

# **CURRICULUM VITAE**

## **PERSONAL DATA**

**Name:** Prof. Dr. Engr. Sheeraz Ahmed

F. Name: Khadim Hussain

Domicile: K.P.K

Date of Birth: 04-11-1972

PEC number: Elec-13888

Mobile No: 03018909730/ 03309044488

N.I.C No: 17301-3838026-5

P. Address: H.No. 179, Dhaki Namda Mali Qissa Khawani Bazar Peshawar  
City, K.P.K, Pakistan.

E-mail: sheerazahmed306@gmail.com,  
sheeraz.ahmad@inu.edu.pk

Qualifications:

**Ph.D in Electrical Engineering (UWSNs and WBANs)**  
MS-CS (Computer Networks)  
M.Sc in Mathematics  
B.Sc Electrical Engineering (Communication Group)

## **ACADEMIC RECORD**

<b>Examination</b>	<b>Year of Passing</b>	<b>Board/University</b>	<b>Marks Obt. Total</b>	<b>Division/ Grade</b>	<b>%age</b>
<b>S.S.C (Science)</b>	1989/A	BISE Peshawar	646/850	1st/ A	76.76
<b>F.Sc (Pre-Engg)</b>	1991/A	BISE Peshawar	794/1100	1 <sup>st</sup> / A	78.53
<b>B.Sc (Elec. Engg)</b>	1997/A	U.E.T Peshawar	913/1150	1 <sup>st</sup> / A+	80
<b>M.Sc Mathematics</b>	1999/A	Peshawar University	632/1100	2 <sup>nd</sup>	57.45
<b>MS-CS (Networks)</b>	2009/A	City University Peshawar	3.38/4 CGPA	1 <sup>st</sup> / A	84.5
<b>Ph.D in EE (Comp.Networks)</b>	2016	COMSATS Islamabad	3.82/4	1 <sup>st</sup> / A+	

## **Ph.D THESIS TITLE**

Towards Cooperative Routing in Underwater and Body Area Wireless Sensor Networks.

## **RESEARCH PUBLICATIONS**

1. "Optimized QoS protocols for small-sized MANETs" in proceedings of ICET 2006 under IEEE, organized by UET, Peshawar in Nov, 2006.
2. "Performance Analysis of various routing strategies in Mobile Ad hoc Network using QualNet simulator" in proceedings of ICET 2007 under IEEE, organized by Riphah International University, Islamabad in Nov, 2007.
3. "Monitoring Detection and Security Maintenance using WMS-Webcam Mobile Surveillance" in proceedings of ICET 2007 under IEEE, organized by Riphah International University, Islamabad in Nov, 2007.
4. "4x4 Multipurpose Logic Gate/Circuit for Quantum Hardware, Realizing on the Same Outputs " in proceedings of ICICT 2008 under IEEE, organized by USTB, Bannu in Aug, 2008.
5. "Implementation of DSDV Routing Protocol for Piconet using Java" in proceedings of ICICT 2008 under IEEE, organized by USTB, Bannu in Aug, 2008.
6. **"Implementing Dimensional-View of 4x4 Logic Gate/Circuit for Quantum Computer Hardware Using Xilinx", in Journal of IJSSST Vol.9 No.5, Dec 2008. ISSN 1473-804x.**
7. "Analyzing Energy-efficiency and Route-selection of Multi-level Hierarchical Routing Protocols in WSNs", 5th International Workshop on Next Generation of Wireless and Mobile Networks (NGWMN 2012) in conjunction with 7th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA 2012), Victoria, Canada, 2012.
8. **"Quantum Cryptography using various reversible quantum logic gates in WSNs", J. Basic. Appl. Sci. Res., 3(6)130-147, 2013.**
9. **"Comparative Analysis of Routing Protocols for Under Water Wireless Sensor Networks", J. Basic. Appl. Sci. Res., 3(6)130-147, 2013.**
10. "AMCTD: Adaptive Mobility of Courier nodes in Threshold-optimized DBR Protocol for Underwater Wireless Sensor Networks", 8th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA'13), Compiègne, France, 2013.
11. "AID: An Energy Efficient Decoding Scheme for LDPC Codes in Wireless Body Area Sensor Networks", 4th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN-2013), Niagara Falls, Ontario, Canada, 2013.
12. **"iMODLEACH protocol for Wireless Sensor Networks", J. Basic. Appl. Sci. Res., 3(6)130-147, September 2013. arXiv:1309.4379.**
13. "LAEEBA: Link Aware and Energy Efficient Scheme for Body Area Networks", The 28th IEEE International Conference on Advanced Information Networking and Applications (AINA-2014), Victoria, Canada, 2014.
14. "EEP: Energy Efficient and Power Aware routing protocol for WSN", SCONEST, the IEEE international conference at ISRA University, Hyderabad, Pakistan, 2014.

