

Aftab Ahmed Memon

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<https://scholar.google.com.pk/citations?user=inkUeWEAAAAAJ&hl=en>

<https://www.researchgate.net/profile/Aftab-Memon>

EXPERIENCE

Jan 2020- Present Professor, Mehran University of Engineering & Technology (**MUET**), Jamshoro, Pakistan.

- Designed curricula, course outcomes, program objectives, mission statement of Bachelor's in Cyber Security program.
- As a convener and head of task force committee, successfully implemented online LMS at MUET, Jamshoro. The SaaS based cloud solution needed project management, leadership and advanced technical skills for its implementation in a strict timeline of two weeks.
- Taught five postgraduate courses: (i) Information Security (ii) Network Security (iii) Vulnerability Assessment and Pentesting (iv) Wireless Sensor Networks (v) Advanced Computer Networks; and two undergraduate courses (i) Network Protocols & Architecture (ii) Transmission and Switching Systems
- Expertise in teaching Cybersecurity concepts and tools: Parrot/Kali Linux, Vulnerability Assessment & Pentesting (VAPT), ethical hacking, MD5/SHA3 hashing, DES, 3DES, AES symmetric encryption, RSA asymmetric encryption, Digital signatures, digital certificates, steganography, Cyber Kill Chain Methodology, MIT&RE framework, Open Source Intelligence (OSINT), session hijacking, cross site scripting (XSS), SQL injection, malware analysis, firewalls, etc.

Sep 2015 - Jan 2020 Software Application Engineer, Schneider Electric Canada/USA

- Installed and configured EcoStruxure IT, a cloud-based solution that brings together connected products and edge control with apps, analytics and services to turn big data into actionable insights. Integrated at edge, IoT-enabled sensors for an end-to-end solution for centralized monitoring and control of power, cooling and IT infrastructure in more than thirty customer sites in USA/Canada.
- Planned, installed and configured data center infrastructure management (DCIM) solutions at various customer sites in Canada and USA. The projects entailed IoT expertise, project management and high-tech IT skills.

July 2004- June 2015 Professor, Telecommunication engineering Department, MUET.

- Supervised four PhD students in the areas of Location determination in wireless networks, cryptographic techniques to secure wireless networks, and controller design for power plants.
- Published **60+ research articles**, 1 book chapter, and edited four books.
- Supervised 50+ Master's and 30+ bachelor's degree research projects in the areas of Cybersecurity, Computer Networking & Telecommunication.
- Obtained public sector funding for the following projects:
 - HEC, Islamabad grant Rs. 925,207/- for arranging international conference, 2012
 - PSF, Islamabad grant Rs. 150,000/- for arranging TechCombat, 2012

- HEC, ICT R&D Fund Rs. 85,850/= for design and implementation of 3D printer, 2014
- Sindh Revenue Board grant Rs.2.8M for capacity design of Data Center project. 2021
- HEC fund Rs. 185,000/- for supervising location based services research project, 2020
- KANUUP Pakistan, research scholar salary for research project controller design of nuclear power plant, 2010-2014
- Obtained funding for research projects from Erasmus Mundus, and private industry.
- A key member in organizing and obtaining funding for 4 International Conferences:
 - International Multi-topic Conference (IMTIC)-2008
 - IMTIC-2012
 - Wireless Sensor Networks 4 Developing Countries (WSN4DC) 2013
 - IMTIC-2013
- Headed a newly introduced but unpopular program viz., Department of Telecommunication Engineering, which had shortage of faculty, equipment, and other resources. Designed specifications and procured equipment worth \$1.2M for 11 state-of-the art laboratories. Started two master of engineering programs in Telecommunication; and designed/updated curriculum. As a result, the program became very popular; 120 bachelors' students and around 50 master's students opted/graduated each year.
- Designed curricula, course outcomes, program objectives, mission statement of Bachelor's and Master of Engineering programs in Telecommunication Engineering. The two master's degree programs viz. M.E in Telecommunication Engineering & Management, and M.E in **Communication Systems & Networks**, were designed as per industry demands; hence became very popular.

