CURRICULUM VITAE

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CAREER OUTLINE

Currently I am employed as Assistant Professor at Faculty of Engineering, Department of Information Systems Effat University Jeddah Saudi Arabia. The focus of my employment has been on research and teaching, and I have maintained a rare balance by demonstrating a strong competencies Research (60%), Teaching (30%) as well as Community Service (10). The detailed curriculum vitae provides a comprehensive account of my activities and achievements and summarizes the prominent achievements in my career.

I completed my doctoral research (Ph.D) in July 2013. My doctoral thesis, titled "Energy Efficient and Low Carbon Enabler Green IT Framework for Data Centers in Pakistan", derived a measurement framework to evaluate and implement Energy Efficient Cloud data centers in Pakistan. In 2012, an extensive publication and discussion in a top tier journal described my doctoral research outcome as the most comprehensive and rigorously tested measurement framework for cloud data centers.

In my relatively short academic career, I have gained global recognition through my transformational research, strong leadership and applied teaching in the area of Information Systems specifically focusing on Information & Network Security and Cloud Computing. This is evident by the: (i) 80+ journal and conference publications, (ii) initiation of a large and vibrant research track at different Universities with different research groups I worked, (iii) initiation of multiple International Information System related workshops, (iv) regular involvement in research grants with leading and global academic and industry partners around the world, (v) regular invitations for presentations by the academia and practice, (vi) substantial editorial, review and academic services, and (vii) the demonstrated excellence in teaching. Below are the details.

1. I have more than (**80**) international publications to my credit in past (9) years of my professional research and teaching career, in reputed academic and practitioner outlets. The number of publications demonstrates my excellence in research, while the publication outlets and accolades demonstrate the quality of my research (see the complete list of publications on page 7). It is highlighted that **23** of my publications are published in tier level publication outlets i.e. Q ranked journals with cumulative Impact Factor more than 35. Two (2) of my papers in international conferences got best paper awards for serving the CS & IS community especially Cloud based Energy Efficient Computing paradigm. Attesting to the rigor and relevance of my research, Publish or Perish (PoP) reports **834 citations** of my publications, Google Scholar reports over **900 citations**, while Scopus Elsevier (Mendeley) reports over **590 citations** during the last 8 years of my research profile. More importantly, demonstrating a strong impact of my research, Google Scholar & PoP highlights over **100 citations per-year** with an **h-index value of 18**.

2. As a key indication of my research leadership and the foresight, I am currently a research member of Machine Learning & Cyber Security Research group at Effat University. I was also heading a vibrant & coherent research track titled, "Secure & energy efficient algorithmic cloud computing" at International Islamic University Malaysia (IIUM) during my Postdoctoral Research from 2013 to 2015 (co-chairing with Prof. Dr. Asadullah Shah). The track was a direct outcome my Postdoctoral research and attempts to further extend my research work and findings with collaboration between different researchers from various universities. The track today has grown to a substantial research initiative attracting a large number of students and grants locally and internationally involving people from academia and industry. At present, I have supervised seven (7) Master's students for their thesis and dissertations by research, while more than 35 undergraduate students have completed their final year projects in last 5 years' time.

3. Demonstrating my leadership qualities at the international level, I participated & chaired Multiple International conference sessions including "Scientific Committee Chair" 16th Learning & Technology Conference 2019 (Elsevier Indexed) at Effat University Jeddah 2019, Program committee Member of the 5th International Conference on Higher Education Advances (HEAd'19) Valencia, Spain from 26th-28th June 2019, Scientific Advisory Board of the 4th Renewable Energy Sources - Research and Business conference (RESRB) to be held on July 8-9, 2019 in Wrocław (Poland). "Track Chair ICT for sustainability" at International Conference on Information and Communication Technology for the Muslim World 2013 (ICT4M 2013) at Rabat Morocco, 25-27 March 2013, "Track Chair e-Service/ Ad hoc and sensor Networks/Internet and web Applications" World Congress on Computing and Information Technology (WCIT) 2013, at Asia Pacific University of Technology and Innovation (APU) KL Malaysia, 4-6 March 2013, "Track Chair Wireless Communication and Data Mining" World Congress on Computing and Information Technology (WCIT) 2014, Asia Pacific University of Technology and Innovation (PAU) KL Malaysia, 18-20 March 2014.

