

# Muhammad Usama

Assistant Professor  
Pakistan Navy Engineering College

Email: musama@pnec.nust.edu.pk  
Contact:



## About

Dr. Muhammad Usama is working as Assistant Professor in the Pakistan Navy Engineering College. Dr. Muhammad Usama has a PhD in Information Security. Dr. Muhammad Usama has published 17 research articles & conference papers having a citation count of 199, carried out 0 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in Information Security</b> Universiti Teknologi Petronas , Malaysia	2014 - 2018
<b>MS in Software Engineering</b> Bahria University , Pakistan	2006 - 2008
<b>BS in Software Engineering</b> Bahria University , Pakistan	2000 - 2005

## Experience

<b>Assistant Professor</b> Pakistan Navy Engineering College	2023- Present
<b>Assistant Professor</b> FAST-NU , FAST-NU, Karachi Pakistan	2022 - 2023
<b>Assistant Professor</b> DHA-SUFFA University , DHA-SUFFA University, Karachi, Pakistan	2020 - 2022
<b>Research Assistant</b> Qatar University , Qatar University, Doha, Qatar	2019 - 2020
<b>Assistant Professor</b> Bahria University , Bahria University, Karachi, Pakistan	2018 - 2019
<b>Graduate Assistant</b> University Technology Petronas , University Technology Petronas, Malaysia	2014 - 2018
<b>Lecturer</b> King Saud University , King Saud University, Riyadh, Saudi Arabia	2010 - 2013
<b>Assistant Manager</b> SUPARCO , SUPARCO, Karachi, Pakistan	2007 - 2010
<b>Software Developer</b> SigmaFlow , SigmaFlow, Karachi, Pakistan	2006 - 2007
<b>Software Developer</b> East Tech International , East Tech International, Karachi, Pakistan	2006 - 2006

