

Mehreen Afzal

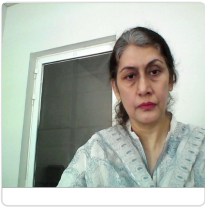
Associate Professor of Practice

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About

Dr. Mehreen Afzal is working as Associate Professor of Practice in the Military College of Signals. Dr. Mehreen Afzal has a PhD in Information Security. Dr. Mehreen Afzal has published 24 research articles & conference papers having a citation count of 319, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Information Security NUST, Islamabad , Pakistan	2007 - 2010
MS in Information Security NUST, Islamabad , Pakistan	2003 - 2007
MSc in Applied Mathematics Quaid-i-Azam University , Pakistan	1993 - 1995

Experience

Associate Professor of Practice Military College of Signals	2023- Present
Associate Professor of Practice Military College of Signals	2022 - 2023
Adjunct Faculty Military College of Signals	2020 - 2020
Adjunct Faculty Military College of Signals	2018 - 2020
Chair Cyber Security Department Air Univ , Islamabad	2021 - 2022
GM NESCOM , Islamabad	2001 - 2021
Lecturer Govt College Chakwal , Chakwal	1999 - 2001
Lecturer Army Public College , Jhelum	1995 - 1999

Research Articles

SLF-ADM: Securing Linux frontiers: Advanced persistent threat (APT) detection using machine learning <i>Mehreen Afzal Dawood Al Abri Yawar Abbas Mian Muhammad Waseem Iqbal S Sohaib Karim</i> <i>Neural Computing and Applications</i> , Pages 1-20 Impact Factor: N/A DOI: doi.org/10.1007/s00521-025-11338-8	2025
PQCAIE: Post quantum cryptographic authentication scheme for IoT-based e-health systems <i>Khwaja Mansoor Mehreen Afzal Mian Muhammad Waseem Iqbal Dr. Yawar Abbas Bangash Shynar Zhenisbekovna Abdellah Chehri</i> <i>Internet of Things</i> , Volume:27, Article Number: 101228 Impact Factor: 6.0 Quartile: 1 Citations: 19 DOI: 10.1016/j.iot.2024.101228	2024

The reality of backdoored S-Boxes—An eye opener	2024
<i>Shah Fahd Mehreen Afzal Waseem Iqbal Dawood Shah Ijaz Khalid</i> <i>Journal of Information Security and Applications</i> , Volume 80, Article Number 103674 Impact Factor: 5.6 Quartile: 2 Citations: 5 DOI: https://doi.org/10.1016/j.jisa.2023.103674	
Detection of non-trivial preservable quotient spaces in S-Box(es)	2023
<i>Shah Fahd Mehreen Afzal Dawood Shah Mian Muhammad Waseem Iqbal Yawar Abbas Bangash</i> <i>Neural Computing and Applications</i> , Pages 1-13 Impact Factor: 6.0 Quartile: 2 DOI: https://doi.org/10.1007/s00521-023-08654-2	
A systematic threat analysis and defense strategies for the metaverse and extended reality systems	2023
<i>Sara Qamar Zahid Anwar Dr. Mehreen Afzal</i> <i>Computers and Security</i> , Volume 128, Article Number:103127 Impact Factor: 5.105 Quartile: 2 Citations: 96 DOI: 10.1016/j.cose.2023.103127	
A game model design using test bed for Malware analysis training	2022
<i>Marium Khalid Mehreen Afzal Mian Muhammad Waseem Iqbal</i> <i>Information and Computer Security</i> , Volume 23, Issue 1, Pages 1-18 Impact Factor: N/A Citations: 1 DOI: https://doi.org/10.1108/ICS-09-2021-0152	
FBASHI: Fuzzy and Blockchain-Based Adaptive Security for Healthcare IoTs	2022
<i>Zeeshan Zulkifl Fawad Khan Shahzaib Tahir Mehreen Afzal Mian Muhammad Waseem Iqbal Abdul Rehman Saqib Saeed Abdullah M. Almuhaideb</i> <i>IEEE Access</i> , Volume 10, Pages 15644-15656 Impact Factor: 3.367 Quartile: 2 Citations: 63 DOI: 10.1109/ACCESS.2022.3149046	
Behavioral Based Insider Threat Detection Using Deep Learning	2021
<i>Mehreen Afzal Rabia Latif Mian Muhammad Waseem Iqbal Rida Nasir</i> <i>IEEE Access</i> , Volume 9, Pages 143266-143274 Impact Factor: 3.367 Quartile: 2 Citations: 65 DOI: 10.1109/ACCESS.2021.3118297	
Encryption and Re-Randomization Techniques for Malware Propagation	2021
<i>Ahsan Rasheed Abbasi Mehreen Afzal Mian Muhammad Waseem Iqbal Shynar Mussiraliyeva Fawad Khan Awais Ur Rehman</i> <i>IEEE Access</i> , Volume 9, Pages 132522-132532 Impact Factor: 3.367 Quartile: 2 Citations: 2 DOI: http://dx.doi.org/10.1109/access.2021.3112750	
Enhanced Metamorphic Techniques-A Case Study Against Havex Malware	2021
<i>Zainab Mumtaz Mehreen Afzal Mian Muhammad Waseem Iqbal Waqas Aman Naima Altaf</i> <i>IEEE Access</i> , Volume 9, Pages 112069-112080 Impact Factor: 3.476 Quartile: 2 Citations: 6 DOI: 10.1109/ACCESS.2021.3102073	
Kleptographic Attack on Elliptic Curve Based Cryptographic Protocols	2020
<i>Anum Sajjad Mehreen Afzal Mian Muhammad Waseem Iqbal Haider Abbas Rabia Latif Rana Aamir Raza</i> <i>IEEE Access</i> , Volume 8, Pages 139903-139917 Impact Factor: 3.367 Quartile: 2 Citations: 8 DOI: 10.1109/ACCESS.2020.3012823	
On the efficiency of software implementations of lightweight block ciphers from the perspective of programming languages	2020
<i>Khawir Mahmood Abdur Rehman Raza Khan Muhammad Faisal Amjad Haider Abbas Mehreen Afzal</i> <i>Future Generation Computer Systems</i> , Volume:104, Page:43-59 Impact Factor: 7.187 Quartile: 1 Citations: 10 DOI: https://doi.org/10.1016/j.future.2019.09.058	
Correlation power analysis of modes of encryption in AES and its countermeasures	2018
<i>Shah Fahd Dr. Mehreen Afzal Dr. Haider Abbas Mian Muhammad Waseem Iqbal Salman Waheed</i> <i>Future Generation Computer Systems</i> , NULL Impact Factor: 5.768 Quartile: 1 Citations: 23	