4. My research rigor, industriousness, strong leadership and excellence in teaching in the domain of Information Systems has provided me with a strong global academic and industry network for on-going research and teaching collaborations. In February 2015, I orchestrated an Internal Research Grant (30000 MR) from University Malaysia Pahang UMP for my research titled “Evaluating Power Efficient Algorithms for energy Efficiency and Carbon Emissions in Cloud Data Centers”, to further extend my postdoctoral research. The outcome and findings of the grant were highly acknowledged and published **Q1** category journal. In March 2016, at Effat University I was able to receive another Internal Research Grant (20000 SR) for my research titled “Energy Efficient Multipath Routing Protocol for Mobile Ad-hoc Networks using Fitness Function” which was completed in due time. Currently I am involved in various research projects related to IoT application and their security infrastructures at Effat University and was able to get another Research Grant titled: “Robust Security Infrastructure against IoT device-based DDoS attack in Cloud Environments and currently working on this grant and have published one paper in IEEE Access journal with impact factor 3.576. Along with that I have also submitted 3 research grants for review and possible acceptance at various venues in KACST Saudi Arabia.

5. My global recognition as Cloud based Energy Efficiency researcher and Educator is further demonstrated by a number of sponsored guest presentations to both academia and practice. In June 2016, I was invited to present my latest research findings regarding “Cloud Computing Future Opportunities & Challenges” at Institute of Business & Technologies IBT Karachi Pakistan. In July 2014, I was invited as keynote speaker to present my findings for Earth hour 2014 at Asia Pacific University KL Malaysia. Currently at my present job, I have presented seminars and symposiums at KAUST and Effat University related to the awareness & importance of energy efficiency in cloud data centers and current challenges and opportunities for graduate and postgraduate students and academia.

6. My service to academic and research community extends over few other fronts. Since 2012, I have been serving as a track chair for many international conferences on IS. Including Pacific Asian Conferences and IRMA. On average, I tend to review around 12 to 15 research papers per year for reputed journals and conferences. I have been a regular reviewer of MISQ, JAIS, IEEE Cloud Computing, IEEE Parallel & Distributed Systems, IEEE Systems Journal, RSER, IJGW, IJGE, AJAIP, Telecommunication Systems, Ecological Economics, EJIS, Computing Journal, IEEE Access Journal, and many more reputed journals and conferences. Moreover, I have chaired and served as a panel member & external examiner in several Masters and Ph.D defenses at Asia Pacific University, University Malaysia Pahang and Binary University KL Malaysia. Furthermore, currently I am proactively involved in bringing external expertise at Effat University through presentations and discussions from academia and industry professionals.

7. Along with my strong performance in research and service, I have made a substantial contribution to global Information System curricula during my stay at various universities. Since my first appointment in 2012 at Asia Pacific University KL, I have been solely responsible for the development and delivery of two (2) Cloud based modules (subjects) for Entrepreneurship programs offered at university. I was able to develop these subjects with the help of EMC international as they were amongst the early cloud providing vendors in KL Malaysia. We used their tools to perform labs related to implementing cloud-based solutions in different enterprises. In recognition of my research and publication skills, I was also appointed as Research Coordinator for my Faculty in June 2014 for coordinating and heading departmental research activities, publishing quality papers and getting local and international collaborations and grants. Currently at Effat University, we are seeking to get ABET and NCAAA accreditations for our department and university. To acquire, I am very much involved in developing subjects and departmental policies according to **ABET and NCAAA** criteria. Due to my extensive research background, I am also heading the “Cloud Systems Research group” at our department to coordinate and develop research activities involving faculty, local and international partners and more importantly our students to develop cloud based energy efficient solutions grounded on high performance algorithms, techniques, methodologies and frameworks for cloud data centers. We are also working on security aspects of Clouds and currently applying for international research grants at KAUST and other research funding organizations. My academic performance is evinced by the acceptance of my teaching methodologies at various universities I taught outlining case study based teaching approach and Program Outcome (PO) based approaches at UMP Malaysia and Effat University. Finally, my teaching foresight is demonstrated by the introduction and development of a certification program in IS Security to teach and prepare students, industry professionals and other interested people from various fields for different certification programs like GISF, CISSP, A+ etc. which has already attracted cross faculty enrolments and many professionals from outside.

