## Mehdi Hussain

#### Associate Professor

School of Electrical Engineering and Computer Science

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LinkedIn:



### **About**

Dr. Mehdi Hussain is working as Associate Professor in the School of Electrical Engineering and Computer Science. Dr. Mehdi Hussain has a PhD in Steganography. Dr. Mehdi Hussain has published 40 research articles & conference papers having a citation count of 897, carried out 8 projects and filed 0 intellectual property.

#### **Qualifications**

PhD in Steganography Universiti Malaya , Malaysia	2014 - 2017
MS in Steganography Shaheed Zulifkar Ali Bhutto Institute of Science and Technology , Pakistan	2008 - 2011
BS in Computer Science Islamia University of Bahawalpur , Pakistan	2001 - 2006
Experience	
Associate Professor School of Electrical Engineering and Computer Science	2024- Present
Assistant Professor School of Electrical Engineering and Computer Science	2021 - 2024
Assistant Professor School of Electrical Engineering and Computer Science	2018 - 2021
Assistant Professor School of Electrical Engineering and Computer Science	2018 - 2018
Principal Software Engineer Streaming Networks Pvt. , House # 81, Street 45, F-10/4 Islamabad	2006 - 2014

#### **Awards**

FDP

# **Research Projects**

National Projects	
Automatic Classification of Instance of Ship Type using Acoustic Data	2024
Funding Agency: NESCOM	
Amount: PKR 250,000.00	
Status: Approved_inprocess	
Al-based Type Detection of Design for Crypto S-Boxes	2024
Funding Agency: NESCOM	
Amount: PKR 200,000.00	
Status: Approved_inprocess	
Quantum Implementation of Lightweight Ciphers	2024
Funding Agency: NESCOM	
Amount: PKR 300,000.00	
Status: Approved_inprocess	
Automatic Classification of Marine Vessels using Acoustic Data	2023
Funding Agency: NESCOM	
Amount: PKR 250,000.00	
Status: Approved_inprocess	
Active Analysis of Encrypted Traffic Flows for Application Fingerprinting	2023
Funding Agency: NCCS	
Amount: PKR 100,000.00	
Status: Approved_inprocess	
Detection of Ransomware-like Data Manipulation in Android Applications	2023
Funding Agency: NCCS	
Amount: PKR 100,000.00	
Status: Approved_inprocess	
International Projects	
Industry Projects	
National Projects	
Industrial Funding by Walee Tech Phase-3	2024
Client: Walee Technologies Pvt Ltd	
Amount: PKR 10,000,000.00	
Status: Approved_inprocess	
Walee-NUST Center of Excellence for Advanced Social and Digital Media Technologies	2022
Client: Walee Technologies Pvt Ltd	
Amount: PKR 10,000,000.00	
Status: Completed	
International Projects	
Research Articles	
Enhancing Ransomware Detection with Machine Learning Techniques and Effective API Integration	2025
Asad Iqbal Mehdi Hussain Qaiser Riaz Madiha Khalid RAFIA MUMTAZ Ki-Hyun Jung	2020
Computers, Materials & Continua , Pages 1-22	
Impact Factor: 1.700   Quartile: 3	
<b>DOI:</b> https://doi.org/10.32604/cmc.2025.064260	
Lightweight and Robust Android Ransomware Detection Using Behavioral Analysis and Feature	2025
Reduction	
Mehdi Hussain Qaiser Riaz Sana Qadir Naveed Riaz Muhammad Sibtain Ki-Hyun Jung	
Computers, Materials & Continua, Pages 1-23	
Impact Factor: 1.700   Quartile: 3	
<b>DOI:</b> https://doi.org/10.32604/cmc.2025.066198	