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| Sep 2003-July 2004 | Assistant Professor, Department of Electronics Engineering, MUET, Jamshoro, Pakistan |
| Apr 2000- Sep 2003 | PhD in electronics Miyazaki University Japan |
| Sep 1994-Apr 2000 | Assistant Professor, Department of Electronics Engineering, MUET, Jamshoro. |
| Aug 1993-Sep 1994 | Lecturer, Department of Electronics Engineering, MUET, Jamshoro, Pakistan. |
| Aug 1990 – Aug 1993 | M.Sc in electrical & computer engineering, Louisiana State University, Baton Rouge, USA |
| Jan 1989- Aug 1990 | Lecturer, Department of Electronics Engineering, MUET, Jamshoro, Pakistan. |

ADDITIONAL ASSIGNMENTS/MANAGEMENT EXPERIENCE

Jul 2005-Jan 2015 Director, Information Communication & Processing Center (ICPC), MUET, Jamshoro, Pakistan

- Designed, supervised and managed **campus network** of more than 1500 nodes, 800 Voice points and 96Mbps MPLS based Internet backbone.
- Designed, laid, and executed project of indoor copper and outdoor fiber cables of campus network, supporting Gbps connectivity. Shaped and filtered Internet traffic.

- Supervised a team of 10 IT engineers at ICPC, and led them to provide services such as telephony, domain e-mails, access to e-journals, access to digital library, video conferencing through codecs, web portal, dial-up connections, online testing, Wi-Fi, etc.

HIGHER EDUCATION

- September 2003** PhD in Electronics, Miyazaki University, Miyazaki, Japan.
- August 1993** M.Sc in Electrical & Computer Engineering, Department of electrical & Computer engineering, Louisiana state university, Baton Rouge, USA.
- December 1988** Bachelor of Electronics Engineering. Mehran University of engineering & technology, Jamshoro, Pakistan.

PROFESSIONAL CERTIFICATIONS & LICENSING

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| • Ethical Hacking Essentials (EHE), EC-Council | Issued: 2024 |
| • Certified in Cyber Security, ISC ² | Issued: 2023 |
| • P.Eng Ontario, Canada | Issued: 2017 |
| • QUALCOMM, USA Certified resource person on CDMA2000/UMTS | Issued: 2006 |
| • Fiber Optics System Professional (FOSP) | Issued: 2005 |
| • IEEE USA | Issued: 2013 |
| • Pakistan Engineering Council | Issued: 1989 |

COMPUTER SKILLS & TOOLS

- Programming: C/C++, shell scripting . OS: Kali/Parrot linux, Windows 8.1, 7, 10, Sun Solaris,
- Simulators & Tools: Nmap, Burpsuite, Wireshark, bettercap, Opnet, MATLAB, PACKET TRACER, GNS3, PSPICE, ORCAD.
- Software: bFS/MfL, Concur, Struxureware Data Center Expert/Operations, VMWare, Oracle Virtual Box, ISX Designer, Modbus Poll.
- Protocols: SNMPv1/v3, SCP, SSH, SHA, MD5, AES128, TCP/IP, Modbus, RS232/485.

SELECTED PUBLICATIONS

1. "Twitter Mining based Forecasting of Cryptocurrency using Sentimental Analysis of Tweets", Uroosa Maqsood; Faheem Yar Khuhawar; Shahnawaz Talpur; Fawad Hassan Jaskani, Aftab Ahmed Memon, 2022 Global Conference on Wireless and Optical Technologies (GCWOT), 14-17 February 2022, Malaga, Spain, IEEE Xplore, pp: 1-6. ISBN:978-1-6654-7105-3
DOI: 10.1109/GCWOT53057.2022.9772923
2. "Smart Phone Sensor Data: Comparative Analysis of Various Classification Methods for Task of Human Activity Recognition", Tanveer Abbas Gadehi; Faheem Yar Khuhawar; Aftab Ahmed Memon; Kashif Nisar, 2022 Global Conference on Wireless and Optical Technologies (GCWOT), 14-17 February 2022, Malaga, Spain, IEEE Xplore.pp:1-7. ISBN:978-1-6654-7105-3
DOI: 10.1109/GCWOT53057.2022.9772905

