

Muhammad Tariq Saeed

Associate Professor
School of Interdisciplinary Engineering & Sciences

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About

Dr. Muhammad Tariq Saeed is working as Associate Professor in the School of Interdisciplinary Engineering & Sciences. Dr. Muhammad Tariq Saeed has a PhD in High Performance Computing. Dr. Muhammad Tariq Saeed has published 20 research articles & conference papers having a citation count of 121, carried out 16 projects and filed 0 intellectual property.

Qualifications

PhD in High Performance Computing NUST, Islamabad , Pakistan	2010 - 2018
MS in Information Security NUST, Islamabad , Pakistan	2006 - 2008
BS in Computer Science Islamia University of Bahawalpur , Pakistan	2000 - 2004

Experience

Associate Professor School of Interdisciplinary Engineering & Sciences	2022- Present
Assistant Professor School of Interdisciplinary Engineering & Sciences	2022 - 2018
Assistant Professor Research Centre for Modelling & Simulation	2018 - 2022
Assistant Professor Research Centre for Modelling & Simulation	2011 - 2022
Lecturer Research Centre for Modelling & Simulation	2008 - 2011
Assistant Professor NUST , H-12 Islamabad	2011 - 2022

Awards

Best Teacher Award 2018-2019

Research Projects

National Projects

Equitable Urban Heat Island Mapping: A Citizen Science Approach for Climate Justice	2024
Funding Agency: NUST	
Amount: PKR 1,000,000.00	
Status: Approved_inprocess	
NUST Digital Twin through Advanced Modeling & Simulation	2024
Funding Agency: NUST	
Amount: PKR 50,000,000.00	
Status: Approved_inprocess	
NUST Biomedical Data Bank (NBDB); A Roadmap to Personalized Medicine (Phase-I)	2023
Funding Agency: NUST	
Amount: PKR 1,000,000.00	
Status: Completed	
AGILE (Artificial General Intelligence Learning Engine)	2023
Funding Agency: NUST	
Amount: PKR 91,000,000.00	
Status: Approved_inprocess	
An Artificial Intelligence Framework for Data-Driven Analysis of Microbial Pangenomes	2022
Funding Agency: HEC	
Amount: PKR 7,980,000.00	
Status: Completed	
City-level vulnerability to COVID pandemic: Spatio-temporal analysis of land use and land cover type effect on COVID incidences”	2022
Funding Agency: National Institute of Health (NIH), PAK	
Amount: PKR 1,980,000.00	
Status: Approved_inprocess	
On Development of Generalized Tracks Association (GTA) & Validation, Optimization System (VOS) by Uncertainty Measurement of Multiple Sensor Tracks Data through Modeling and Simulation	2019
Funding Agency: PAF	
Amount: PKR 4,979,000.00	
Status: Approved_inprocess	
DEVELOPMENT OF GUI INTEGRATED WITH SERVER-BASED BACKEND SATELLITE IMAGERY ANALYSIS ALGORITHMS	2019
Funding Agency: Pakistan Air Force	
Amount: PKR 3,177,000.00	
Status: Approved_inprocess	

International Projects

Industry Projects

National Projects

Provision of Consultancy Services to M/s Infoserv360 Client: InfoServ360 Amount: PKR 400,000.00 Status: Completed	2023
Provision of Consultancy Services to Rapidev by Dr. Muhammad Tariq Saeed (Assoc Prof-SINES) Client: Rapidev Amount: PKR 1,440,000.00 Status: Approved_inprocess	2023
Consultancy Proposal NASTP - Alpha Client: NASTP Amount: PKR 1,560,000.00 Status: Approved_inprocess	2023
Development of Tracking Portal for restoration of habitats Client: Serena Hotels Amount: PKR 1,870,000.00 Status: Approved_inprocess	2021
Implementation of Mission Manager and Map Manager module of HSI Client: PAF Amount: PKR 550,000.00 Status: Approved_inprocess	2021
Implementation of Swarm-maker module Client: PAF Amount: PKR 400,000.00 Status: Approved_inprocess	2021
Proof of Concept Implementation of HSI Client: PAF Amount: PKR 700,000.00 Status: Approved_inprocess	2021
Detection and Classification of Man Made Structures Client: STG, Pakistan Air Force Amount: PKR 600,000.00 Status: Completed	2019