Using Wearable Inertial Sensors	2020
Umar Khan Qaiser Riaz Mehdi Hussain Muhammad Zeeshan Björn Krüger	
Algorithms , Volume 18(4), Article Number 203	
Impact Factor: 1.800   Quartile: 2	
<b>DOI:</b> https://doi.org/10.3390/a18040203	
Intelligent parameter-based in-network IDS for IoT using UNSW-NB15 and BoT-IoT datasets	2025
Muhammad Luqman Qaiser Riaz Mehdi Hussain Hasan Tahir Muhammad Zeeshan Noman Mazhar Muhammad Saffeer Khan	
Journal of the Franklin Institute, Volume 362, Issue 1, Article Number 107440	
Impact Factor: 3.700   Quartile: 1   Citations: 4	
<b>DOI:</b> https://doi.org/10.1016/j.jfranklin.2024.107440	
Performance-Oriented and Sustainability-Oriented Design of an Effective Android Malware Detector	2024
Sana Qadir Amna Naeem Mehdi Hussain Huma Ghafoor AISHA HASSAN ABDALLA HASHIM	
IEEE Access , Volume: 12, Page(s):159036-159055	
Impact Factor: 3.4   Quartile: 2   Citations: 1	
<b>DOI:</b> 10.1109/ACCESS.2024.3486094	
Generisch-Net: A Generic Deep Model for Analyzing Human Motion with Wearable Sensors in the	2024
Internet of Health Things	
Kiran Hamza Qaiser Riaz Hamza Ali Imran Mehdi Hussain Björn Krüger	
MDPI Sensors , Volume 24(19), Article Number 6167	
Impact Factor: 3.400   Quartile: 2   Citations: 1	
<b>DOI:</b> https://doi.org/10.3390/s24196167	
Forensic analysis of web browsers lifecycle: A case study	2024
Ahmed Raza Mehdi Hussain Hasan Tahir Muhammad Zeeshan Muhammad Adil Raja Ki-Hyun Jung	
Journal of Information Security and Applications, Volume 85, Article Number 103839	
Impact Factor: 3.800   Quartile: 2   Citations: 3	
<b>DOI:</b> https://doi.org/10.1016/j.jisa.2024.103839	
Unveiling Fall Origins: Leveraging Wearable Sensors to Detect Pre-Impact Fall Causes	2024
Qaiser Riaz Mehdi Hussain Muhammad Zeeshan Björn Krüger Samia Kiran	2024
IEEE Sensors Journal, Volume: 24, Issue: 15, Pages:24086-24095	
Impact Factor: 4.300   Quartile: 1   Citations: 7	
<b>DOI:</b> 10.1109/JSEN.2024.3407835	
Smart-Wearable Sensors and CNN-BiGRU Model: A Powerful Combination for Human Activity	2023
Recognition	
Hamza Ali Imran Qaiser Riaz Mehdi Hussain Hasan Tahir Razi Arshad	
IEEE Sensors Journal, Volume: 24, Issue: 2, 15 January 2024	
Impact Factor: 4.3   Quartile: 1   Citations: 12	
<b>DOI:</b> 10.1109/JSEN.2023.3338264	
Hiding EPR and watermark in medical images using repeated pixel differencing	2023
Hira Aftab Mehdi Hussain Qaiser Riaz Muhammad Zeeshan Ki-Hyun Jung	
Multimedia Tools and Applications, Pages 1-29	
Impact Factor: 3.6   Quartile: 2   Citations: 1	
<b>DOI:</b> 10.1007/s11042-023-15434-6	
Machines Perceive Emotions: Identifying Affective States from Human Gait Using On-Body Smart Devices	2023
Hamza Ali Imran Qaiser Riaz Muhammad Zeeshan Mehdi Hussain Razi Arshad	
Applied Sciences, Volume 13, Issue 8, 4828	
Impact Factor: 2.7   Quartile: 2   Citations: 4  DOI: 10.3390/app13084728	
A portable hardware security module and cryptographic key generator	2022
Hasan Tahir Malik Hamza Murtaza Shahzaib Tahir Zahoor Ahmed Alizai Qaiser Riaz Mehdi Hussain	
Journal of Information Security and Applications, Volume 70, Article Number 103332	
Impact Factor: 4.960   Quartile: 2   Citations: 9	
<b>DOI:</b> https://doi.org/10.1016/j.jisa.2022.103332	
Permissions-Based Detection of Android Malware Using Machine Learning	2022