3. "Vulnerability Assessment & Analysis of Software-Defined Networking using a Virtual Testbed", Muhammad Raza Shaikh; Faheem Yar Khuhawar; Kashif Nisar; Aftab Ahmed Memon, Adnan Shahid Khan, 2022 Global Conference on Wireless and Optical Technologies (GCWOT), 14-17 February 2022, Malaga, Spain, IEEE Xplore. ISBN:978-1-6654-7105-3
DOI: 10.1109/GCWOT53057.2022.9772918
4. "Analysis of Dynamic Host Control Protocol Implementation to Assess DoS Attacks", Shameel Syed, Faheem Khuhawar, Shahnawaz Talpur, Aftab A. Memon, Miquel-Angel Luque-Nieto, Sanam Narejo, 2022 Global Conference on Wireless and Optical Technologies (GCWOT), 14-17 Feb 2022, Malaga, Spain, IEEE Xplore, ISBN:978-1-6654-7105-3
DOI: 10.1109/GCWOT53057.2022.9772887
5. "Exchanging information in Wireless Sensor Networks at very low time consumption rate in An Efficient Hybrid Cryptographic Algorithm", Piyar Ali Jatoi, Aftab A. Memon, B.S Chowdhry, Muhammad Ghazamfar ullah, Shiraz Latif; Springer's Journal on Wireless Personal Communication, Volume 85, Issue 2, November 2015, Pp 449-462, ISI Impact Factor.
6. "FAMWiFi and FAMWiFi-mobile: reliable and user friendly surveying for IEEE 802.11 based indoor localization", Shiraz Latif, Abdul Hadi, Aftab Memon, B.S. Chowdhry, Ryszard Zielinski; NED University Journal of Research - Applied Sciences-Special Issue on MCCT'14, pp: 57-68, Dec 2014.
7. "An Efficient Hybrid Cryptographic Algorithm, Consuming Less Time for Exchanging Information in Wireless Sensor Networks", Piyar Ali Jatoi, Aftab A. Memon, B.S Chowdhry, Muhammad Ghazamfar ullah, Shiraz Latif; Springer's Journal on Wireless Personal Communications: An International Journal, Volume 85 Issue 2, November 2015, Pages 449-462, ISI Impact Factor. Kluwer Academic Publishers Hingham, MA, USA.
8. "Project Oriented Problem Based Learning: A Wireless Sensor Network Perspective", Umair M. Qureshi, Zuneera Aziz, Faisal K. Shaikh, Nafeesa Bohra, Aftab A. Memon, Springer International Journal on Wireless Personal Communications (Wireless Pers Commun). Springer US, ISSN: 0929-6212, April 2014, Vol. 76, Issue 3, pp: 463-477 (ISI Indexed, Impact factor)
9. "FaMWiFi: Fingerprinting/Sampling & Monitoring of WiFi signals for Indoor Positioning", Shiraz Latif, Abdul Hadi, Aftab A. Memon, Bhawani S. Chowdhry, Ghazanfarullah Khan, First International Conference on Modern Communication & Computing Technologies (MCCT'14), 26-28 February, 2014, Nawabshah, Pakistan.
10. Piyar Ali Jatoi, Aftab A Memon, B.S Chowdhry; Shiraz Latif; (2013), "A comparative study of memory consumption on different nodes in a Wireless Sensor Network" International conference WSN4DC'13 at Mehran UET Jamshoro Pakistan. (Springer Verlag abstracted)
11. Shiraz Latif, Muhammad Ghazanfar, Aftab A. Memon, Bhawani Shankar Chowdhry, Javed Ahmed, "Comparison of D-Model and Wall-Attenuation for signal strength estimation in indoor environment", 2012 Fourth International Conference on Computational Intelligence, Modelling and Simulation, IEEE Computer Society, pp: 336-340, 2012, ISSN: 2166-8531, IEEE Explore abstracted
12. "A Hybrid Cryptographic Algorithm in Wireless Networks for exchanging Information at Low Memory Consumption Rate", Piyar Ali Jatoi, Aftab A. Memon, Shiraz Latif, Bhawani Shankar Chowdhry, Science Series Data Report ISSN: 1307-119X , Vol 4, No. 5, Pp: 74-85, May 2012. (ISI Indexed)
13. "D-Model: A new perspective for modeling radio signal propagation in indoor environment", by Shiraz Latif, Binghao Li, Chris Rizos, Aftab Memon & Ghazanfar Khan, Australian Journal of Basic and applied Sciences (ISSN: 1991-8178), Vol. 5(10), 2011. (Scopus Indexed)
14. "Optical characterization of the ZnTe pure-green LED", by K. YOSHINO, A. MEMON, M. YONETA, K. OHMORI, H. SAITO, and M. OHISHI, phys. Stat. Sol. (b), Vol. 229, No. 2, pp. 977-980 (2002). ISI Indexed impact factor

AWARDS AND HONOURS

- Best University Teacher Award 2006 presented by HEC.
- PhD approved supervisor by HEC (since 2004).
- QUALCOMM, USA Certified resource person on CDMA2000/UMTS
- S&T Scholarship 1990
- Monboshō Japanese scholarship 2000
- Selected amongst two Pakistanis to visit Qualcomm Labs, Sand Diego, USA.2006

REFERENCES

Available upon request