EDUCATION QUALIFICATIONS

1. **Doctor of Philosophy**
   Universiti Teknologi Malaysia UTM – (January 2010 - July 2013)

2. **Postdoctoral Fellowship**
   International Islamic University Malaysia - March 2013 - April 2015

3. **Master of Science (Information Networks)**
   Isra University Hyderabad Pakistan (April 2006 – February 2008)
   Grade Point Average 3.85 out of a maximum of 4.00

4. **Bachelor of Computer Science**
   Isra University Hyderabad Pakistan (April 2001 – September 2005)
   Grade Point Average 3.2 out of a maximum of 4.00

UNIVERSITY TEACHING EXPERIENCE AND APPOINTMENTS

1 . **Assistant Professor**
   October 2015 – On going
   Faculty of Engineering Department of Information System
   Effat University Jeddah Saudi Arabia
   Subject area experience: IS Fundamentals, IS & Network Security, Cybercrime & Digital Forensics, IT Infrastructure & E-Commerce

2. **Senior Lecturer (Assistant Professor)**
   October 2014 – July 2015
   Faculty of Computer Systems and Software Engineering
   University Malaysia Pahang
   Subject area experience: Network Security, Industrial Networks, Problem Solving in ICT

3. **Senior Lecturer (Assistant Professor)**
   May 2012 – October 2014
   Faculty of Computing and Technology
   Asia Pacific University of Technology and Innovation Kuala Lumpur Malaysia
   Subject area experience: Cloud Infrastructure & Services, Research Methods for Computing and Technology, Computer Networks, Network & IS Security, Wireless and Mobile Computing

4. **Research Coordinator (Green IT & Cloud Computing)**
   June 2014 – October 2014
   Faculty of Computing and Technology
   Asia Pacific University of Technology and Innovation Kuala Lumpur Malaysia
   Subject area experience: Green Cloud Data Centers & Network Security

5. **Visiting Supervisor/External Examiner (Postgraduate)**
   December 2014 – On going
   Binary School of Computing
   Binary University of Management & Entrepreneurship Kuala Lumpur Malaysia
   Subject area experience: Cloud Computing & Computer Networks, Network Security

6. **Research Assistant**
   March 2010 – May 2010
   Faculty of Computing Department of Information systems
   Universiti Teknologi Malaysia
   Subject area experience: Final Year Projects (FYP)

7. **Lecturer**
   April 2007 – December 2009
   Faculty of Computer Science & IT
   Isra University Hyderabad Pakistan
   Subject area experience: Computer Networks, Statistics, Introduction to Computers

8. **Lecturer & Coordinator (Evening)**
August 2005 – December 2009
Institute of Computer Science & IT
New Trends Institute of IT Hyderabad Pakistan
Subject area experience: Computer Networks, Programming, Network Security

AWARDS, RECOGNITIONS AND MEMBERSHIPS

1. **Certificate in Teaching Skills Masterclass (2019)** at Effat University from **Advance Higher Education (HE) United Kingdom.**

2 . **Certificate of Appreciation (2018) (Teaching & Research)** from Dean College of Engineering Effat University Jeddah Saudi Arabia.

3 . **Certificate of Appreciation (2017) (Teaching & Research)** from Dean College of Engineering Effat University Jeddah Saudi Arabia.

4 . **Certificate of Appreciation (2017) (Teaching, Research & Community Service)** from President of Effat University Jeddah Saudi Arabia.

5. **Community Service Award (2017)** from Dean College of Engineering Effat University Jeddah Saudi Arabia.

6 . **Certificate of Appreciation (2016) (Teaching & Research)** from Dean College of Engineering Effat University Jeddah Saudi Arabia.

7 . **Certificate of Appreciation (2014-2015) (Teaching & Research)** by Asia Pacific University KL Malaysia.

8 . **Certificate of Appreciation (2017) as Mentor for "NASA Space Apps Challenge"** at Effat University Jeddah Saudi Arabia.

9. **Certificate of Participation in 13th Learning & Technology Conference, February 2016, "3,4,5 Dimensions & Beyond: Immerse into the Learning Environment!"** at Effat University Jeddah Saudi Arabia.

10. **Certificate of Participation at 14th Learning & Technology Conference, February 2017, "The Makers Space from Imagining to Making"** at Effat University Jeddah Saudi Arabia.

11. **Certificate of Participation at 15th Learning & Technology Conference, February 2018, "IoT Embedding Intelligence"** at Effat University Jeddah Saudi Arabia.

12. **Certificate of Participation at 16th Learning & Technology Conference, March 2019 "Machine Learning: Intelligence is Power"** at Effat University Jeddah Saudi Arabia.