Fahad Akbar Mehdi Hussain Rafia Mumtaz Qaiser Riaz Ainuddin Wahid Abdul Wahab Ki-Hyun Jung	
Symmetry, Volume 14(4), Article Number 718	
Impact Factor: 2.7   Quartile: 2   Citations: 32  DOI: https://doi.org/10.3390/sym14040718	
A Forensic Analysis of Video Streaming Activities on Android Applications	2022
Adil Ahmad Mehdi Hussain	
Mobile and Forensics, Volume 4, No.1, Pages 44-52	
Impact Factor: 0 DOI: https://doi.org/10.12928/mf.v4i1.5762	
Forensic Analysis of Tor Browser on Windows 10 and Android 10 Operating Systems	2021
Muhammad Raheel Arshad Mehdi Hussain Hasan Tahir Sana Qadir Faraz Iqbal Ahmed Memon Yousra Javed IEEE Access, Volume 9, Pages 141273-141294	
Impact Factor: 3.367   Quartile: 2   Citations: 17  DOI: 10.1109/ACCESS.2021.3119724	
Encrypted Network Traffic Analysis of Secure Instant Messaging Application: A Case Study of Signal  Messenger App	2021
Mehdi Hussain Asmara Afzal Shahzad Saleem M. Khuram Shahzad Anthony T.S.HO Ki-Hyun Jung Applied Sciences, Volume 11, Issue 17, Article Number 7789	
Impact Factor: 2.838   Quartile: 2   Citations: 19  DOI: https://doi.org/10.3390/app11177789	
PUF-Based Key Generation Scheme for Secure Group Communication Using MEMS	2021
Mubarak Mehdi Muhammad Taha Ajani Hasan Tahir Shahzaib Tahir Zahoor Alizai Fawad Khan Qaiser Riaz Mehdi Hussain	2021
Electronics , Volume 10(14), Article Number 1691  Impact Factor: 2.690   Quartile: 3   Citations: 11	
DOI: https://doi.org/10.3390/electronics10141691	
Enhanced adaptive data hiding method using LSB and pixel value differencing	2021
Mehdi Hussain Qaiser Riaz Ki-Hyun Jung Shahzad Saleem Abdul Ghafoor	
Multimedia Tools and Applications, Pages 1-21	
Impact Factor: 2.577   Quartile: 2   Citations: 32  DOI: https://doi.org/10.1007/s11042-021-10652-2	
GAFOR: Genetic Algorithm Based Fuzzy Optimized Re-Clustering in Wireless Sensor Networks	2020
Muhammad Khuram Shahzad S. M. Riazul Islam Mahmud Hossain Mohammad Abdullah-Al-Wadud Atif Alamri Mehdi Hussain	
Mathematics , Volume 9(1), Article Number 43	
Impact Factor: 2.258   Quartile: 1   Citations: 22  DOI: https://doi.org/10.3390/math9010043	
Real-Time Automated Contour Based Motion Tracking Using a Single-Camera for Upper Limb Angular	2020
Motion Measurement  Alireza Akhavizadegan Mohd Yamani Idna Idris Zaidi Bin Razak Mazlina Binti Mazlan Norhamizan Binti Hamzah Ainuddin Wahid Abdul Wahab Mehdi	į
Hussain	
Malaysian Journal of Computer Science, Volume 33(1), Pages 52-77  Impact Factor: 0.622   Quartile: 4	
DOI: 10.22452/mjcs.vol33no1.4	
What Lies Beneath One's Feet? Terrain Classification Using Inertial Data of Human Walk	2019
Muhammad Zeeshan Ul Hasnain Hashmi [OrcID] Qaiser Riaz Mehdi Hussain Muhammad Shahzad	
Applied Sciences, Vol. 9 Issue 15, p3099-3099	
Impact Factor: 2.474   Quartile: 2   Citations: 27  DOI: 10.3390/app9153099	
High-Capacity Image Steganography with Minimum Modified Bits Based on Data Mapping and LSB Substitution	2018
Abdul Alif Zakaria Mehdi Hussain Ainuddin Wahid Abdul Wahab Mohd Yamani Idna Idris Norli Anida Abdullah Ki-Hyun Jung Applied Sciences , NULL	
Impact Factor: 2.217   Quartile: 3   Citations: 54	
<b>DOI</b> : 10.3390/app8112199	
Image Steganography in Spatial Domain: A Survey	2018

Mehdi Hussain Ainuddin Wahid Abdul Wahab Yamani Idna Bin Idris Anthony TS Ho Ki-Hyun Jung