15. "Co-CEStat: Cooperative Critical Data Transmission in Emergency in Static Wireless Body Area Network", the 9th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA'14), 2014, Guangzhou, China.
16. "Underwater Wireless Sensor Network's Performance Enhancement with Cooperative Routing and Sink Mobility", the 9th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA'14), 2014, Guangzhou, China.
17. "Incremental Relay-based Co-CEStat Protocol for Wireless Body Area Networks", The 9th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA'14), 2014, Guangzhou, China.
18. **"Co-LAEEBA: Cooperative link aware and energy efficient protocol for wireless body area networks"**, **Computers in Human Behavior**, Available online 7 October 2015, ISSN 0747-5632, <http://dx.doi.org/10.1016/j.chb.2014.12.051>, (IF=8.957).
19. **"Delay-Sensitive Routing Schemes for Underwater Acoustic Sensor Networks"**, **International Journal of Distributed Sensor Networks**, 2014. (IF=1.787).
20. "ARCUN: Analytical approach towards Reliability with Cooperation for Underwater WSNs", The 6th International Conference on Ambient Systems, Networks and Technologies (ANT 2015).
21. **"Co-UWSN: Cooperative Energy-Efficient Protocol for Underwater WSNs."** **International Journal of Distributed Sensor Networks**, Volume 2015 (2015), Article ID 891410, (IF=1.787).
22. "Electronic Ballast Circuit Configurations for Fluorescent Lamps", PGSRET, the IEEE international conference at Islamic International University, Islamabad, Pakistan, 2015.
23. "COPE: Cooperative Power and Energy-efficient routing protocol for Wireless Sensor Networks." In Computer and Information Science (ICIS), 2015 IEEE/ACIS 14th International Conference on, pp. 47-52. IEEE, 2015.
24. **"SPARCO: Stochastic Performance Analysis with Reliability and Cooperation for Underwater Wireless Sensor Networks"**, **Hindawi Journal of Sensors**, Volume 2016 (2016), Article ID 7604163, (IF=2.475).
25. **"Wireless-powered Cooperative Energy Aware Anycast Routing in WSNs."** **International Journal of Distributed Sensor Networks**, Volume 2016 (2016), Article ID DSN-16-0337, (IF=1.787).
26. **"Modelling and Analyzing Anycast and Geocast Routing in Wireless Mesh Networks"**, **International Journal of Advanced Computer Science and Applications IJACSA**, Volume 7 No. 9, September 2016.
27. "Cooperation vs. Non-Cooperation based routing protocols in WBAN" In 7<sup>th</sup> International Conference on Modern Trends in Science, Engineering and Technology 2016 (ICMTSET), Dubai, 1-2 Nov, 2016.
28. "A review on Support Threshold Free-frequent Itemsets Mining Approaches" In 19<sup>th</sup> IEEE International Multi-topic Conference (INMIC 2016), Air University, Islamabad, 5-6 Dec, 2016.
29. **"ETEEM: Extended Traffic Aware Energy Efficient MAC protocol for Wireless Sensor Networks"**, **International Journal of Advanced Computer Science and Applications IJACSA**, Volume 7 No. 11, November 2016.
30. "RACE: Reliability and Adaptive Cooperation for Efficient Underwater Sensor Networks" In 10<sup>th</sup> International Conference on Open Source Systems and Technologies 2016 (IEEE ICOSST), Lahore, Pakistan, 15-17 Dec, 2016.

31. "Design and analysis of switching in Automatic Transfer Switch for load transfer" In 10<sup>th</sup> International Conference on Open Source Systems and Technologies 2016 (IEEE ICOSST), Lahore, Pakistan, 15-17 Dec, 2016.
32. "Energy Management Strategies using Microgrid Systems" In 1<sup>st</sup> International Multi-Disciplinary Conference (IMDC) 2016, Gujrat, Pakistan, 22-23 Dec, 2016.
33. "Data Driven Modelling for Real-time Flood Forecasting" In 1<sup>st</sup> International Multi-Disciplinary Conference (IMDC) 2016, Gujrat, Pakistan, 22-23 Dec, 2016.
34. "Electrical Energy Regulation and Load Management for addressing Power Crisis in Pakistan" In 1<sup>st</sup> International Multi-Disciplinary Conference (IMDC) 2016, Gujrat, Pakistan, 22-23 Dec, 2016.
35. "Precipitation Trend Analysis Of Upper Indus Basin Using Mann Kendall Method" In 1<sup>st</sup> International Multi-Disciplinary Conference (IMDC) 2016, Gujrat, Pakistan, 22-23 Dec, 2016.
36. "Performance Analysis of Training and Blind Equalization Algorithms for Wireless Communication using 64-QAM" In 1<sup>st</sup> International Multi-Disciplinary Conference (IMDC) 2016, Gujrat, Pakistan, 22-23 Dec, 2016.
37. "Towards Cooperative Diversity in WSN (Coop-WSN)" In 2<sup>nd</sup> International Conference on Emerging Trends in Engineering, Management and Sciences (ICETEMS) 2016, Peshawar, Pakistan, 27-29 Dec, 2016.
38. "Towards an energy-efficient and throughput aware scheme for BANs " In 2<sup>nd</sup> International Conference on Emerging Trends in Engineering, Management and Sciences (ICETEMS) 2016, Peshawar, Pakistan, 27-29 Dec, 2016.
39. "Enhanced role of Anycasting in Threshold-optimized Depth-based routing protocol for Underwater Wireless Networks (ERTDUWN) " In Computational Science and Computational Intelligence (CSCI), 2016 International Conference in Washington, USA. 15-17 Dec, 2016.
40. **"On energy efficiency in underwater wireless sensor networks with cooperative routing." Annals of Telecommunications, Volume 2017 (2017), (IF=1.412).**
41. "Body Area Network for Cattle Monitoring" In International Conference on Cultural Technology (ICCT) 2017, Chiang Mai, Thailand, 12-14 Jan, 2017.
42. "Statistical Analysis of Probable Future Flood in Khyber Pakhtunkhwa (KPK)–Pakistan" In International Conference on Cultural Technology (ICCT) 2017, Chiang Mai, Thailand, 12-14 Jan, 2017.
43. "Viability of LiFi as the Future of Wireless Communication" In International Conference on Cultural Technology (ICCT) 2017, Chiang Mai, Thailand, 12-14 Jan, 2017.
44. "A real-time weed recognition system for selective herbicides using morphological operation" In International Conference on Cultural Technology (ICCT) 2017, Chiang Mai, Thailand, 12-14 Jan, 2017.
45. "Towards cost-effective use of Li-Fi in smart buildings" In International Conference on Cultural Technology (ICCT) 2017, Chiang Mai, Thailand, 12-14 Jan, 2017. **(Best Paper Award)**
46. **"Orchestrating an effective formulation to investigate the impact of EMSs for residential units prior to installation", Energies 10 no.3, (2017) : 335. (IF=2.676).**
47. **"Anycasting in Dual Sink approach (ACIDS) for WBASNs", International Journal of Advanced Computer Science and Applications IJACSA, Volume 8 No. 2, March 2017.**

