtaz*

*2020 IEEE 17th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET)* res.country(233,)

**Citations:** N/A

**DOI:** 10.1109/HONET50430.2020.9322829

2020

**Internet of Things (IoT) and Machine Learning (ML) enabled Livestock Monitoring**

*Abdul Aziz Chaudhry Rafia Mumtaz Syed Mohammad Hassan Zaidi Muhammad Ali Tahir Syed Hassan Muzammil School*

2020

<i>IEEE 17th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET)</i> res.country(233,)	
<b>Citations:</b> N/A	
<b>DOI:</b> 10.1109/HONET50430.2020.9322666	
<b>Efficient Distributed Key Agreement for Edge Devices in the Internet of Things with Information-Theoretic Security</b>	2020
<i>Abid Rauf Zhaohong Wang Hasan Sajid Muhammad Ali Tahir</i>	
<i>7th International Cryptology and Information Security Conference 2020 (CRYPTOLOGY2020)</i> , res.country(157,)	
<b>Citations:</b> N/A	
<b>DOI:</b> not assigned so far	
<b>Predictive Analytics in Healthcare for Diabetes Prediction</b>	2019
<i>Faizan Zafar Saad Raza Muhammad Umair Khalid Muhammad Ali Tahir</i>	
<i>ICBET 2019 9th International Conference on Biomedical Engineering and Technology</i> , res.country(113,)	
<b>Citations:</b> N/A	
<b>DOI:</b> 10.1145/3326172.3326213	
<b>A Supervised Machine Learning Based Approach for Automatically Extracting High-Level Threat Intelligence from Unstructured Sources</b>	2018
<i>Yumna Ghazi Zahid Anwar Rafia Mumtaz Shahzad saleem Ali Tahir</i>	
<i>2018 International Conference on Frontiers of Information Technology (FIT)</i> , res.country(177,)	
<b>Citations:</b> N/A	
<b>DOI:</b> <a href="https://doi.org/10.1109/FIT.2018.00030">https://doi.org/10.1109/FIT.2018.00030</a>	
<b>Classification of Breast Cancer Histology Images using ALEXNET</b>	2018
<i>wajahat nawaz sagheer ahmed ali tahir hassan aqeel khan</i>	
<i>15th International Conference on Image Analysis and Recognition</i> , res.country(183,)	
<b>Citations:</b> N/A	
<b>DOI:</b> 10.1007/978-3-319-93000-8_99	
<b>Improvements in RWTH LVCSR evaluation systems for Polish, Portuguese, English, Urdu, and Arabic</b>	2015
<i>Mahaboob Ali Basha Shaik Zoltan Tieske Muhammad Ali Tahir Markus Nussbaum-Thom Ralf Schlueter Hermann Ney</i>	
<i>16th Annual Conference of the International Speech Communication Association</i> , res.country(57,)	
<b>Citations:</b> N/A	
<b>DOI:</b> <a href="http://www.isca-speech.org/archive/interspeech/_2015/i15/_3154.html">http://www.isca-speech.org/archive/interspeech/_2015/i15/_3154.html</a>	
<b>Integrating Gaussian Mixtures into Deep Neural Networks: Softmax Layer with Hidden Variables</b>	2015
<i>Zoltan Tieske Muhammad Ali Tahir Ralf Schlueter Hermann Ney</i>	
<i>IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)</i> , res.country(13,)	
<b>Citations:</b> N/A	
<b>DOI:</b> <a href="https://doi.org/10.1109/ICASSP.2015.7178779">https://doi.org/10.1109/ICASSP.2015.7178779</a>	
<b>Investigation of Mixture Splitting Concept for Training Linear Bottlenecks of Deep Neural Network Acoustic Models</b>	2015
<i>Muhammad Ali Tahir Simon Wiesler Ralf Schlueter Hermann Ney</i>	
<i>IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)</i> , res.country(13,)	
<b>Citations:</b> N/A	
<b>DOI:</b> <a href="https://doi.org/10.1109/ICASSP.2015.7178845">https://doi.org/10.1109/ICASSP.2015.7178845</a>	
<b>RWTH LVCSR Systems for Quaero and EU-Bridge: German, Polish, Spanish and Portuguese</b>	2014
<i>Mahaboob Ali Basha Shaik Zoltan Tieske Muhammad Ali Tahir Markus Nussbaum-Thom Ralf Schlueter Hermann Ney</i>	
<i>15th Annual Conference of the International Speech Communication Association</i> , res.country(197,)	
<b>Citations:</b> N/A	
<b>DOI:</b> not assigned	
<b>Training Log-Linear Acoustic Models in Higher-Order Polynomial Feature Space for Speech Recognition</b>	2013
<i>Muhammad Ali Tahir Heyun Huang Ralf Schlueter Hermann Ney Louis Ten Bosch Bert Cranen Lou Boves</i>	
<i>14th Annual Conference of the International Speech Communication Association</i> , res.country(75,)	
<b>Citations:</b> N/A	
<b>DOI:</b> not assigned	
<b>Simultaneous Discriminative Training and Mixture Splitting of HMMs for Speech Recognition</b>	2012
<i>Muhammad Ali Tahir Markus Nussbaum-Thom Ralf Schlueter Hermann Ney</i>	
<i>13th Annual Conference of the International Speech Communication Association</i> , res.country(233,)	