Impact Factor: 2.814   Quartile: 2   Citations: 399  DOI: 10.1016/j.image.2018.03.012	
Recursive Information Hiding Scheme Through LSB, PVD Shift, and MPE  Ainuddin Wahid Abdul Wahab Noman Javed Ki-Hyun Jung Mehdi Hussain	2018
IETE Technical Review, Volume 35, Issue 1, Pages: 53-63 Impact Factor: 1.61799999999999999999999999999999999999	
A data hiding scheme using parity-bit pixel value differencing and improved rightmost digit replacement  Mehdi Hussain Ainuddin Wahid Abdul Wahab Anthony T.S. Ho Noman Javed Ki-Hyun Jung	2017
Signal Processing: Image Communication, Volume: 50 Pages: 44-57  Impact Factor: 2.073   Quartile: 2   Citations: 106  DOI: 10.1016/j.image.2016.10.005	
Hybrid Data Hiding Scheme Using Right-Most Digit Replacement and Adaptive Least Significant Bit for Digital Images  Mehdi Hussain Ainuddin Wahid Abdul Wahab Noman Javed Ki-Hyun Jung  Symmetry , Volume 8, Issue 6, Article number 41	2016
Impact Factor: 1.457   Quartile: 2   Citations: 42  DOI: 10.3390/sym8060041	
Evaluating Performance of Intrusion Detection System using Support Vector Machines: Review  Leila Mohammadpour Alihossein Aryanfar Vahid Maleki Raee Fahad Sattar Mehdi Hussain  International Journal of Security and its Applications, Volume 9, Issue 9, Pages 225-234  Impact Factor: 0   Citations: 5  DOI: 10.14257/ijsia.2015.9.9.20	2015
Challenges and Issues in DATA Stream: A Review  Muhammad Arif Khubaib Amjad Alam Mehdi Hussain  International Journal of Hybrid Information Technology, Volume 8, No.3, Pages 155-164  Impact Factor: -  DOI: 10.14257/ijhit.2015.8.3.15	2015
Crime Mining: A Comprehensive Survey  Muhammad Arif Khubaib Amjad Alam Mehdi Hussain International Journal of u- and e- Service, Science and Technology, Volume 8, No.2, Pages 357-364  Impact Factor: -  DOI: http://dx.doi.org/10.14257/ijunesst.2015.8.2.34	2015
Secure Password Transmission for Web Applications over Internet using Cryptography and Image Steganography  Mehdi Hussain Ainuddin Wahid Abdul Wahab Ishrat Batool Muhammad Arif  International Journal of Security and Its Applications, Volume 9, No.2, Pages 179-188  Impact Factor: -   Citations: 8  DOI: 10.14257/ijsia.2015.9.2.17	2015
Application of Data Mining Using Artificial Neural Network: Survey  Muhammad Arif Khubaib Amjad Alam Mehdi Hussain  International Journal of Database Theory and Application, Volume 8, No.1, Pages 245-270  Impact Factor: -  DOI: 10.14257/ijdta.2015.8.1.25	2015
Characterizing Strengths of Snort-based IDPS  Ghilman Ahmed Mehdi Hussain M.N.A. Khan  Research Journal of Recent Sciences, Volume 3(4), Pages 88-94  Impact Factor: N/A  DOI: http://www.isca.me/rjrs/archive/v3/i4/15.ISCA-RJRS-2013-483.php	2014
Information Hiding Using Edge Boundaries of Objects  Mehdi Hussain International Journal of Security and Its Applications, Volume 5, No. 3, Pages 1-10	2011