48. "A Novel Noise-Measuring System based on WSN" International Conference on Innovations in Electrical Engineering and Computational Technologies 2017 (ICIEECT'17), 5-7 April, 2017.
49. **"A balanced energy consumption based routing protocol for efficient data gathering in underwater ASNs" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
50. **"QL-EEBDG: QLearning based energy balanced routing in underwater sensor networks" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
51. **"Adaptive transmission based Geographic and Opportunistic routing in UWSNs" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
52. **"Location error resilient geo-opportunistic routing for void hole avoidance in USNs" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
53. "Geospatial division based geographic routing protocol for interference avoidance in underwater WSNs" in Future 5V- the 2<sup>nd</sup> EAI International Conference on Future Intelligent Vehicular Technologies, Oct 17-19, 2017.
54. "Void hole recovery in underwater WSNs through sink mobility" in Future 5V- the 2<sup>nd</sup> EAI International Conference on Future Intelligent Vehicular Technologies, Oct 17-19, 2017.
55. **"BER and NCMSE based estimation algorithms for underwater noisy channels" in EAI Endorsed Transactions on Internet of Things 18(11): e1, volume 5, April 2018.**
56. "Master key based light-weight key negotiation scheme for WSNs" in Future 5V- the 2<sup>nd</sup> EAI International Conference on Future Intelligent Vehicular Technologies, Oct 17-19, 2017.
57. **"A survey of key negotiation and authentication systems in WSNs" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
58. **"Performance and execution evaluation of VANETs routing protocols in different scenarios" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
59. "Nodes density analysis for WBAN schemes in terms of stability and throughput" in Future 5V- the 2<sup>nd</sup> EAI International Conference on Future Intelligent Vehicular Technologies, Oct 17-19, 2017.
60. **"Depth-based Adaptive and Energy-aware (DAE) routing schemes for UWSNs" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
61. **"Design and Analysis of compact triple band microstrip patch antenna for multiband applications" in Journal of ICST Trans. Mobile Communications Applications: e2, volume 3, issue 10, 2018.**
62. **"Impact of Beacon order and superframe order on IEEE 802.15.4 for nodes association in WBAN" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**
63. **"EH-DBR: Energy Harvesting depth-based routing for underwater sensor networks" in EAI Endorsed Transactions on Energy Web and Information Technologies 18(17): e1, volume 5, April 2018.**