## Research Articles

<b>Enhancing Healthcare Cybersecurity through the Development and Evaluation of Intrusion Detection Systems</b> <i>Muhammad Usama Arshad Aziz Imtiaz Hassan Shynar Akhmetzhanova Sultan Noman Qasem Abdullah M. Albarrak Tawfik Al-Hadhrami</i> <i>Computer Modelling in Engineering &amp; Sciences</i> , Volume:144, Issue:1, Page:1225-1248 <b>Impact Factor:</b> 2.500   <b>Quartile:</b> 1 <b>DOI:</b> <a href="https://doi.org/10.32604/cmes.2025.067098">https://doi.org/10.32604/cmes.2025.067098</a>	2025
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<b>Enhancing security in 6G-enabled wireless sensor networks for smart cities: a multi-deep learning intrusion detection approach</b> <i>Muhammad Usama Muhammad Shahbaz Khan Oumaima Saidani Hussam Al Hamadi Noha Alnazzawi Mohammed S. Alshehri Jawad Ahmad Waqar Khan</i> <i>Frontiers in Sustainable Cities</i> , Vol 7, Article Number: 1580006 <b>Impact Factor:</b> 2.100   <b>Quartile:</b> 2 <b>DOI:</b> <a href="https://doi.org/10.3389/frsc.2025.1580006">https://doi.org/10.3389/frsc.2025.1580006</a>	2025
<b>IDCE: Integrated Data Compression and Encryption for Enhanced Security and Efficiency</b> <i>Muhammad Usama Arshad Aziz Suliman A. Alsuhbany Imtiaz Hassan Farrukh Yuldashev</i> <i>Computer Modelling in Engineering &amp; Sciences</i> , Volume 143(1), Pages 1029-1048 <b>Impact Factor:</b> 2.200   <b>Quartile:</b> 2 <b>DOI:</b> <a href="https://doi.org/10.32604/cmes.2025.061787">https://doi.org/10.32604/cmes.2025.061787</a>	2025
<b>An efficient secure data compression technique based on chaos and adaptive Huffman coding</b> <i>Muhammad Usama Qutaibah M. Malluhi Nordin Zakaria Imran Razzak Waheed Iqbal</i> <i>Peer-to-Peer Network Applications</i> , Volume 14, Issue 5, Pages 2651-2664 <b>Impact Factor:</b> 3.488   <b>Quartile:</b> 2   <b>Citations:</b> 12 <b>DOI:</b> <a href="https://doi.org/10.1007/s12083-020-00981-8">https://doi.org/10.1007/s12083-020-00981-8</a>	2021
<b>An efficient construction of key-dependent substitution box based on chaotic sine map</b> <i>Muhammad Usama Osama Rehman Imran Memon Safdar Rizvi</i> <i>International Journal of Distributed Sensor Networks</i> , Volume 15, Issue 12, Pages 1-9 <b>Impact Factor:</b> 1.151   <b>Quartile:</b> 4   <b>Citations:</b> 20 <b>DOI:</b> <a href="https://doi.org/10.1177/1550147719895957">10.1177/1550147719895957</a>	2019
<b>An efficient, secure, and queryable encryption for NoSQL-based databases hosted on untrusted cloud environments</b> <i>Mamdouh Alenezi Muhammad Usama Khaled Almustafta Waheed Iqbal Muhammad Ali Raza Tanveer Khan</i> <i>International Journal of Information Security and Privacy</i> , Volume 13, Issue 2, Pages 14-31 <b>Impact Factor:</b> N/A   <b>Citations:</b> 5 <b>DOI:</b> <a href="https://doi.org/10.4018/IJISP.2019040102">10.4018/IJISP.2019040102</a>	2019
<b>Chaos-based simultaneous compression and encryption for Hadoop</b> <i>Muhammad Usama Nordin Zakaria</i> <i>PLoS ONE</i> , Volume 12, Issue 1, Article Number e0168207 <b>Impact Factor:</b> 2.766   <b>Quartile:</b> 1   <b>Citations:</b> 12 <b>DOI:</b> <a href="https://doi.org/10.1371/journal.pone.0168207">10.1371/journal.pone.0168207</a>	2017
<b>Range GLS-Coding: A Scheme of Simultaneous Data Compression and Encryption</b> <i>Muhammad Usama Nordin Zakaria</i> <i>Journal of Informatics and Mathematical Sciences</i> , Vol:8, No. 4, Pages:273-279 <b>Impact Factor:</b> N/A <b>DOI:</b> <a href="https://doi.org/10.26713/jims.v8i4.557">10.26713/jims.v8i4.557</a>	2016
<b>Chaos based secure storage and transmission of digital medical images</b> <i>Fahad bin Muhaya Muhammad Usama Fahim Akhter</i> <i>Applied Mathematics and Information Sciences</i> , Volume 8, Issue 1, Pages 27-33 <b>Impact Factor:</b> N/A   <b>Citations:</b> 1 <b>DOI:</b> <a href="http://dx.doi.org/10.12785/amis/081L04">http://dx.doi.org/10.12785/amis/081L04</a>	2014
<b>Framework for secure wireless communication in wireless sensor networks</b> <i>Muhammad Usama Fahad bin Muhaya</i> <i>International Journal of Distributed Sensor Networks</i> , Volume 2013, Article ID 585491, 8 pages <b>Impact Factor:</b> 0.923   <b>Quartile:</b> 3   <b>Citations:</b> 1 <b>DOI:</b> <a href="http://dx.doi.org/10.1155/2013/585491">http://dx.doi.org/10.1155/2013/585491</a>	2013
<b>Satellite Image Encryption for C4I System</b> <i>Abdullah Sharaf Alghamdi Hanif Ullah Muhammad Usama Iftikhar Ahmad Khalid Alnafajan</i> <i>International Journal of the Physical Sciences</i> , Vol:6, Issue:17, Pages:4255-4263, Article Number: E4CC61B26745 <b>Impact Factor:</b> N/A <b>DOI:</b> <a href="https://doi.org/10.5897/IJPS11.470">10.5897/IJPS11.470</a>	2011
<b>Chaos-based secure satellite imagery cryptosystem</b> <i>Muhammad Usama Muhammad Khurram Khan Khaled Alghathbar Changhoon Lee</i> <i>Computers and Mathematics with Applications</i> , Volume 60, Issue 2, Pages 326-337	2010

## Conference Proceedings

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- Secure NoSQL Over Cloud Using Data Decomposition and Queryable Encryption** 2019  
*Muhammad Ali Raza Muhammad Usama Waheed Iqbal Faisal Bukhari*  
*CIntelligent Technologies and Applications: Second International Conference, INTAP*, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1007/978-981-15-5232-8\_35
- Modified AES using chaotic key generator for satellite imagery encryption** 2009  
*Fahad Bin Muhaya Muhammad Usama Muhammad Khurram Khan*  
*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* res.country(121,)  
**Citations:** N/A  
**DOI:** 10.1007/978-3-642-04070-2\_107
- Satellite imagery security application (SISA)** 2008  
*Muhammad Usama Muhammad Khurram Khan*  
*2008 IEEE International Multitopic Conference* , res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/INMIC.2008.4777741
- AINAN: Collaborative application for protein visualization & analyses** 2008  
*Rauf Malick Muhammad Usama Athar Abbas Waheed Iqbal Kamran Azim*  
*Proc. 9th ACIS Int. Conf. Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing, SNPD 2008 and 2nd Int. Workshop on Advanced Internet Technology and Applications* , res.country(217,)  
**Citations:** N/A  
**DOI:** 10.1109/SNPD.2008.123
- Classical and chaotic encryption techniques for the security of satellite images** 2008  
*Muhammad Usama Muhammad Khurram Khan*  
*IEEE- International Symposium on Biometrics and Security Technologies, ISBAST'08*, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/ISBAST.2008.4547663