

Arshad Aziz

Professor
Pakistan Navy Engineering College

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About

Dr. Arshad Aziz is working as Professor in the Pakistan Navy Engineering College. Dr. Arshad Aziz has a PhD in Information Security And Fpga Design. Dr. Arshad Aziz has published 63 research articles & conference papers having a citation count of 171, carried out 2 projects and filed 2 intellectual property.

Qualifications

PhD in Information Security And Fpga Design NUST, Islamabad , Pakistan	2002 - 2007
MS in Computer Networking Sir Syed UET , Pakistan	2000 - 2002
BS in Computer Engineering Sir Syed UET , Pakistan	1994 - 1998

Experience

Professor Pakistan Navy Engineering College	2024- Present
Professor Pakistan Navy Engineering College	2021 - 2021
Associate Professor Pakistan Navy Engineering College	2011 - 2003
Assistant Professor Pakistan Navy Engineering College	2007 - 2011
Assistant Lecturer Pakistan Navy Engineering College	2003 - 2002
Demonstrator Pakistan Navy Engineering College	2002 - 2021
Demonstrator Pakistan Navy Engineering College	2000 - 2007
Systems Manager Pakistan Navy Engineering College , Habib Rehmatullah Road Karachi 75600	1998 - 2000

Awards

Professional Memberships

PEC	Since 1998
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Research Projects

National Projects

Self Navigating Car	2021
Funding Agency: IGNITE	
Amount: PKR N/A	
Status: Completed	
1500 Lines IPPABX for Pakistan Navy	
Funding Agency: Naval HQ (NHQ)	
Amount: PKR 27,000,000.00	
Status: Completed	

International Projects

Research Articles

Area-Time Efficient Pipelined Number Theoretic Transform for CRYSTALS-Kyber	2025
Ayesha Waris Bilal Muhammad Khan Arshad Aziz	
PLOS ONE , Volume 20(5), Article Number e0323224	
Impact Factor: 2.900 Quartile: 1	
DOI: https://doi.org/10.1371/journal.pone.0323224	
UniHaCh: Unicode and Hash Function Supported with Counting and Frequency Recurrence of Arabic Characters for Quranic Text Watermarking	2023
Arshad Aziz Majida Kazmi Samreen Habib Saad Hayat Lubaba Rehman Saad Ahmed Qazi	
Arabian Journal for Science and Engineering , Pages 1-17	
Impact Factor: 2.9 Quartile: 2	
DOI: https://doi.org/10.1007/s13369-023-08349-9	
Approximate Computing: Hardware and Software Techniques, Tools and Their Applications	2023
Arshad Aziz Mehwish Raza Sharjeel Javed Majida Kazmi Muhammad Fahim Ul Haque Saad Ahmed Qazi	
Journal of Circuits Systems and Computers , Pages 1-64	
Impact Factor: 1.5 Quartile: 4	
DOI: 10.1142/S0218126624300010	
An Efficient IIoT-Based Smart Sensor Node for Predictive Maintenance of Induction Motors	2023
Majida Kazmi Tabasum Shoaib Arshad Aziz Hashim Raza Khan Saad Ahmed Qazi	
Computer Systems Science and Engineering , Volume 47(1), Pages 255-272	
Impact Factor: 2.2 Quartile: 3	
DOI: https://doi.org/10.32604/csse.2023.038464	
Integrated representation for discrete Fourier and wavelet transforms using vector notation	2022
Tariq Javid Muhammad Faris Arshad Aziz Pervez Akhtar	
Mehran University Research Journal of Engineering and Technology , Volume 41(3) 175-184	
Impact Factor: 0	
DOI: https://doi.org/10.22581/muet1982.2203.18	
Segmented Multistage Reconstruction of Magnetic Resonance Images	2021
Arshad Aziz Muhammad Faris Tariq Javed Majida Kazmi	
Advances in Electrical and Computer Engineering , Volume 21, Issue 4, Pages 107-114	
Impact Factor: 1.221 Quartile: 4 Citations: 1	
DOI: 10.4316/AECE.2021.04012	
Resource-Shared Crypto-Coprocessor of AES Enc/Dec With SHA-3	2020
Arshad Aziz Dur-e-Shahwar Kunidi Ayesha Khalid Chenghua Wang Máire O'Neill Weiqiang Liu	
IEEE Transactions on Circuits and Systems I: Regular Papers (Early Access), Volume 67, Issue 12	
Impact Factor: 3.605 Quartile: 2 Citations: 37	
DOI: 10.1109/TCSI.2020.2997916	
Resource-Efficient Image Buffer Architecture for Neighborhood Processor	2020
Arshad Aziz Majida Kazmi Hashim Raza Khan Lampros Stergioulas Saad Ahmed Kazi	
IEEE Access , Volume 8, Pages 181964-181975	
Impact Factor: 3.367 Quartile: 2 Citations: 1	
DOI: 10.1109/ACCESS.2020.3025344	