13. **Certificate of Attendance** for **Advising & Active Learning Workshop (2017)** at Effat University Jeddah Saudi Arabia.

14. **Certificate of Attendance (2017)** for attending **The Center of Excellence in Teaching & Learning Workshop** at Effat University Jeddah Saudi Arabia.

15. **UTM ZAMALAH Ph. D Fellowship** (2010-2011) Awarded by Universiti Teknologi Malaysia UTM

16. **International Doctoral Fellowship (IDF)** 2011-2013 Awarded by Universiti Teknologi Malaysia UTM

17. **Partial Support Program Scholarship** (Last year of Ph. D - 2012) Awarded by Higher Education Commission (HEC) Pakistan

18. **Best Paper Award** International Journal of Current Research and Reviews (IJCRR), 2011

19. **Best Paper Nomination** International Multi Conference of Engineers and Computer Scientists (IMECS 2011)

20. **Biography** Inclusion in **Marquis Who's Who in the world 2016** (33rd Edition)

21. **Certificate of Appreciation 2013** Awarded by International Association for Information, Culture and Industry Technology

22. Post-doc free Access Passport (Science Direct) 2014- 2015

23. Member of the Association of Information Systems (AIS)

24. Senior Member, International Association of Educators and Researchers (IAER) (Membership ID:181121)

25. Member of the ES-SIG Association of Information Systems (AIS)

26. Senior Member of International Engineering & Technology Institute (IETI) (Membership ID: 2015082012)

27. Member, American Association of Science and Technology (AASCIT) (Membership ID: 1001179)

28. Member, Asian Council of Science Editors (ASCE)

29. Member of Association of Energy Engineers (AEE) (Membership ID: 78952)

30. Senior Member International Association of Engineering Technology (Membership ID: 100823)

31. Student Member of ACM SIGCOMM (Member ID: 1542867)

32. Professional Member, International Association of Engineers IAENG (Membership ID. 106968)

33. Member, International Association of Computer Science and Information Technology (Membership ID: 80340689)

34. Member of the Society of Digital Information & Wireless Communication (Membership ID: 1304406977)

35. Student Membership of the Institute for Computer Sciences, Social Informatics & Telecommunication Engineering (ICST).

36. Student Membership in Association of Environmental and Resource Economists (AERE) (Membership ID: 3852930)

RESEARCH AND SCHOLARSHIP

I have been engaging in progressive rigorous research in the domain of Energy Efficient Cloud Data Centers and security related aspects of cloud and MANET over the past 8 years. My persistent focus and commitment to rigorous research together with industrious outcomes have given me global recognition. My doctoral research, titled "Energy Efficient and Low Carbon Enabler Green IT Framework for Data Centers in Pakistan", resulted in a derivation of a measurement and implementation framework, which provides a theoretical and logical methodology including PUE and DCIE metrics to measure the performance of data centers considering benchmark values. It also provides solutions to implement Server consolidation at tier level data centers to achieve more efficient and environment friendly data centers. The framework provides a valid, economical and robust measure of data center performance, which has been the holy grail of cloud based data centers since last decade or so.

I completed my Postdoc research at IIUM Malaysia which was a further extension of doctoral research where I evaluated and developed Virtualized Load Management algorithms to categorize server workloads based on processing capabilities & power requirements in tier level cloud data centers. During my research, we also evaluated many of the most useful and common power efficiency algorithms using Cloudsim Simulator for cloud based data centers applying different simulation parameters based on their performance

and efficiency. In addition to this, we also proposed and implemented techniques for managing some of the security issues pertaining to implementing service level agreements (SLAs) for cloud based scenarios as nowadays security is also considered as major obstacle in implementing cloud based services across enterprises. We developed different security approaches and techniques mainly mobile agent based cloud authentication system between cloud service provider and cloud users.

Summary highlights of my research and scholarship excellence is demonstrated through:

- **80 peer reviewed papers in leading journals and conferences**
- **23 Q ranked publications**
- **35 Cumulative Impact Factor (CIF)**
- **18 h-index**
- **22 i-10 index**

Extensive citations in just 6 years of my research,

- **Publish-or-Perish (PoP) reports over 835 citations**
- **Google Scholar reports over 900 + citations**
- **Scopus Elsevier reports over 590 citations**
- **PoP highlights over 100 citations–per-year**
- **Google scholar highlights over 185 citations per year**