64. **"Congestion control reliability and adaptive cooperation for efficient underwater sensor networks" in EAI Endorsed Transactions on Scalable Information Systems 18(16):e4, volume 5, April 2018.**
65. "Scalability analysis of DBR and EEDBR in terms of delay, throughput and path-loss in UASNs" in Future 5V- the 2<sup>nd</sup> EAI International Conference on Future Intelligent Vehicular Technologies, Oct 17-19, 2017.
66. "Towards Energy harvesting in Wireless Sensor Networks" Information Technology Trends (ITT), Higher College of Technology, Dubai (UAE), 25-26 October, 2017.
67. "Various node mobility scenarios of wireless sensor networks based on B-MAC protocol" Information Technology Trends (ITT), Higher College of Technology, Dubai (UAE), 25-26 October, 2017.
68. "DSAB: Dual Sink Approach in WBANs" Information Technology Trends (ITT), Higher College of Technology, Dubai (UAE), 25-26 October, 2017. **(Best Paper Award)**
69. "A comparison of fuzzy control schemes to enhance sustainability in microgrid" 12<sup>th</sup> International Conference on Broad-Band Wireless Computing, Communication and Applications (BWCCA), Barcelona, Spain, 08--10 November, 2017.
70. "Estimation and Equalization of Sparse Underwater Communication Channels" International Symposium on Wireless Systems and Networks (ISWSN), Lahore, 19-22 November, 2017.
71. "Path-Loss and Energy Efficient Model (PLEEM) for Wireless Body Area Networks (WBANs)" International Symposium on Wireless Systems and Networks (ISWSN), Lahore, 19-22 November, 2017.
72. "Integration of Cloud Computing with IoT and WBAN for Effective HealthCare" International Symposium on Wireless Systems and Networks (ISWSN), Lahore, 19-22 November, 2017.
73. "A study on different Control Schemes to achieve sustainability in Microgrid" International Symposium on Wireless Systems and Networks (ISWSN), Lahore, 19-22 November, 2017.
74. "ARV2V: Attack Resistant Vehicle to Vehicle Algorithm for Trust Computation Error in VANETs" 2018 International Conference on Computing, Mathematics and Engineering Technologies (iCOMET 2018), IBA Sukkur, 3-4<sup>th</sup> March, 2018.
75. "A Framework for Multi Modal Aptitude Detection System for Smart Offices" 2018 International Conference on Computing, Mathematics and Engineering Technologies (iCOMET 2018), IBA Sukkur, 3-4<sup>th</sup> March, 2018.
76. **"Delay and Throughput analysis using node density as pivot value in UWASNs" Ad Hoc & Sensor Wireless Networks, Vol.0, pp.1-19 2018, Article ID AHWSN - 4837JLM, (IF=0.753).**
77. **"Wet Environmental Conditions Affecting Narrow Band On-body communication Channel for WBANs" Ad Hoc & Sensor Wireless Networks, Vol.0, pp.1-19 2018, Article ID AHWSN -4810JLM, (IF=0.753).**
78. "Load Flow Analysis and Predictions for Swat and D.I.Khan regions in terms of PESCO Transmissions" 2018 IEEE International Conference on Power, Energy and Smart Grid (ICPESG 2018), MUST Mirpur AJK, 9-10<sup>th</sup> April, 2018.
79. **"VANSec: Attack Resistant VANETs Security Algorithm in terms of Trust Computation Error and Normalized Routing Overhead", Hindawi Journal of Sensors, Volume 2018 (2018), Article ID 6576841, (IF=2.475).**

80. **“Dist-Coop: Distributed Cooperative Transmission in UWSNs Using Optimization Congestion Control and Opportunistic Routing”, International Journal of Advanced and Applied Sciences (IJACSA), Volume 9 Issue 6, Article ID 181126, 2018.**
81. "Automation of Fiber to the Home (FTTH) planning, its impact on Customer Satisfaction and Cost Effectiveness" 4<sup>th</sup> Multi-Disciplinary Student Research International Conference (MDSRIC 2018), University of Wah, Wah, 29-30<sup>th</sup> August, 2018.
82. "WiBOT- A Wi-Fi controlled robot" 4<sup>th</sup> Multi-Disciplinary Student Research International Conference (MDSRIC 2018), University of Wah, Wah, 29-30<sup>th</sup> August, 2018.
83. "Power Flow Control in Power System using Static Synchronous Series Compensator (SSSC)" 4<sup>th</sup> Multi-Disciplinary Student Research International Conference (MDSRIC 2018), University of Wah, Wah, 29-30<sup>th</sup> August, 2018.
84. "Experimental Analysis of Open Source and Commercial Web Application Vulnerability Scanning Tools" 4<sup>th</sup> Multi-Disciplinary Student Research International Conference (MDSRIC 2018), University of Wah, Wah, 29-30<sup>th</sup> August, 2018.
85. "Analysis of Different Searching Algorithms" 4<sup>th</sup> Multi-Disciplinary Student Research International Conference (MDSRIC 2018), University of Wah, Wah, 29-30<sup>th</sup> August, 2018.
86. **“A role of PSO in formation of Underwater Autonomous Vehicles”, Technical Journal, University of Engineering and Technology, Taxila, Volume 23 Issue 03, 2018 pp 62-72.**
87. **“Parameters affecting underwater channel communication performance”, International Journal of Advanced and Applied Sciences (IJACSA), Volume 9 Issue 10, Digital Object Identifier (DOI): 10.14569/IJACSA.2018.091050, 2018.**
88. **"Packet size optimization techniques and challenges for wireless body area networks" Engineering Technology Open Access Journal, volume 2, Issue 4, October 2018.**
89. "Energy Harvesting in Clustering Based Routing Scheme for UWSNs (EH-CDBR)" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.
90. "Missing Link Prediction in Complex Networks" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.
91. "Hybrid Approach for Requirement Prioritization" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.
92. "Survey on Security Attacks in Virtual Organizations" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.
93. "Electronic Birds Eggs incubation System With 360° rotation" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.
94. "Impact and Detection of GPS Jammers and Counter-measures Against Jamming" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.