DOI: 10.1016/j.future.2017.06.004

Algebraic Side Channel Attack on Trivium and Grain Ciphers2017

ASIF RAZA KAZMI Mehreen Afzal MUHAMMAD FAISAL AMJAD HAIDER ABBAS XIAODONG YANG

IEEE Access , Volume 5, Pages 23958-23968

Impact Factor: 3.557 | Quartile: 1 | Citations: 14

DOI: 10.1109/ACCESS.2017.2766234

Algebraic analysis of Trivium and Trivium/1282008

Mehreen Afzal Ashraf Masood

International Journal of Electronic Security and Digital Forensics, Volume:1, Issue:4, Page:344-352

Impact Factor: 0

DOI: 10.1504/IJESDF.2008.021452

Conference Proceedings

Robustness of Affine and Extended Affine Equivalent Surjective S-Box(es) against Differential Cryptanalysis2022

Shah Fahd Mehreen Afzal Dawood Shah Mian Muhammad Waseem Iqbal Atiya Hai

15th International Symposium on Foundations & Practice of Security (FPS – 2022), res.country(38,)

Citations: N/A

DOI: Nil

Is Blockchain Overrated?2021

Asif Raza Kazmi Mehreen Afzal Haider Abbas Shahzaib Tahir Abdul Rauf

2021 IEEE 19th International Conference on Embedded and Ubiquitous Computing (EUC), res.country(48,)

Citations: N/A

DOI: 10.1109/EUC53437.2021.00035

Smart Secure USB SSU-2562021

Muhammad Ehsan ul Haq Zeeshan Ali Muhammad Taimoor Ali Ruqiya Fazal Waseem Iqbal Mehreen Afzal

ICGS3 2021 : 13th International Conference on Global Security, Safety & Sustainability, res.country(231,)

Citations: N/A

DOI: https://doi.org/10.1007/978-3-030-68534-8_9

An ICMetric based key generation scheme for controlled group communication2014

Shahzaib Tahir Mehreen Afzal Muhammad Tahir

IISA 2014, The 5th International Conference on Information, Intelligence, Systems and Applications, res.country(88,)

Citations: N/A

DOI: 10.1109/IISA.2014.6878816

On the security of LBlock against the cube attack and side channel cube attack2013

Saad Islam Mehreen Afzal Adnan Rashdi

3rd International Workshop on Security and Cognitive Informatics for Homeland Defense, res.country(57,)

Citations: N/A

DOI: 10.1007/978-3-642-40588-4_8

A Compact S-Box Design for SMS4 Block Cipher2011

Imran Abbasi Mehreen Afzal

International Conference on Intelligent Robotics, Automations, Telecommunication Facilities, and Applications, IROA, res.country(57,)

Citations: N/A

DOI: 10.1007/978-94-007-2598-0_69

Think before your LFSRs jump2010

Mujahid Mohsin Mehreen Afzal Arif Wahla

2010 10th IEEE International Conference on Computer and Information Technology, res.country(231,)

Citations: N/A

DOI: 10.1109/CIT.2010.195

On generating algebraic equations for A5-type key stream generator2008

Mehreen Afzal Ashraf Masood

Lecture Notes in Electrical Engineering, res.country(57,)

Citations: N/A

DOI: 10.1007/978-0-387-74935-8_31