Citations: N/A  
DOI: not assigned

<b>A Web-based visualisation tool for analysing mouse movements to support map personalisation</b> <i>Ali Tahir Gavin McArdle Michela Bertolotto</i> <i>International Conference on Database Systems for Advanced Applications DASFAA 2011</i> , res.country(48,) Citations: N/A DOI: 10.1007/978-3-642-20244-5_13	2011
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Book Chapters

<b>A Rural Healthcare Mobile App: Urdu Voice-Enabled Mobile App for Disease Diagnosis</b> <i>Rafia Mumtaz Muhammad Ali Tahir Afaq Ahmed Ahmad Ali Khan Ismail Shah</i> In: <i>Book on Empowering Sustainable Industrial 4.0 Systems With Machine Intelligence</i> , Chapter 12, Pages 251-280 Citations: N/A DOI: <a href="https://doi.org/10.4018/978-1-7998-9201-4.ch012">https://doi.org/10.4018/978-1-7998-9201-4.ch012</a>	2022
<b>Temporal Analysis and Prediction of Ambient Air Quality Using Remote Sensing, Deep Learning, and Geospatial Technologies</b> <i>Rafia Mumtaz Muhammad Ali Tahir Aymen Bashir Abdullah Mughal</i> In: <i>Book on Empowering Sustainable Industrial 4.0 Systems With Machine Intelligence</i> , Chapter 2, Pages 25-59 Citations: N/A DOI: <a href="https://doi.org/10.4018/978-1-7998-9201-4.ch002">https://doi.org/10.4018/978-1-7998-9201-4.ch002</a>	2022
<b>Automated Multi-Sensor Board for IoT and ML-Enabled Livestock Monitoring</b> <i>Rafia Mumtaz Muhammad Ali Tahir Abdul Aziz Chaudhry Usman Ahmad Siddiqui Syed Hassan Muzammil</i> In: <i>Book on Empowering Sustainable Industrial 4.0 Systems With Machine Intelligence</i> , Chapter 3, Pages 60-85 Citations: N/A DOI: <a href="https://doi.org/10.1007/10.4018/978-1-7998-9201-4.ch003">https://doi.org/10.1007/10.4018/978-1-7998-9201-4.ch003</a>	2022

Editorial Activities

Reviewed Papers for Journals Impact Factor: 1.009	2020
Reviewed Papers for Journals Impact Factor: 3.745	2020

Intellectual Property

<b>Copyrights</b> <b>Emotion Identification and Analysis on Call Center Audio</b> Status: Filed	2019
<b>Patents</b>	
<b>Industrial Designs</b>	
<b>Trademarks</b>	