Imran Mahmood

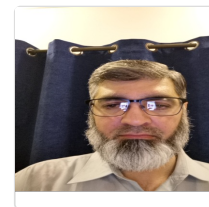## Associate Professor

School of Electrical Engineering and Computer Science

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Contact:
LinkedIn:

About

Dr. Imran Mahmood is working as Associate Professor in the School of Electrical Engineering and Computer Science. Dr. Imran Mahmood has a PhD in Complex System Modeling formal verification. Dr. Imran Mahmood has published 25 research articles & conference papers having a citation count of 333, carried out 6 projects and filed 1 intellectual property.

Qualifications

PhD in Complex System Modeling formal verification   2008 - 2013
  Royal Institute of Technology , Sweden

MS in Agent based Modeling   2006 - 2007
  Royal Institute of Technology , Sweden

BS in Software Engineering   1998 - 2000
  Hamdard University , Pakistan

Experience

Associate Professor   2022- Present
  School of Electrical Engineering and Computer Science

Associate Professor   2022 - 2022
  School of Electrical Engineering and Computer Science

Assistant Professor   2022 - 2022
  School of Electrical Engineering and Computer Science

Assistant Professor   2019 - 2019
  School of Electrical Engineering and Computer Science

Assistant Professor   2019 - 2019
  School of Electrical Engineering and Computer Science

Assistant Professor   2016 - 2019
  School of Electrical Engineering and Computer Science

Assistant Professor   2015 - 2016
  School of Electrical Engineering and Computer Science

UET Lahore   2014 - 2006
  Lahore , 2013-04-25

Assistant Professor   2013 - 2014
  UET Lahore , Lahore

MS Intern   2007 - 2007
  Swedish Defense Research Agency , Sweden

System Incharge (HOD)   2003 - 2006
  Virtual University , Lahore

System Incharge (HOD)   2003 - 2006
  Virtual University , Lahore

System Incharge (HOD)   2003 - 2006
  Virtual University , Lahore

Research Projects

National Projects

MUAWIN   2019
   Funding Agency: IGNITE
   Amount: PKR 73,150.00
   Status: Completed

smart waste management   2018
   Funding Agency: IGNITE
   Amount: PKR 51,950.00
   Status: Completed

fe amaan - fetal monitoring and analysis to prevent miscarriages   2018
   Funding Agency: IGNITE
   Amount: PKR 57,700.00
   Status: Completed

Smart Device for Non Invasive Fetal Analysis & Diagnosis (Meternal - Aid)   2019
   Funding Agency: NUST
   Amount: PKR 300,000.00
   Status: Approved_inprocess

Simulation Modeling and Analysis of Household Water Consumption in Pakistan using Hybrid   2018
Approach
   Funding Agency: USPCASE / USAID
   Amount: PKR 2,900,000.00
   Status: Completed

Simulation Modeling, Analysis and Forecasting of Electricity generation and consumption in Pakistan   2018
using System Dynamics approach
   Funding Agency: USPCAS-W / USAID
   Amount: PKR 2,280,000.00
   Status: Completed

International Projects

Research Articles

FACS: A geospatial agent-based simulator for analysing COVID-19 spread and public health measures   2022
on local regions
   Imran Mahmood Hamid Arabnejad Diana Suleimenova Derek Groen
   Journal of Simulation , Volume 16, Issue 4, Pages 355-373
   Impact Factor: 2.543 | **Quartile:** 2 | **Citations:** 35
   DOI: https://doi.org/10.1080/17477778.2020.1800422

Detection and Grading of Hypertensive Retinopathy Using Vessels Tortuosity and Arteriovenous Ratio   2022
   Sufian Al Badawi Muhammad Moazam Fraz Muhammad Shahzad Imran Mahmood Sajid Javed Emad Mosalam Ajay Kamath Nileshwar
   Journal of Digital Imaging , Pages 1-21
   Impact Factor: 4.056 | **Quartile:** 1 | **Citations:** 28
   DOI: 10.1007/s10278-021-00545-z

A Demand Response based solution to Overloading in Underdeveloped Distribution Networks   2021
   Muhammad Jibran Hasan Arshad Nasir Faran Qureshi Usman Ali Colin Jones Imran Mahmood
   IEEE Transactions on Smart Grid , Volume12, Issue 5, Pages 4059-4067
   Impact Factor: 10.275 | **Quartile:** 1 | **Citations:** 15
   DOI: https://doi.org/10.1109/TSG.2021.3079959