International Research Grants

Recognized through Awards and Honoraria

1. Multipath Routing Protocol for Mobile Ad-hoc Networks, Internal Research grant from Effat University Jeddah Saudi Arabia Feb (2016 to Mar 2017) (**Completed**).
2. Evaluating Power Efficient Algorithms for energy Efficiency and Carbon Emissions in Cloud Data Centers" Internal Research grant from UMP Malaysia (Nov 2014 to July 2015) (**Completed**).
3. Robust security infrastructure against IoT device-based DDoS attack in cloud environments, submitted to Effat University (March 2018) (**Accepted**).
4. Internet of Vehicles (IoV): Connected Vehicles Architecture for Smart Cities "Fast Handover Protocol for Network-Based Distributed Mobility Management in Vehicular Environment", Submitted to KACST GPURC Saudi Arabia (July 2017, **Submitted**).
5. TRIZ and ICT-based Systematic Innovation Model for Problem Solving in Small and Medium Enterprises (SMEs) (**February 2018, Submitted**).
6. Gene Selection and Cancer Types Classification in Microarray Datasets Using Multi Classification Ensemble based Methods (**February 2018, Submitted**).

Evidence of my research and publication excellence is demonstrated below:

RESEARCH PUBLICATIONS

The **(80)** publications that I have to my credit in international-refereed journals and conferences attest to the excellence in research productivity, efficiency and consistency, while the substantial citations in a relatively short period of time in the quality publication outlets demonstrate the research rigor of my research potential. Furthermore, I have authored two books published by Lambert Publications Germany targeting Network security.

International Journal Publications

1. **Mueen U.,** Zohreh, G., Nazish T., (2019). "PEMC: Green Metrics to Calculate Power Efficiency and CO2 Emissions in Data Centers", (**Accepted**) in Wireless Communication & Mobile Computing (IF- 0.869).
2. Tanzila Saba, Amjad Rehman, **Mueen U.,** (2019). "Plasmodium Life Cycle Stage Classification Based Quantification of Malaria Parasitaemiain Thin Blood Smears", Microscopy Research and Technique, Vol.82, Issue. 3, pp-283-295, (IF= 1.087).

3. **Mueen U.,** (2019). “Server Virtualization: Technique to Improve Cloud Data Center Performance & Power Efficiency”, International Journal of Distributed Sensor Networks (IF 1.787) **(Submitted)**.

4. Abdul M., Tanzila S., Amjad R., (2019). **Mueen U.,** “A novel technique of Classification and Prediction using Transfer Learning in Co-Author Networks”, IEEE Access (IF 3.557) **(Submitted)**.

5. Celestine I., **Mueen U.,** P. Nkurunziza, J. H. Anajemba, and Ali Kashif B., (2018). “On Detection of Sybil Attack in Large-Scale VANETs Using Spider-Monkey Technique”, IEEE Access, Vol. 6(1), pp.47258-47267 (IF= 3.557).

6. Shumaila J., Khurram S. A., Wajahat J., **Mueen U.**, (2018). “A modified artificial neural network based prediction technique for tropospheric radio refractivity”, (PLOS ONE) 13(3): e0192069. https://doi.org/10.1371/journal.pone.0192069 (IF 2.806).

7. Aqeel, T. Raed, A. **Mueen U.,** Maha, A. (2017). “Energy Efficient Multipath Routing Protocol for Mobile ad-hoc Network Using the Fitness Function”, IEEE Access, Vol. 5, pp. 10369-10381 (**IF 3.244**).

8. Mustafa, T. Raed, A. **Mueen U.,** Maha, A. (2017). “Mobile Ad Hoc Network Energy Cost Algorithm based on Artificial Bee Colony”, Wireless Communication & Mobile Computing, Vol. 2017, Article ID: 4519357, pp.1-14 (**IF 1.899**).

9. Adamu, A. Haruna, C. Akram, Z. **Mueen U.,** Herawan T. (2017). “Dynamics of Watermark Position in Audio Watermarked Files using Neural Networks”, Applied Mathematics and Information Sciences, Vol.11, Issue.3, pp.703-715 (**Scopus**).

10. **Mueen U.,** Safiya, O. & Tanzila Saba (2017). “Green ICT Framework to Reduce Carbon Footprints in Universities”, Advances in Energy Research, Vol.5, Issue.1 pp.1-11.

11. **Mueen U.,** (2017). “Knowledge Management: Tool for Enhancing HRM Practices and Organizational Innovation”, International Journal of Humanities & Social Sciences (IJHSS), Vol.9, