

DR. RANA AAMIR RAZA

CHAIRMAN/ASSOCIATE PROFESSOR,
DEPARTMENT OF COMMUNICATION
AND CYBER SECURITY BZU MULTAN.

PROFILE

Possessing over 20 years of combined teaching, research and professional experience with a strong focus on computing and information security. Holds an MS in Computer Science specializing in Information Security from Blekinge Tekniska Högskola (BTH), Sweden, and a PhD in Machine Learning and Cyber Security from Shenzhen University, China. Completed advanced training in Satellite Communication, Information, and Network Security at the Royal Institute of Technology (KTH), Stockholm. Research expertise centers on uncertainty in Big Data using AI/ML techniques, particularly in Intrusion Detection and Prevention Systems (IDS/IPS)/Cyber security threat management.

[HTTPS://SCHOLAR.GOOGLE.COM/CITATIONS?USER=1KDWY3A AAAAJ&HL=EN](https://scholar.google.com/citations?user=1KDWY3A AAAAJ&hl=en)

CONTACT

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DEPARTMENT OF COMMUNICATION AND
CYBER SECURITY, BAHAUDDIN ZAKARIYA
UNIVERSITY, MULTAN, PAKISTAN.

PUBLICATION STATISTICS

PUBLICATIONS	33+
CITATIONS	1400+
H-INDEX	13
I10-INDEX	16

STUDENTS' SUPERVISION

PROGRAM	NO. OF STUDENTS
BSCS/MCS/ BSIT/MIT	200+
MS/M.PHIL.	45+
PH.D. (U. S)	02

EDUCATION

PH.D. (INFORMATION AND COMMUNICATION ENGINEERING)

RESEARCH AREA: AI/INFORMATION/CYBER SECURITY

SHENZHEN UNIVERSITY (SZU), SHENZHEN, P.R. CHINA.

MS/M.PHIL COMPUTER SCIENCE

RESEARCH AREA: INFORMATION/NETWORK SECURITY

BLEKINGE TEKNISKA HOGSKOLA (BTH), KARLSKRONA,
SWEDEN

MASTER OF COMPUTER SCIENCE

BAHAUDDIN ZAKARIYA UNIVERSITY, MULTAN, PAKISTAN

BACHELOR OF SCIENCE (COMPUTER SCIENCE)

BAHAUDDIN ZAKARIYA UNIVERSITY, MULTAN, PAKISTAN

PUBLICATIONS

1. "An Effective Weighted Hybrid Regularizing Approach for Image Noise Reduction", Circuits, Systems, and Signal Processing, vol. 38, no. 1, pp. 218-241, 2019. Available: 10.1007/s00034-018-0853-1
2. "Fuzziness based semi-supervised learning approach for intrusion detection system", Information Sciences, vol. 378, pp. 484-497, 2017. Available: 10.1016/j.ins.2016.04.019
3. "A Novel Weighted Variational Model for Image Denoising", International Journal of Pattern Recognition and Artificial Intelligence, vol. 31, no. 12, p. 1754022, 2017. Available: 10.1142/s0218001417540222
4. Forensic artifacts modeling for social media client applications to enhance investigatory learning mechanisms", Journal of Intelligent & Fuzzy Systems, vol. 31, no. 5, pp. 2645- 2658, 2016. Available: 10.3233/jifs-169105
5. "Impact of fuzziness categorization on divide and conquer strategy for instance selection", Journal of Intelligent & Fuzzy Systems, vol. 33, no. 2, pp. 1007-1018, 2017. Available: 10.3233/jifs-162297