A route pruning algorithm for an automated geographic location graph construction   2021
   Christoph Schweimer Bernhard C. Geiger Meizhu Wang Sergiy Gogolenko Imran Mahmood Alireza Jahani Diana Suleimenova Derek Groen
   Scientific Reports , Volume 11, Article Number: 11547
   Impact Factor: 4.379 | **Quartile:** 1 | **Citations:** 6
   DOI: https://doi.org/10.1038/s41598-021-90943-8

ExpressionHash: Securing Telecare Medical Information Systems Using BioHashing   2021
   Ayesha Riaz Naveed Riaz Awais Mahmood Sajid Ali Khan Imran Mahmood Omar Almutiry Habib Dhahri

CMC-Computers, Materials & Continua, Volume 67, No.3, Pages 2747-2764

Impact Factor: 3.772 | **Quartile:** 2 | **Citations:** 5

DOI: 10.32604/cmc.2021.014418

Uncertainty quantification of dynamic earthquake rupture simulations 2021

Eric G. Daub Hamid Arabnejad Imran Mahmood Derek Groen

Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, Volume 379, Issue , Article Number 20200076

Impact Factor: 4.226 | **Quartile:** 1 | **Citations:** 1

DOI: https://doi.org/10.1098/rsta.2020.0076

The impact of uncertainty on predictions of the CovidSim epidemiological code 2021

Wouter Edeling Hamid Arabnejad Robbie Sinclair Diana Suleimenova Krishnakumar Gopalakrishnan Derek Groen Imran Mahmood Peter V. Coveney Bartosz Bosak Daan Crommelin

Nature Computational Science, Volume 1, Pages 128-135

Impact Factor: N/A

DOI: 10.1038/s43588-021-00028

A Water Evaluation and Planning-based framework for the long-term prediction of urban water demand 2021
and supply

Arfa Saleem Imran Mahmood Hessam Sarjoughian ASAD WAQAR MALIK Hasan Arshad Nasir

Simulation, Pages 1-23

Impact Factor: 1.699 | **Quartile:** 3 | **Citations:** 18

DOI: https://doi.org/10.1177/0037549720984250

Modeling, simulation and forecasting of wind power plants using agent-based approach 2020

Imran Mahmood Anis-ur-Rahman Mahe Mobeen Shahzad Younis Asad Waqar Malik Muhammad Moazam Fraz Kafait Ullah

Journal of Cleaner Production, Volume 276, Article Number 124172

Impact Factor: 9.297 | **Quartile:** 1 | **Citations:** 15

DOI: https://doi.org/10.1016/j.jclepro.2020.124172

Dynamic Modeling and Heat Flow Study of a Thermal Power Plant Using OpenModelica 2020

Hafeez Anjum Azhar-ul-Haq Imran Mehmood

IEEE Access, Volume 8, Pages 178614-178626

Impact Factor: 3.367 | **Quartile:** 2 | **Citations:** 2

DOI: 10.1109/ACCESS.2020.3027640

A hierarchical multi-resolution agent-based modeling and simulation framework for household 2020
electricity demand profile

Imran Mahmood Quair-tul-ain Fahad Javed Jose A Aguado Hasan Arshad Nasir

Simulation-Transactions of the Society for Modeling and Simulation International, Volume 96, Issue 8, Pages 655-678

Impact Factor: 1.377 | **Quartile:** 4 | **Citations:** 18

DOI: https://doi.org/10.1177/0037549720923401

Electricity supply pathways based on renewable resources: A sustainable energy future for Pakistan 2020

Muhammad Shahid Kafait Ullah Kashif Imran Imran Mahmood Arshad Mahmood

Journal of Cleaner Production, Volume 263, Article Number 121511

Impact Factor: 9.297 | **Quartile:** 1 | **Citations:** 48

DOI: https://doi.org/10.1016/j.jclepro.2020.121511

Sustainable vehicle-assisted edge computing for big data migration in smart cities 2020

Maria Kanwal Anis-ur-Rahman Muhammad Shahzad Maria Kanwal Asad Waqar Malik Imran Mahmood

IEEE Internet of Things Journal, Volume: 7 , Issue: 3, Pages 1857-1871

Impact Factor: 9.471 | **Quartile:** 1 | **Citations:** 14

DOI: 10.1109/JIOT.2019.2957127

SEECSSim: A toolkit for parallel and distributed simulations for mobile devices 2019