A Pareto-Optimal Multi-filter Architecture on FPGA for Image Processing Applications Majida Kazmi Arshad Aziz Dur-E-Shahwar Kundi <i>Circuits Systems and Signal Processing</i> , Volume 38, Issue 10, Pages 4762-4786 Impact Factor: 1.681 Quartile: 3 Citations: 2 DOI: 10.1007/s00034-019-01083-4	2019
A new rectangular window based image cropping method for generalization of brain neoplasm classification systems RAZIA ZIA PERVEZ AKHTAR ARSHAD AZIZ <i>International Journal of Imaging Systems and Technology</i> , NULL Impact Factor: 1.254 Quartile: 3 Citations: 27 DOI: 10.1002/ima.22266	2018
Multi-Resolution Transforms Based Hybrid Feature Extraction Technique for Differentiating Glioma Grades. Razia Zia Pervez Akhtar Arshad Aziz Dur-E-Shahwar Kundi <i>International Journal of Wavelets, Multiresolution and Information Processing</i> , Volume 16, No. 06, Article Number 1850048 Impact Factor: 0.523 Quartile: 4 DOI: 10.1142/S0219691318500480	2018
An efficient and compact row buffer architecture on FPGA for real-time neighbourhood image processing Majida Kazmi Arshad Aziz Pervez Akhtar <i>Journal of Real-Time Image Processing</i> , NULL Impact Factor: 1.574 Quartile: 3 Citations: 3 DOI: 10.1007/s11554-017-0690-7	2017
A Low Cost Structurally Optimized Design for Diverse Filter Types Majida Kazmi Arshad Aziz Pervez Akhter Nassar Ikram <i>PLoS ONE</i> , Volume 11, Issue 11, Article number e0166056 Impact Factor: 2.806 Quartile: 1 Citations: 3 DOI: 10.1371/journal.pone.0166056	2016
A low-power SHA-3 designs using embedded digital signal processing slice on FPGA Dur-E-Shahwar Kundi Arshad Aziz <i>Computers & Electrical Engineering</i> , Volume 55, Pages 138-152 Impact Factor: 1.57 Quartile: 3 Citations: 20 DOI: 10.1016/j.compeleceng.2016.04.004	2016
A high performance ST-Box based unified AES encryption/decryption architecture on FPGA Dur-E-Shahwar Kundi Arshad Aziz Nassar Ikram <i>Microprocessors and Microsystems</i> , Volume 41, Pages 37-46 Impact Factor: 1.025 Quartile: 3 Citations: 24 DOI: 10.1016/j.micpro.2015.11.015	2016
A FPGA based Reconfigurable 2D Filter Architecture for Biomedical Image Preprocessing Arshad Aziz Majida Kazmi Pervez Akhtar Nassar Ikram <i>Caspian Journal of Applied Sciences Research</i> , Vol.5(2), Pages 1-10 Impact Factor: - DOI: NA	2016
Resource Efficient Implementation of the Keccak, Skein & JH Algorithms on a Reconfigurable Platform Arshad Aziz Dur-e-Shahwar Kundi Kashif Latif <i>Cankaya University Journal of Science and Engineering</i> , Volume 13, No. 1, Pages 40-57 Impact Factor: 0 DOI: https://dergipark.org.tr/en/pub/cankujse/issue/31481/368620	2016
Implementation of T-box/T-1-Box Based AES Design on Latest Xilinx FPGA Arshad Aziz Dur-e-Shahwar Kundi <i>Mehran University Research Journal of Engineering and Technology</i> , Volume 35, Issue 4, Pages 441-446 Impact Factor: - DOI: 10.22581/muet1982	2015
A Robust Wavelet Based Digital Image Watermarking Technique Using FPGA Arshad Aziz Zareen Tabassum Majida Kazmi Saad Ahmed Qazi	2015