Signal Processing: Image Communication, Volume 65, Pages 46-66

Impact Factor: N/A

## **Conference Proceedings**

A Study on the Forensic Analysis of Airlines Applications on Android Operating System  Urva Maryam Mehdi Hussain	2023
2023 IEEE Conference on Dependable and Secure Computing, DSC 2023, res.country(233,)  Citations: N/A	
<b>DOI:</b> 10.1109/DSC61021.2023.10354207	
A Forensic Framework for Webmail Threat Detection Using Log Analysis  Abdul Saboor Malik Muhammad Khuram Shahzad Mehdi Hussain	2022
Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) res.country(188,)	
Citations: N/A DOI: 10.1007/978-3-031-17510-7_5	
Automated Analysis of Pakistani Websites' Compliance with GDPR and Pakistan Data Protection Act	2021
Muhammad Asif Yousra Javed Mehdi Hussain  2021 International Conference on Frontiers of Information Technology (FIT), res.country(282,)	
Citations: 5	
<b>DOI:</b> https://10.1109/FIT53504.2021.00051	
Towards A Distributed Ledger Based Verifiable Trusted Protocol For VANET	2021
Muhammad Usman Aftab Mehdi Hussain Anders Lindgren Abdul Ghafoor	
2021 International Conference on Digital Futures and Transformative Technologies (ICoDT2), res.country(177,)  Citations: 2	
DOI: 10.1109/ICoDT252288.2021.9441531	
Pixel value differencing steganography techniques: Analysis and open challenge	2015
Mehdi Hussain Ainuddin Wahid Abdul Wahab Nor Badrul Anuar Rosli Salleh Rafidah Md Noor	
2015 IEEE International Conference on Consumer Electronics - Taiwan, res.country(227,)	
Citations: 14  DOI: 10.1109/ICCE-TW.2015.7216859	
Pixel intensity based high capacity data embedding method	2010
Mehdi Hussain Mureed Hussain	
2010 International Conference on Information and Emerging Technologies, ICIET 2010, res.country(177,)	
Citations: 19  DOI: 10.1109/ICIET.2010.5625723	
Editorial Activities	
Transactions on Dependable and Secure Computing	2025
Reviewed Papers for Journals  Impact Factor: 7.0	
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IEEE Sensors Journal  Reviewed Papers for Journals	2025
Impact Factor: 4.325	
IEEE Sensors Journal	2025
Reviewed Papers for Journals	
Impact Factor: 4.325	
Journal of Information Security and Applications	2025
Reviewed Papers for Journals  Impact Factor: 4.92	
PLOS ONE	2025
Reviewed Papers for Journals	
Impact Factor: 2.9	
Engineered Science	2025
Reviewed Papers for Journals  Impact Factor: N/A	
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Journal of Information Security and Applications Reviewed Papers for Journals Impact Factor: 3.8	2025
Reviewed Papers for Journals Impact Factor: 8.62	2025
International Journal of Electrical and Computer Engineering Systems Reviewed Papers for Journals Impact Factor: 0.8	2025
Transactions on Information Forensics & Security Reviewed Papers for Journals Impact Factor: 6.3	2025
Signal Processing: Image Communication Reviewed Papers for Journals Impact Factor: 3.4	2025
Journal of Information Security and Applications  Editor in Chief of Journal  Impact Factor: 4.92	2024
Reviewed Papers for Journals Impact Factor: 2.0	2024
Journal of Information Security and Applications Reviewed Papers for Journals Impact Factor: 3.6	2024
Computers Reviewed Papers for Journals Impact Factor: 2.6	2024
Journal of Intelligent & Fuzzy Systems Reviewed Papers for Journals Impact Factor: 1.7	2024
Discover Internet of Things Reviewed Papers for Journals Impact Factor: N/A	2024
IEEE Access Reviewed Papers for Journals Impact Factor: 3.9	2024
Transactions on Information Forensics & Security Reviewed Papers for Journals Impact Factor: 7.178	2024
Alexandria Engineering Journal Reviewed Papers for Journals Impact Factor: 3.696	2023
Computers and Electrical Engineering Editor in Chief of Journal Impact Factor: 4.3	2023
Journal of Information Security and Applications Reviewed Papers for Journals Impact Factor: 4.96	2023
IEEE Transactions on Information Forensics and Security Reviewed Papers for Journals Impact Factor: 7.231	2023
International Journal of Intelligent Systems Reviewed Papers for Journals Impact Factor: 7.0	2023

Journal of Engineering Research Reviewed Papers for Journals Impact Factor: 1.325	2023
Applied Sciences-Basel Reviewed Papers for Journals Impact Factor: 2.838	2023
Journal of Cybersecurity and Privacy Reviewed Papers for Journals Impact Factor: N/A	2023
Journal of Information Security and Applications Reviewed Papers for Journals Impact Factor: 4.960	2023
Journal of Electrical and Computer Engineering Reviewed Papers for Journals Impact Factor: N/A	2023
EURASIP Journal on Image and Video Processing Reviewed Papers for Journals Impact Factor: 2.399	2023
Signal Processing Reviewed Papers for Journals Impact Factor: 4.729	2022
Journal of Internet Technology Reviewed Papers for Journals Impact Factor: 1.140	2022
Visual Computer Reviewed Papers for Journals Impact Factor: 2.835	2022
OPTIK Reviewed Papers for Journals Impact Factor: 2.840	2022
Electronics Open Access since 2012 Reviewed Papers for Journals Impact Factor: 2.690	2022
Signal Processing Reviewed Papers for Journals Impact Factor: 4.729	2022
Reviewed Papers for Journals Impact Factor: 3.872	2022
Reviewed Papers for Journals Impact Factor: 0.871	2022
Reviewed Papers for Journals Impact Factor: 3.872	2022
Symmetry-Basel Reviewed Papers for Journals Impact Factor: 2.940	2021
Reviewed Papers for Journals  Impact Factor: 0	2021
	2021

Reviewed Papers for Journals

#### Impact Factor: 6.795

Reviewed Papers for Journals  Impact Factor: 2.601	2021
Reviewed Papers for Journals	2021
Impact Factor: 10.85	2020
Reviewed Papers for Journals  Impact Factor: 3.745	
Reviewed Papers for Journals  Impact Factor: 2.187	2020
Reviewed Papers for Journals	2020
Reviewed Papers for Journals Impact Factor: 2.479	2020
Reviewed Papers for Journals  Impact Factor: 1.711	2020
Reviewed Papers for Journals  Impact Factor: 4.201	2019
Reviewed Papers for Journals  Impact Factor: -	2019
Reviewed Papers for Journals	2019
Impact Factor: 5.524  Reviewed Papers for Journals	2019
Reviewed Papers for Journals  Impact Factor: 6.211	2018
Edited Journal Issue / Proceeding / Book	2010