95. "Supervised Monaural Speech Separation using Computational Auditory Scene Analysis" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.
96. "Scheduling Based Dynamic Power Management Technique for offline Optimization of Energy in Multi Core Processors" 1st International Multi-Disciplinary Conference (INUMDC 2018), Iqra National University, Peshawar, 7<sup>th</sup> -8<sup>th</sup> November, 2018.
97. "Distributed Admission Control-QOS Algorithm to Improve Network Performance in MANET Environments" 5<sup>th</sup> the Fifth HCT Information Technology Trends (ITT 2018), Higher College of Technology, Dubai, 28<sup>th</sup> -29<sup>th</sup> November, 2018.
98. **"Adaptive Thresholding Using Median Base Filtering for Quality Improvement of Signal", International Journal of Scientific and Engineering Research, Volume 9, No.12, December 2018.**
99. **"Perspectives of Water level Measurement in Plastic Pipes using Wideband Horn Antenna", Journal of Engineering, Technology and Applied Science Research, Volume 8, No.6, 2018 pp 3624-3630.**
100. **"Energy harvesting techniques for routing issues in wireless sensor networks." International Journal of Grid and Utility Computing 10, no. 1 (2019): 10-21.**
101. "Impact and Detection of GPS Spoofing and Countermeasures against Spoofing" 2<sup>nd</sup> International Conference on Computing, Mathematics & Engineering Technologies (iCOMET 2019), IBA Sukkur University, Sukkur, 30<sup>th</sup> -31<sup>st</sup> January, 2019.
102. "Analysis of different packet size optimization techniques for TWSNs" 2<sup>nd</sup> International Conference on Computing, Mathematics & Engineering Technologies (iCOMET 2019), IBA Sukkur University, Sukkur, 30<sup>th</sup> -31<sup>st</sup> January, 2019.
103. "Penetration testing active reconnaissance phase-optimized port scanning with NMap Tool" 2<sup>nd</sup> International Conference on Computing, Mathematics & Engineering Technologies (iCOMET 2019), IBA Sukkur University, Sukkur, 30<sup>th</sup> -31<sup>st</sup> January, 2019.
104. "MLA based protocol for monitoring electrical parameters in smart grid using WSNs" 2<sup>nd</sup> International Conference on Computing, Mathematics & Engineering Technologies (iCOMET 2019), IBA Sukkur University, Sukkur, 30<sup>th</sup> -31<sup>st</sup> January, 2019.
105. "A preview on Internet of things (IoT) and its applications" 2<sup>nd</sup> International Conference on Computing, Mathematics & Engineering Technologies (iCOMET 2019), IBA Sukkur University, Sukkur, 30<sup>th</sup> -31<sup>st</sup> January, 2019.
106. **"Intelligent clustering using moth flame optimizer for VANETs", International Journal of Distributed Sensor Networks (IJDSN), SAGE Publications Volume 15, Issue 1, 2019 (IF=1.787).**
107. **"EH-ARCUN: Energy Harvested Analytical Approach Towards Reliability with Cooperation for Underwater WSNs." In Recent Trends and Advances in Wireless and IoT-enabled Networks, pp. 147-157. Springer, Cham, 2019.**
108. **"iBTTA: Improved Body Tissues Temperature Aware Routing Scheme for WBANs", Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.1, 2019 doi.org/10.26782/jmcmms.2019.02.00003.**
109. **"Design and Analysis of Maximum Power Point Tracking (MPPT) Controller for PV System", Journal of Mechanics of Continua and**



- Mathematical Sciences, Volume 14, No.1, 2019  
doi.org/10.26782/jmcms.2019.02.00019.**
110. **“Smart Grid Leading to Demand Side Management : A Perspective in Terms of Categorizations and Limitations”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.1, 2019  
doi.org/10.26782/jmcms.2019.02.00026.**
  111. **"Comparative analysis of DDOS attack types with attack strategy" 2<sup>nd</sup> Pak-Turk International Conference on Emerging Technologies in the field of Sciences and Engineering, GIK Institute, Swabi, Topi, 11<sup>th</sup> -13<sup>th</sup> March, 2019.**
  112. **"A Comprehensive survey on demand side management techniques for home-appliances scheduling" 2<sup>nd</sup> Pak-Turk International Conference on Emerging Technologies in the field of Sciences and Engineering, GIK Institute, Swabi, Topi, 11<sup>th</sup> -13<sup>th</sup> March, 2019.**
  113. **“Smart Farm Intelligence Model to Uplift Farmers in Rural Pakistan”, International Journal of Wireless Communications and Mobile Computing, Volume 6, No.4, 2019 doi: 10.11648/j.wcmc.20180604.11**
  114. **"Use of Information and Communication Technology ICT in Agriculture to Uplift Small Scale Farmers in Rural Pakistan" American Journal of Engineering and Technology Management 4, no. 1 (2019): 25-33.**
  115. **“A review on Training and Blind Equalization Algorithms for Wireless Communications” Wireless Personal Communications (2019), Springer US  
https://doi.org/10.1007/s11277-019-06495-8 (IF = 1.200)**
  116. **“Traffic priority based delay-aware and energy efficient path allocation routing protocol for wireless body area networks” Journal of Ambient Intelligence and Humanized Computing, vol 10, issue 10 (2019), Springer Berlin  
https://doi.org/10.1007/s12652-019-01343-w (IF = 1.91)**
  117. **“A Comprehensive Analysis of Cyber Security Attacks in Virtual Organizations with their Mitigation Plans”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.3, 2019  
doi.org/10.26782/jmcms.2019.06.00035.**
  118. **“Dual Energy X-Ray Image Enhancement using Hybrid Approach”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.1, 2019  
doi.org/10.26782/jmcms.2019.06.00005.**
  119. **“Adopting Modern Energy Conservation Measures to Enhance Building Energy Efficiency”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.1, 2019 doi.org/10.26782/jmcms.2019.06.00039.**
  120. **“Energy Harvesting Based Routing Protocol for Underwater Sensor Networks” PloS one 14, no. 7 (2019): e0219459.  
doi.org/10.1371/journal.pone.0219459 (IF = 2.776)**
  121. **“Power Flow Control by Unified Power Flow Controller”, Engineering, Technology & Applied Science Research 9, no. 2 (2019): 3900-3904.**
  122. **“Synthesis and Characterization of PMMA Nanofibers for Filtration of Drinking Water”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.4, 2019 doi.org/10.26782/jmcms.2019.08.00009.**
  123. **“Thermal-Aware Real-Time Task Schedulabilty test for Energy and Power System Optimization using Homogeneous Cache Hierarchy of Multi-core Systems”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.4, 2019 doi.org/10.26782/jmcms.2019.08.00036.**
  124. **“Factors affecting Service Quality, Customer Satisfaction and Customer Churn in Pakistan Telecommunication Services Market”, Journal of**