Impact Factor: -

DOI: <https://doi.org/10.22581/MUET1982>

Area Efficient S-Box Approach for SubByte Transformation in AES

2015

Arshad Aziz Dur-e-Shawar Kundi Saleha Zaka

Mehran University Research Journal of Engineering and Technology, Volume 34, Issue S1, Pages 63-68

Impact Factor: 0

DOI: 10.22581/muet1982

Logically Grouped Reduced-set Implementation of SHA3-256 on FPGA

2015

Arshad Aziz Dur-e-Shahwar Kundi

Mehran University Research Journal of Engineering and Technology, Volume 34, Issue S1, Pages 13-20

Impact Factor: -

DOI: 10.22581/muet1982

An efficient single unit T-box/T-1-box implementation for 128-bit AES on FPGA

2015

Dur e Shahwar Arshad Aziz Majida Kazmi

Security and Communication Networks, Volume 8, Issue 9, Pages 1725-1731

Impact Factor: 0.806 | **Quartile:** 3 | **Citations:** 5

DOI: 10.1002/sec.1138

FPGA Based Compact and Efficient Full Image Buffering for Neighborhood Operations

2015

Majida Kazmi Arshad Aziz Pervez Akhter Dur-E-Shahwar Kundi

Advances in Electrical and Computer Engineering, Volume 15, Issue 1, Pages 95-104

Impact Factor: 0.459 | **Quartile:** 4 | **Citations:** 6

DOI: 10.4316/AECE.2015.01014

FPGA Implementation of Advance Encryption Standard Using Xilinx System Generator

2014

Arshad Aziz Alia Arshad Kanwal Aslam Dur-e-Shahwar Kundi

Asian Journal of Applied Sciences, Volume 02, Issue 02, Pages 190-198

Impact Factor: -

DOI: <https://www.ajouronline.com/index.php/AJAS/article/view/1136>

Comparison between FPGA Logic Resources and Embedded Resources Used By Discrete Arithmetic (DA) Architecture to Design FIR Filter

2014

Arshad Aziz Irfan Ahmed Usmani Muzaffar Rao Razia Zia

International Journal of Scientific Engineering and Technology, Volume No.3 Issue No.4, Pages 440-443

Impact Factor: -

DOI: <http://www.ijset.com/publication/v3/095.pdf>

Area Efficient Implementation of MTI Processing Module on a Reconfigurable Platform

2014

Arshad Aziz Munaza Yousuf Riaz Mahmud

Chinese Journal of Engineering, Volume 2014, Article ID 167184, 7 pages

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DOI: <https://doi.org/10.1155/2014/167184>

Reduced Precision Redundancy for Satellite Telecommand Receiver Module on FPGA

2013

Arshad Aziz Salman Sadruddin

Chinese Journal of Engineering, Volume 2013, Article ID 453872, 8 pages

Impact Factor: -

DOI: <https://doi.org/10.1155/2013/453872>

Xilinx System Generator® Based Implementation of a Novel Method of Extraction of Nonstationary Sinusoids