6. "Toward an efficient fuzziness based instance selection methodology for intrusion detection system", *International Journal of Machine Learning and Cybernetics*, vol. 8, no. 6, pp. 1767-1776, 2016.
7. "Comments on "Local coupled extreme learning machine"", *Neural Computing and Applications*, vol. 28, no. 3, pp. 631-634, 2016. Available: 10.1007/s00521-016-2497-z
8. "Fuzziness based sample categorization for classifier performance improvement", *Journal of Intelligent & Fuzzy Systems*, vol. 29, no. 3, pp. 1185-1196, 2015. Available: 10.3233/ifs-151729
9. Random weight network-based fuzzy nonlinear regression for trapezoidal fuzzy number data", *Applied Soft Computing*, vol. 70, pp. 959-979, 2018. Available: 10.1016/j.asoc.2017.08.006
10. "Further improvements on extreme learning machine for interval neural network", *Neural Computing and Applications*, vol. 29, no. 8, pp. 311-318, 2016. Available: 10.1007/s00521-016-2727-4
11. "Extreme learning machine with fuzzy input and fuzzy output for fuzzy regression", *Neural Computing and Applications*, vol. 28, no. 11, pp. 3465-3476, 2016. Available: 10.1007/s00521-016-2232-9
12. "An initial study on the rank of input matrix for extreme learning machine", *International Journal of Machine Learning and Cybernetics*, vol. 9, no. 5, pp. 867-879, 2016. Available: 10.1007/s13042-016-0615-y
13. "Monotonic classification extreme learning machine", *Neurocomputing*, vol. 225, pp. 205-213, 2017. Available: 10.1016/j.neucom.2016.11.021
14. Hyperspectral imaging-based unsupervised adulterated red chili content transformation for classification: Identification of red chili adulterants *Neural Computing and Applications*, 1-15. 2021
15. Multi Sensor-based implicit user identification, *Computer, Materials & Continua* DOI: 10.32604/cmc.2021.016232, 2021
16. **Kleptographic Attack on Elliptic Curve Based Cryptographic Protocols** *IEEE Access* 8, 139903-139917, 2020
17. Performance analysis of QoS in IoT based cognitive radio Ad Hoc network *Concurrency and Computation: Practice and Experience*, e5853, 2020
18. Multiclass non-randomized spectral-spatial active learning for hyperspectral image classification, *Applied Sciences* 10 (14), 4739, 2020
19. Impact of Different Random Initializations on Generalization Performance of Extreme Learning Machine. *JCP* 13(7): 805-822 (2018)
20. Comparative Analysis of Gaussian Process Regression Based Extreme Learning Machine. *JSW* 12(4): 292-302 (2017)
21. An Improved Local Coupled Extreme Learning Machine. *JSW* 11(8): 745-755 (2016)

22. Impact of Variances of Random Weights and Biases on Extreme Learning Machine. JSW 11(5): 440-454 (2016)
23. Relationship between Factors of Quality Models and the System Development Life Cycle. International Journal of Computer Applications, 81(10), pp.39-44. (2013)
24. A Robust Functional Minimization Technique to Protect Image Details from Disturbances, International Journal of Information Technology and Computer Science, Vol 11, No. 7, PP1-8, DOI:10.5815/ijitc.2019.07.01
25. Component Based Software Testing Strategies to Develop Good Software Product, 1st International Conference on Emerging & Engineering Technologies (ICEET-2014)
26. Use Correlation Coefficients in Gaussian Process to Train Stable ELM Models, PAKDD (1) 2015 Advances in Knowledge Discovery and Data Mining pp 405-417
27. Imbalanced ELM Based on Normal Density Estimation for Binary-Class Classification. PAKDD 2016: 48-60
28. An Efficient Swarm based Feature Selection Technique using Random Weight Neural Network, JOURNAL OF NANOSCOPE (JN) 2 (2), 231-255
29. "An Efficient Classification Model Using Fuzzy Rough Set Theory And Random Weight Neural Network". Lahore Garrison University Research Journal Of Computer Science And Information Technology, vol 5, no. 3, 2021, pp. 92-108. Lahore Garrison University, <https://doi.org/10.54692/lgurjcsit.2021.0503224>.
30. "Generalization Ability of Extreme Learning Machine Using Different Sample Selection Methods". STATISTICS, COMPUTING AND INTERDISCIPLINARY RESEARCH, vol 3, no. 1, 2021, pp. 57-72. The Women University Multan, Pakistan, <https://doi.org/10.52700/scir.v3i1.34>.
31. "Artifacts of Different Dimension Reduction Methods On Hybrid CNN Feature Hierarchy For Hyperspectral Image Classification". Optik, vol 246, 2021, p. 167757. Elsevier BV, <https://doi.org/10.1016/j.ijleo.2021.167757>.
32. "Uncertainty Based Optimal Sample Selection for Big Data," in IEEE Access, vol. 11, pp. 6284-6292, 2023, doi: 10.1109/ACCESS.2022.3233598.
33. IDS-FRNN: an intrusion detection system with optimized fuzziness-based sample selection technique, Neural Computing and Applications 36 (36), 22789-22803
34. Transformer-Driven Active Transfer Learning for Cross-Hyperspectral Image Classification , IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (2025)

CURRENT EMPLOYMENT

(Academic/ Research Experiences)

2010-Cont. Bahauddin Zakariya University, Multan, Pakistan.

Chairman/Associate Professor → Department of Communication and Cyber Security, Bahauddin Zakariya University, Multan, Pakistan

PROFESSIONAL EXPERIENCE

2004 – 2007 United Bank Ltd., Pakistan.

United Bank Ltd., Pakistan → Regional ATM Coordinator/ IT Trainer / E-Coordinator (IT & Telecom)

ADMINISTRATIVE EXPERIENCE

1. Chairman, Department of Communication and Cyber Security, BZU Multan.
2. Focal Person (IGNITE (National ICT R&D Fund) owned by Government of Pakistan and administered by the Ministry of Information Technology and Telecommunication) in **Bahauddin Zakariya University, Multan Pakistan.**
3. Focal Person, HEC Digital Library, Bahauddin Zakariya University, Multan.

OTHERS

1. Distinguish Trainer - (DTP) National Cyber Emergency Response Team (NCERT), Govt. of Pakistan