- Mechanics of Continua and Mathematical Sciences, Volume 14, No.4, 2019 doi.org/10.26782/jmcms.2019.08.00048.**
125. **“Techno-economic planning with different topologies of Fiber to the Home access networks with Gigabit Passive Optical Network technologies”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.4, 2019 doi.org/10.26782/jmcms.2019.08.00049.**
  126. **“An Energy-Efficient Task Scheduling using BAT Algorithm for Cloud Computing”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.4, 2019 doi.org/10.26782/jmcms.2019.08.00050.**
  127. **“Analysis and Prediction of Heart Attacks Based on Design of Intelligent Systems”, Journal of Mechanics of Continua and Mathematical Sciences, Volume 14, No.4, 2019 doi.org/10.26782/jmcms.2019.08.00051.**
  128. **“Customers Churn Prediction using Artificial Neural Networks (ANN) in Telecomm Industry”, International Journal of Advanced and Applied Sciences (IJACSA), Volume 10 Issue 9, Digital Object Identifier (DOI): 10.14569/IJACSA.2019.0100918, 2019.**
  129. **“Strategic Planning Towards Automation of Fiber to the Home (FTTH) Considering Optical Access Network (OAN) Model”, International Journal of Advanced and Applied Sciences (IJACSA), Volume 10 Issue 9, Digital Object Identifier (DOI): 10.14569/IJACSA.2018.0100930, 2019.**
  130. **"China Pakistan Economic Corridor (CPEC) Impact on Economic Development of Balochistan: A qualitative research on Ethnic Groups Perception" 2<sup>nd</sup> International Conference on Contemporary Issues in Business and Economics, Ghazi Osman Pahsa University, Tokat, Turkey, 04<sup>th</sup>-06<sup>th</sup> Oct, 2019.**
  131. **"Role of Machine Learning in Manufacturing Industry" 5<sup>th</sup> International Multidisciplinary Research Conference, Shaheed Benazir Bhutto Women University, Peshawar, 29<sup>th</sup> – 31<sup>st</sup> Oct, 2019.**
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  133. **"Dual Sink Based Approach for Cardiovascular and Cancer Patients in WBANs" 5<sup>th</sup> International Multidisciplinary Research Conference, Shaheed Benazir Bhutto Women University, Peshawar, 29<sup>th</sup> – 31<sup>st</sup> Oct, 2019.**
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## **BOOK CHAPTERS**

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1. [\*EH-ARCUN: Energy Harvested Analytical Approach Towards Reliability with Cooperation for Underwater WSNs\*](#) by Adil Khan, **Sheeraz Ahmed**, Mukhtaj Khan, Mian Ahmad Jan, Zahoor Ali Khan, M. Usman Akhtar Pages 147-157
2. [\*Scalability Analysis of Depth-Based Routing and Energy-Efficient Depth-Based Routing Protocols in Terms of Delay, Throughput, and Path Loss in Underwater Acoustic Sensor Networks\*](#) by Saqib Shahid Rahim, **Sheeraz Ahmed**, Nadeem Javaid, Adil Khan, Nouman Siddiqui, Fazle Hadi, M.Ayub Khan. Pages 171-185
3. [\*Geospatial Division Based Geographic Routing for Interference Avoidance in Underwater WSNs\*](#) by Farwa Ahmed, Nadeem Javaid, Zahid Wadud, Arshad Sher, **Sheeraz Ahmed** Pages 207-214
4. [\*Node Density Analysis for WBAN Schemes in Terms of Stability and Throughput\*](#) by **Sheeraz Ahmed**, Nouman Sadiq, Kamran Sadiq, Nadeem Javaid, M. Ali Taqi Pages 247-261