International Projects

Research Articles

Dynamics simulations of hypoxia inducible factor-1 regulatory network in cancer using formal verification techniques <i>Hafiz Muhammad Faraz Azhar Muhammad Tariq Saeed Ishrat Jabeen</i> <i>Frontiers in Molecular Biosciences</i> , Volume 11, Article Number 1386930 Impact Factor: 3.900 Quartile: 2 DOI: https://doi.org/10.3389/fmolb.2024.1386930	2024
VacSol-ML(ESKAPE): Machine learning empowering vaccine antigen prediction for ESKAPE pathogens <i>Samavi Nasir Farha Anwer Zaara Ishaq Muhammad Tariq Saeed Amjad Ali</i> <i>Vaccine</i> , Volume 42, Issue 22 , Article Number 126204 Impact Factor: 4.500 Quartile: 2 Citations: 5 DOI: https://doi.org/10.1016/j.vaccine.2024.126204	2024
AbAMPdb: a database of Acinetobacter baumannii specific antimicrobial peptides <i>Farha Anwer Ahmad Navid Fiza Faiz Uzair Haider Samavi Nasir Muhammad Farooq Maryam Zahra Anosh Bano Hafiza Hira Bashir Madiha Ahmad Syeda Aleena Abbas Shah E Room Muhammad Tariq Saeed Amjad Ali</i> <i>Database : The Journal of Biological Databases and Curation</i> , Volume:2024, Article Number: baae096, Pages: 15 Impact Factor: 3.4 Quartile: 1 Citations: 2 DOI: https://doi.org/10.1093/database/baae096	2024

Modelling and analysis of the complement 2 system signalling pathways: Roles of C3, 3 C5a and pro-inflammatory cytokines in 4 SARS-CoV-2 infection <i>Didar Murad Rehan Zafar Paracha Muhammad Tariq Saeed Jamil Ahmad Ammar Mushtaq Maleeha Humayun</i> <i>PeerJ</i> , Vol:11, Article Number: e15794 Impact Factor: 2.7 Quartile: 2 Citations: 1 DOI: 10.7717/peerj.15794	2023
System Level Modeling and Analysis of TNF-α mediated Sphingolipid Signaling Pathway in Neurological Disorders for the Prediction of Therapeutic Targets <i>Sanam Banarus Rehan Zafar Paracha Maryum Nisar Jamil Ahmad Muhammad Tariq Saeed Zartasha Mustansar Malik N Shuja Ayesha Arif</i> <i>Frontiers in Physiology</i> , Volume 13 Impact Factor: 4.755 Quartile: 1 Citations: 9 DOI: doi: 10.3389/fphys.2022.872421	2022
Decoding the Role of Epigenetics in Breast Cancer Using Formal Modeling and Machine-Learning Methods <i>Ayesha Asim Yusra Sajid Kiani Muhammad Tariq Saeed Ishrat Jabeen</i> <i>Frontiers in Molecular Biosciences</i> , Volume 9, Article Number 882738 Impact Factor: 6.113 Quartile: 1 DOI: doi: 10.3389/fmolb.2022.882738	2022
A Map-Based Recommendation System and House Price Prediction Model for Real Estate <i>Maryam Mubarak Ali Tahir Fizza Waqar Ibraheem Haneef Gavin McArdle Michel Bertolotto Muhammad Tariq Saeed</i> <i>ISPRS International Journal of Geo-Information</i> , Volume 11, Issue 3, Article Number 178 Impact Factor: 2.899 Quartile: 2 Citations: 8 DOI: https://doi.org/10.3390/ijgi11030178	2022
Reinforcement learning-based radar-evasive path planning: a comparative analysis <i>Adnan Maqsood Rizwan Riaz Rana Umair Hameed Ali Javed Hashmi Muhammad Tariq Saeed</i> <i>Aeronautical Journal</i> , Volume 126, Issue 1297, Pages 547-564 Impact Factor: 0.818 Quartile: 4 Citations: 10 DOI: https://doi.org/10.1017/aer.2021.85	2022
Genomic Investigation of Methicillin-Resistant Staphylococcus aureus ST113 Strains Isolated from Tertiary Care Hospitals in Pakistan <i>Nimat Ullah Hamza Arshad Dar Kanwal Naz Saadia Andleeb Abdur Rahman Fazal Hanan Taeok Bae Amjad Ali Muhammad Tariq Saeed</i> <i>Antibiotics-Basel</i> , Volume 10(9), Article Number 1121 Impact Factor: 4.639 Quartile: 2 Citations: 9 DOI: https://doi.org/10.3390/antibiotics10091121	2021
Biological Regulatory Network (BRN) Analysis and Molecular Docking Simulations to Probe the Modulation of IP3R Mediated Ca²⁺ Signaling in Cancer <i>Humaira Ismatullah Ishrat Jabeen Muhammad Tariq Saeed</i> <i>Genes</i> , Volume 12(1), Article Number 34 Impact Factor: 4.096 Quartile: 2 Citations: 7 DOI: https://doi.org/10.3390/genes12010034	2020
Formal model of the interplay between TGF-β1 and MMP-9 and their dynamics in hepatocellular carcinoma <i>Shifa Tariq Ashraf Ayesha Obaid Muhammad Tariq Saeed Anam Naz Fatima Shahid Jamil Ahmad Amjad Ali</i> <i>Mathematical Bio sciences and Engineering</i> , Volume 16, Issue 5, Pages 3285–3310 Impact Factor: 1.313 Quartile: 4 Citations: 9 DOI: 10.3934/mbe.2019164	2019
Parameter estimation of qualitative biological regulatory networks on high performance computing hardware <i>Muhammad Tariq Saeed Jamil Ahmad Jan Baumbach Josch Pauling Aamir Shaf Rehan Zafar Paracha Asad Hayat Amjad Ali</i> <i>BMC Systems Biology</i> , Volume 12, Article Number 146 Impact Factor: 2.048 Quartile: 2 Citations: 6 DOI: 10.1186/s12918-018-0670-y	2018
Multicore and GPU based Pupillometry using Parabolic and Elliptic Hough Transform <i>Amnah Nasim Adnan Maqsood Tariq Saeed</i> <i>International Journal of Mechanical Engineering and Robotics Research</i> , NULL Impact Factor: 0 Citations: 3	2017