2013

Arshad Aziz Muhammad Abubakar Pervez Akhtar

Journal of Signal and Information Processing, Volume 4, No. 3B, Pages 7-13

Impact Factor: 0

DOI: 10.4236/jsip.2013.43B002

Efficient Hardware Implementation of SHA-3 Candidate Grostl using FPGA

2012

Arshad Aziz Syed Muhammad Adnan

International Journal of Computer Applications, Volume 55, No.15, Pages 6-11

Impact Factor: -

DOI: <https://www.ijcaonline.org/archives/volume55/number15/8829-2963>

Look-Up Table Based Implementations of SHA-3 Finalists: JH, Keccak and Skein <i>Kashif Latif Arshad Aziz Athar Mahboob</i> <i>KSII Transactions on Internet and Information Systems</i> , Vol. 6, No.9 Impact Factor: 0.56 Quartile: 3 DOI: 10.3837/tiis.2012.09.024	2012
Hardware Performance Evaluation of SHA-3 Finalists - Blake, Keccak and Skein <i>Kashif Latif Arshad Aziz Athar Mahboob</i> <i>Arab Gulf Journal of Scientific Research</i> , Volume 30, Issue 1, Pages 14-22 Impact Factor: 0.047 Quartile: 4	2012
High Throughput Hardware Implementation of Secure Hash Algorithm Skein-256 <i>Arshad Aziz Kashif Latif Muhammad Tariq Athar Mahboob</i> <i>International Journal of Academic Research</i> , Vol. 3, No. 6, Part I, Pages 200-206 Impact Factor: 0 DOI: NA	2011
Efficient Software Implementation of Secure Hash Algorithm (Sha-3) Candidate-Skein <i>Arshad Aziz Kashif Latif Muhammad Tariq Athar Mahboob</i> <i>International Journal of Academic Research</i> , Vol. 3. No. 6, Part II Impact Factor: - DOI: NA	2011
Optimal utilization of available reconfigurable hardware resources <i>Kashif Latif Arshad Aziz Athar Mahboob</i> <i>Computers & Electrical Engineering</i> , Volume 37, Issue 6, Pages 1043-1057 Impact Factor: 0.837 Quartile: 3 Citations: 10 DOI: 10.1016/j.compeleceng.2011.07.010	2011
Some Aspects of Deposition Parameters of RF Sputtered Ferromagnetic Film Germane to the Study of Magnetoresistive Sensing Devices <i>Arshad Aziz Pervez Akhtar Tariq Javid Ali</i> <i>Advanced Materials Research</i> , Vol. 264-265, Pages 160-165 Impact Factor: - Citations: 1 DOI: https://doi.org/10.4028/www.scientific.net/AMR.264-265.160	2011
Resource efficient implementation of T-Boxes in AES on Virtex-5 FPGA <i>Dur-E-Shahwar Kundi Arshad Aziz Nassar Ikram</i> <i>Information Processing Letters</i> , Volume 110, Issue 10, Pages 373-377 Impact Factor: 0.612 Quartile: 4 Citations: 14 DOI: 10.1016/j.ipl.2010.03.004	2010
An FPGA Based AES-CCM Crypto Core for IEEE 802. 11i Architecture <i>Arshad Aziz Nassar Ikram</i> <i>International Journal of Network Security (IJNS)</i> , Vol.5, No.2, Pages 224-232 Impact Factor: - DOI: 10.6633/IJNS	2007
Memory efficient implementation of AES S-BOXES on FPGA <i>Arshad Aziz Nassar Ikram</i> <i>Journal of Circuit Systems and Computers</i> , Volume 16, Issue 4, Pages 603-611 Impact Factor: 0.13 Quartile: 4 Citations: 17 DOI: 10.1142/S0218126607003873	2007

Conference Proceedings

Segmented Region Based Reconstruction of Magnetic Resonance Image <i>Arshad Aziz Muhammad Faris Tariq Javed Sajjad Rizvi</i> 2021 <i>International Conference on Computer & Information Sciences (ICCOINS)</i> , res.country(157,) Citations: N/A DOI: 10.1109/ICCOINS49721.2021.9497166	2021
Non Sub-sampled Contourlet Transform based Feature Extraction technique for Differentiating Glioma Grades using MRI Images <i>Arshad Aziz Razia Zia Pervez Akhtar Maroof Ali Shah Dur-e-Shahwar Kundi</i>	2017