5. [Adaptive Transmission Based Geographic and Opportunistic Routing in UWSNs](#) by Saba Gul, Nadeem Javaid, Zahid Wadud, Arshad Sher, **Sheeraz Ahmed** Pages 283-290
6. [A Lightweight Key Negotiation and Authentication Scheme for Large Scale WSNs](#) by Mohammad Tehseen, Huma Javed, Ishtiaq Hussain Shah, **Sheeraz Ahmed** Pages 225-235

## **SUBJECTS TAUGHT**

Discrete Mathematics, Calculus, Analogue Electronics, Digital Electronics, Advance Operating Systems, Microprocessor Technology, Numerical Analysis, Mobile Communication, Advance Computer Architecture, Digital signal Processing, Artificial Intelligence, Data Communication and Networking, Operations Research, Advance Analysis of Algorithms, Wireless Networks, Network Security, Advanced Theory of Computation, Compiler Construction.

## **FAFEN WORKING EXPERIENCE**

1. Served as Observer District Coordinator (ODC) in Election Observation project
2. Lead the team as District Coordinator of Static Observers and Mobile Observers during Feb 2008 elections.
3. Served as ODC during Voter list display period 2007.
4. Worked from 01 April 2011 to 30th Mar 2012 as Monitoring Officer in STAEP project.
5. Observed the General Election of 2013 with ACE
6. Worked from 16th Jan 2013 to 30th April 2014 as Election Observation Manger in TDEA-EU Long term election observation and oversight project
7. Served as Facilitator for Local Government Election 2015 observation in Town -1 of District Peshawar
8. Served as Project Coordinator in CADGP for Charsada district from Sep 15 till Mar 16
9. Worked as District Coordinator in DESP project for Peshawar district from Aug 16 till March 17.
10. Served as Project Manager in CVP Cycle 11 under USAID, TDEA for Peshawar district from May 17 till May 18.
11. Served as Project Manager in CVP Cycle 14 under USAID, TDEA for Khyber Agency district from May 19 till Oct 19.
12. Working as Project Coordinator in LADDER project under TDEA for URDO, Peshawar District from Oct 20 till March 2021.
13. Working as Project Coordinator in EQUIP project under FAFEN for URDO, Peshawar District from May 21 till date.

## **MASTER TRAINER**

1. Worked as Master Trainer with Election Commission of Pakistan for General Elections 2018; training being conducted to Presiding Officers, Assistant Presiding Officers and Polling Officers.

2. Worked as Master Trainer with FAFEN for General Elections 2018; training being conducted to Election Day Observers.
3. Worked as Master Trainer with FAFEN for Local Government Elections 2015; training being conducted to Election Day Observers.
4. Worked as Master Trainer with FAFEN for General Elections 2013; training being conducted to Election Day Observers.

### **PhD Supervision**

1. Supervisor of Mr. Malik Taimur Ali, Iqra National University, Peshawar; thesis title “Towards Energy Harvesting and Congestion Control in routing protocols design of UWSNs” (2018).
2. Supervisor of Mr. Atif Ishtiaq, Iqra National University, Peshawar; thesis title “Computational Intelligence based secure clustering techniques for Vehicular ad hoc Networks (VANETs)” (2019).
3. Supervision of Mr. Muhammad Adil, Iqra National University, Peshawar; thesis title “Packet Optimized Routing Schemes for WBAN with focus on Body Tissues Temperature Control” (2020).
4. Supervision of Mr. Sabir Hussain Awan, Iqra National University, Peshawar; thesis title “Information and Communication Technology (ICT)-Based Agriculture to Uplift Small-Scale Farmers in Rural Pakistan” (2021).
5. Co-Supervision of Mr. Adil Khan Kakakhel, Abdul Wali Khan University, Mardan; thesis title “Towards Energy Harvesting Schemes in Underwater Sensor Networks” (2021).
6. Supervision of Mr. Mujahid Shah, Iqra National University, Peshawar; thesis title “Mitigating the Knock-on-Effect of DDoS Attack on Application Layer” (2022).
7. Supervision of Mr. Abid Naeem, Iqra National University, Peshawar; thesis title “Automation to the Fibre To The Home Planning, its impact on customer satisfaction and cost-effectiveness” (2022).
8. Co-Supervision of Mr. Khalid Khan, CSIT Department, UET Peshawar; thesis title “Towards Energy Harvesting Schemes in Underwater Sensor Networks” (2022).
9. Supervision of Mr. Mohsin Tahir, Iqra National University, Peshawar; thesis title “Performance and Reliability of Micro-Inverters Through Stress Reduction and Ripple Compensation Techniques” (2022).

### **TEACHING EXPERIENCE**

1. Worked as a Lecturer in Physics and Electronics at Gandhara Institute of Technology, Peshawar from November 3<sup>rd</sup> 1997 to September 15<sup>th</sup> 1998.
2. Worked as a Lecturer in Electronics and Computer Science at Preston University, Peshawar Campus from 28<sup>th</sup> May, 1998 to 31<sup>st</sup> December, 2000.
3. Worked as a Lecturer in Electronics and Mathematics at Abasyn Institute of Management Sciences from 1<sup>st</sup> Jan, 2001 to 30<sup>th</sup> Sep, 2002.
4. Also worked as a Visiting Lecturer in Subjects of Computer Science at IBMS, Peshawar University from Feb 2001 to June 2002.