DOI: 10.18178/ijmerr.6.5.425-433

Formal modeling of mTOR Associated biological regulatory network reveals novel therapeutic strategy for the treatment of cancer

2017

Zurah Bibi Jamil Ahmad Amnah Siddiqa Rehan Zafar Paracha Tariq Saeed Amjad Ali Hussnain Ahmed Janjua Shakir Ullah Emna Ben Abdallah Olivier Roux
Frontiers in Physiology, Volume: 8, Article Number 416

Impact Factor: 3.394 | **Quartile:** 1 | **Citations:** 5

DOI: 10.3389/fphys.2017.00416

Formal modeling and analysis of the hexosamine biosynthetic pathway: role of O-linked N-acetylglucosamine transferase in oncogenesis and cancer progression

2016

Rehan Zafar Paracha Muhammad Tariq Saeed Jamil Ahmed Shahzina Kanwal Andreana N. Holowatyj Iftikhar A. Sheikh Muhammad Aamir Shafi Amnah Siddiqa Zurah Bibi Mukaram Khan Amjad Ali
PeerJ, Volume 4, Article Number e2348

Impact Factor: 2.177 | **Quartile:** 2 | **Citations:** 15

DOI: 10.7717/peerj.2348

On the real time modeling of interlocking system of passenger lines of Rawalpindi Cantt train station

2016

Umar Khan Jamil Ahmad Tariq Saeed Sikandar Hayat Mirza
Complex Adaptive Systems Modeling, Vol.4, No.1, Pages 1-33

Impact Factor: 0 | **Citations:** 12

DOI: 10.1186/s40294-016-0028-5

On the modelling and analysis of the regulatory network of dengue virus pathogenesis and clearance

2014

Amjad ali Babar Aslam Jamil Ahmad Rehan Zafar Paracha Samar Hayat Khan Tareen Umar Niazi Tariq Saeed
Computational Biology and Chemistry, Volume: 53 Pages: 277-291 Part: B

Impact Factor: 1.117 | **Quartile:** 3 | **Citations:** 19

DOI: 10.1016/j.compbiolchem.2014.10.003

Conference Proceedings

Automatic Tree Counting from Satellite Imagery Using YOLO V5, SSD and UNET Models: A case study of a campus in Islamabad, Pakistan

2023

Um-e-Hani Shahzad Younis Sadia Munir Tariq Saeed Hamad Younis
3rd IEEE International Conference on Artificial Intelligence, ICAI 2023, res.country(177,)

Citations: N/A

DOI: 10.1109/ICAI58407.2023.10136679

Formal Modeling of the Key Determinants of Hepatitis C Virus (HCV) Induced Adaptive Immune Response Network: An Integrative Approach to Map the Cellular and Cytokine-Mediated Host Immune Regulations

2018

Ayesha Obaid Anam Naz Shifa T. Ashraf Faryal M. Awan Aqsa Ikram Tariq Saeed Abida Raza Jamil Ahmed Amjad Ali
International Conference on Computational Science and Its Applications, ICCSA 2018, res.country(13,)

Citations: 1

DOI: https://doi.org/10.1007/978-3-319-95171-3_50

On the Use of Betweenness Centrality for Selection of Plausible Trajectories in Qualitative Biological Regulatory Networks

2018

Muhammad Tariq Saeed Jamil Ahmed Amjad Ali
6th International Conference on Bioinformatics and Biomedical Engineering, IWBBIO 2018, res.country(68,)

Citations: N/A

DOI: https://doi.org/10.1007/978-3-319-78723-7_47