Fahad Maqbool Asad Waqar Malik Syed Meesam Raza Nadeem Ahmed Gabriele D'Angelo Imran Mahmood

Journal of Simulation, Pages 1-26

Impact Factor: 1.214 | **Quartile:** 3 | **Citations:** 1

DOI: 10.1080/17477778.2019.1701958

Optimal Management of Solid Waste in Smart Cities using Internet of Things 2019

Sahar Idwan Imran Mahmood JUNAID AHMED ZUBAIRI Izzeddin Matar

Wireless Personal Communications, -

Impact Factor: 1.061 | **Quartile:** 4 | **Citations:** 60

Enabling Efficient Waste Transportation and Recycling in Smart Cities Using Internet of Things   2019

Imran Mahmood Junaid A Zuberi

IEEE Electrification Magazine , Volume: 7 , Issue: 3, Pages 33-43

Impact Factor: N/A | **Citations:** 16
DOI: 10.1109/MELE.2019.2925761

An Integrated Modeling, Simulation and Analysis Framework for Engineering Complex Systems   2019

Tameen Kausar Naveed Riaz Imran Mahmood Asad Waqar Malik Hessam Sarjoughian

IEEE Access , Volume 7, Pages 67497-67514

Impact Factor: 3.745 | **Quartile:** 1 | **Citations:** 27
DOI: 10.1109/ACCESS.2019.2917652

Big Data in Motion: A Vehicle-Assisted Urban Computing Framework for Smart Cities   2019

Murk Asad Waqar Malik Imran Mahmood Nadeem Ahmed Zahid Anwar

IEEE Access , Volume 7 Pages 55951-55965

Impact Factor: 3.745 | **Quartile:** 1 | **Citations:** 24
DOI: 10.1109/ACCESS.2019.2913150

Conference Proceedings

Modeling Safest and Optimal Emergency Evacuation Plan for Large-scale Pedestrians Environments   2018

Imran Mahmood Muhammad Haris Maryam Badar Muhammad Saad Qaisar Alvi

2018 Winter Simulation Conference (WSC) , res.country(196,)

Citations: N/A
DOI: 10.1109/WSC.2018.8632418

Experiments in Routing Vehicles for Municipal Services   2018

Imran Mahmood Junaid Ahmed Zubairi Sahar Idwan Izzeddin Matar

Proceedings of The International Conference on High Performance Computing & Simulation (HPCS 2018), res.country(75,)

Citations: N/A
DOI: 10.1109/HPCS.2018.00156

Crash Me Inside The Cloud: A Fault Resilient Framework for Discrete Event Simulation   2017

Asad W. Malik Imran Mahmood

2017 SUMMER SIMULATION MULTI-CONFERENCE , res.country(233,)

Citations: N/A
DOI: N/A

Analyzing Emergency Evacuation Strategies for Mass Gatherings using Crowd Simulation And Analysis framework: Hajj Scenario   2017

Imran Mahmood Muhammad Haris Hessam Sarjoughian

2017 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation, res.country(197,)

Citations: N/A
DOI: 10.1145/3064911.3064935

Energy consumption of traditional simulation protocol over SmartPhones: an empirical study (WIP)   2016

Asad W. Malik Imran Mahmood Aakash Parkash

Summer Computer Simulation Conference (SCSC '16) , res.country(38,)

Citations: N/A
DOI: https://dl.acm.org/citation.cfm?id=3015597

Verifying Dynamic Semantic Composability of BOM-Based Composed Model Using Colored Petri Nets   2012

Dr Imran Mahmood Rassul Ayani Vladimir Vlassov Farshad Moradi

2012 ACM/IEEE/SCS 26th Workshop on Principles of Advanced and Distributed Simulation, res.country(48,)

Citations: N/A
DOI: 10.1109/PADS.2012.48

State-machine matching in BOM based model composition   2009

Dr Imran Mahmood Rassul Ayani Vladimir Vlassov Farshad Moradi

2009 13th IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications, res.country(197,)

Citations: N/A
DOI: 10.1109/DS-RT.2009.19

Intellectual Property

Copyrights

Patents

SMART DEVICE FOR NON-INVASIVE FETAL ANALYSIS & DIAGNOSIS (MATERNAL-AID)   2019
   Status: Filed

Industrial Designs

Trademarks