5. Served as a Visiting Lecturer at Greenwich University, Peshawar Campus from June, 2002 till June 2005.
6. Served as a Lecturer in Electrical & Electronic Engineering Deptt: UET, Peshawar campus from April 2006 till Dec, 2007.
7. Served as Assistant Professor in subjects of Mathematics and I.T. at City University, Peshawar from March, 2003 till March 2010.
8. Served at Abasyn University, Peshawar as Assistant Professor, Head of Department in Computer Science and EE Departments from March, 2010 till March 2013.
9. Served as a Visiting faculty at IMS (Institute of Management Studies) Peshawar University from Sep, 15 till May 16.
10. Served as a Visiting faculty at UET, Kohat Campus in the department of Electrical Engineering from Sep, 14 till May, 16.
11. Served as Master Trainer in Computer Studies and Applications, for FATA Recovery Project, 2016 from May,16 to Dec,16.
12. Served as Dean, Faculty of Engineering and Technology, Gomal University, D.I.Khan from 3<sup>rd</sup> Jan, 2017 till 3<sup>rd</sup> Oct, 17.
13. Currently Serving as Associate Dean, Director ORIC and Full Professor in Iqra National University, Peshawar and Director ORIC since 5<sup>th</sup> Oct, 2017.
14. Online Teaching Faculty with UTEL University, Manila, Philippines since 2021 till date.

### **MEMBER OF EDITORIAL BOARD OF JOURNALS/ REVIEWER**

1. Reviewer in Advances in Science, Technology and Engineering Systems Journal (ASTESJ) since 5<sup>th</sup> May, 2018.
2. Editorial Board Member of Journal of Wireless Sensors and Sensor Networks, Clausius Scientific Press Inc. since 31<sup>st</sup> March, 2018.
3. Reviewer in International Journal Advance Agricultural Research (IJAAR) ISSN 2053-1265.
4. Reviewer in International Journal of Advanced Computer Science and Applications (IJACSA), The Science and Information (SAI) organization ISSN : 2156-5570 .
5. Editorial Board Member of Journal of Mechanics of Continua and Mathematical Sciences, India. since 1<sup>st</sup> May, 2019.
6. Reviewer in IEEE Access ISSN 2169-3536.

### **MEMBER OF TECHNICAL PROGRAM COMMITTEES/SESSION ORGANIZER/ SESSION CHAIR/ REVIEWER**

1. 3<sup>rd</sup> International Conference on Wireless Communication and Sensor Network (WCSN), Dec 10-11, 2016 in Wuhan, Hubei, China.
2. 14<sup>th</sup> International Conference on Frontiers of Information Technology (FIT), Dec 19-21, 2016 in COMSATS Islamabad, Pakistan.
3. 19<sup>th</sup> IEEE International Multi-Topic Conference (INMIC 2016), Dec 5-6, 2016 in Air University Islamabad, Pakistan.

4. Future 5V- the 2<sup>nd</sup> EAI International Conference on Future Intelligent Vehicular Technologies, Oct 17-19, by Abdul Wali Khan University, Islamabad, Pakistan.
5. International Symposium on Wireless Systems and Networks (ISWSN 2017), Nov 19-22, 2017 in University of Lahore, Lahore, Pakistan.
6. 12th World Conference on Applied science, Engineering and Technology (WCASET-18) September 21-22, 2018 Dubai.
7. 1<sup>st</sup> International Iqra National University Multi-Disciplinary Conference (INUMDC), November 7<sup>th</sup>-8<sup>th</sup> , 2018, Peshawar, Pakistan.
8. Advances in Science and Engineering Technology (ASET) International Conferences 2022, February 21<sup>st</sup>-24<sup>th</sup>. Dubai, UAE.

## **PROJECTS CONDUCTED AS DIRECTOR**

1. Kamyab Jawan Batch 1 (2020), training with 50 students at INU Peshawar Campus.
2. Skills for All Batch 2 (2021), training with 250 students at INU Peshawar Campus and 50 students at INU Swat Campus.
3. Skills for All Batch 3 (2022), training with 125 students at INU Peshawar Campus.
4. UNHCR Cohort D (2022) training with 20 students training at INU Peshawar Campus.
5. PSEB Training Project training with 4 subjects in Computer Science June 22 till August 22 at INU Peshawar.
6. Hunarmand Program Batch 4 (2023), training with 75 students at INU Peshawar Campus.
7. UNHCR Cohort E (2023) training with 115 students training at INU Peshawar Campus.
8. UNHCR-PMS Training Project (2023) training in Digital Marketing/Fashion Design/ Photography Film Making at INU Peshawar Campus.
9. UNHCR-SRSP Training Project (2023) training in Digital Marketing at INU Peshawar Campus.
10. 3/6 months PMYSDP Batch-1 (2024) training with 160 students at INU Peshawar Campus from March 2024 till September 2024.
11. 3 months PMYSDP Batch-1 (2024) training with 40 students at INU Swat Campus from March 2024 till May 2024.
12. 3 months SUMMER OF CODE Project training of 30 students from August 2024 till October, 2024