30th Australasian Joint Conference on Artificial Intelligence, res.country(13,)	
Citations: N/A	
DOI: https://doi.org/10.1007/978-3-319-63004-5_23	
A FPGA Based Two Level Optimized Local Filter Design for High Speed Image Processing Applications	2016
Arshad Aziz Majida Kazmi Pervez Akhtar Nassar Ikram	
International Conference on Advances in Information and Communication Technology, res.country(241,)	
Citations: N/A	
DOI: https://doi.org/10.1007/978-3-319-49073-1_5	
FPGA based efficient architecture for image watermarking using Wavelet Co-efficients Quantization	2014
Arshad Aziz Jamal Ahmed Pervez Akhtar	
International Conference on Open Source Systems and Technologies (ICOSST), res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICOSST.2014.7029329	
Compact Implementation of SHA3-512 on FPGA	2014
Arshad Aziz Alia Arshad Dur-e-Shahwar Kundi	
IEEE Conference on Information Assurance and Cyber Security (CIACS), res.country(177,)	
Citations: N/A	
DOI: 10.1109/CIACS.2014.6861327	
Compact hardware implementation of SHA-3 finalist blake on FPGA	2013
Arshad Aziz Muhammad Arsalan Muhammad Ata-ur-Rehman Nasir Mehmood	
IEEE 9th International Conference on Emerging Technologies, res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICET.2013.6743547	
Software implementation of Standard Hash Algorithm (SHA-3) Keccak on Intel core-i5 and Cavium Networks Octeon Plus embedded platform	2013
Arshad Aziz Aisha Malik Dur- e-Shahwar Kundi Moiz Akhter	
2nd Mediterranean Conference on Embedded Computing (MECO), res.country(156,)	
Citations: N/A	
DOI: 10.1109/MECO.2013.6601323	
Simulation design of an efficient MTI processing module for embedded platform	2013
Arshad Aziz Munaza Yousuf Riaz Mahmud	
2nd Mediterranean Conference on Embedded Computing (MECO), res.country(156,)	
Citations: N/A	
DOI: 10.1109/MECO.2013.6601322	
Implementation of SHA-3 Candidate Skein on Two Unexplored Multiprocessor Platforms	2013
Arshad Aziz Aisha Malik Abdul Qadeer	
International Conference on Sensor Network Security Technology and Privacy Communication System, res.country(48,)	
Citations: N/A	
DOI: 10.1109/SNS-PCS.2013.6553863	
Low-cost Machine Vision System for dimension measurement of fast moving conveyor products	2012
Arshad Aziz Muhammad Arsalan	
International Conference on Open Source Systems and Technologies, res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICOSST.2012.6472822	
Resource efficient and area optimized Grstl implementation on FPGA	2012
Arshad Aziz Syed Muhammad Adnan	
International Conference on Open Source Systems and Technologies, res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICOSST.2012.6472835	
Comparative Analysis of High Speed and Low Area Architectures of Blake SHA-3 Candidate on FPGA	2012
Arshad Aziz Muhammad Arsalan	
10th International Conference on Frontiers of Information Technology (FIT), res.country(177,)	
Citations: N/A	
DOI: 10.1109/FIT.2012.51	

Medical image denoising based on adaptive thresholding in contourlet domain <i>Arshad Aziz Majida Kazmi Pervez Akhtar Aliza Maftun Wasay Bin Afaq</i> <i>5th International Conference on BioMedical Engineering and Informatics (BMEI 2012) , res.country(48,)</i> Citations: N/A DOI: 10.1109/BMEI.2012.6512939	2012
Compact Implementation of Skein-256 Hash Function on FPGA <i>Arshad Aziz Dur-e-Shahwar Kundi</i> <i>Spring Congress on Engineering and Technology, res.country(48,)</i> Citations: N/A DOI: 10.1109/SCET.2012.6342053	2012
Efficient Hardware Implementations and hardware performance Evaluation of SHA-3 Finalists <i>Kashif Latif M Muzaffar Rao Athar Mahboob Kashif Latif M Muzaffar Rao Athar Mahboob Arshad Aziz Kashif Latif M Muzaffar Rao Athar Mahboob</i> <i>3rd SHA3 Candidate Conference , res.country(233,)</i> Citations: N/A DOI: NA	2012
High Throughput Hardware Implementation of Secure Hash Algorithm (SHA-3) Finalist: BLAKE <i>Arshad Aziz Kashif Latif Athar Mahboob</i> <i>IEEE 9th International Conference on Frontier in Information Technology, res.country(177,)</i> Citations: N/A DOI: 10.1109/FIT.2011.42	2011
FPGA Based Higher Quality Video Acquisition System <i>Arshad Aziz Jamal Ahmed Muhammad Faisal</i> <i>26th IEEEEP Annual Multi-topic International Symposium (SIMTS-2011), res.country(177,)</i> Citations: N/A DOI: https://ieeepkhi.org/studentseminar/doc/MATLAB%20Simulation%20of%20a%20Variable%20Speed%20Controller%20for%20a%20Three%20Phase%20Induction%20Motor.pdf	2011
MATLAB Simulation of a Variable Speed Controller for a Three Phase Induction Motor <i>Arshad Aziz Shezana Zulfiqar Ali Azka Khalil Sumayyah Waheed</i> <i>26th IEEEEP Students' Seminar , res.country(177,)</i> Citations: N/A DOI: NA	2011
A Unified Approach to Secure and Robust Hashing Scheme for Image and Video Authentication <i>Arshad Aziz Nighat Jamil</i> <i>3rd International Conference on Image and Signal Processing, res.country(48,)</i> Citations: N/A DOI: 10.1109/CISP.2010.5648278	2010
Efficient resource utilization of FPGAs <i>Arshad Aziz Kashif Latif Athar Mahboob</i> <i>6th International Conference on Frontiers of Information Technology, res.country(177,)</i> Citations: N/A DOI: https://doi.org/10.1145/1838002.1838031	2009
A Framework for Secure Access to Medical Images <i>Arshad Aziz Tariq Javid Ali Pervez Akhtar</i> <i>International Conference on Bioinformatics, Computational Biology, Genomics and Chemoinformatics, res.country(233,)</i> Citations: N/A DOI: https://ieeexplore.ieee.org/Xplore/home.jsp	2009
A Compact AES Encryption Core on Xilinx FPGA <i>Arshad Aziz Dur-e-Shahwar Kund Saleha Zaka Qurat-UI-Ain</i> <i>2nd IEEE International Conference on Computer, Control and Communication, res.country(177,)</i> Citations: N/A DOI: 10.1109/IC4.2009.4909251	2008
An Efficient Software Implementation of AES-CCM for IEEE 802.11i Wireless St <i>Abdul Samiah Arshad Aziz Nassar Ikram</i> <i>31st Annual International Computer Software and Applications Conference (COMPSAC 2007) , res.country(48,)</i>	2007

Citations: N/A DOI: 10.1109/COMPSAC.2007.62	
An Efficient Software Implementation of AES-CCM for IEEE 802.11i Wireless Standard <i>Arshad Aziz Abdul Samiah Nassar Ikram</i> <i>2nd IEEE International Workshop on Security Trust, and Privacy for Software Applications (STPSA 2007)</i> , res.country(48,)	2007
Citations: N/A DOI: 10.1109/COMPSAC.2007.62	
An efficient FPGA based sequential implementation of advanced encryption standard <i>Arshad Aziz Nassar Ikram</i> <i>3rd International Conference on Information and Communications Technology</i> , res.country(65,)	2005
Citations: N/A DOI: 10.1109/ITICT.2005.1609673	

Intellectual Property

Copyrights

SMART WEARABLE DEVICE FOR IMPROVING HUMAN POSTURE Status: Filed	2021
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Patents

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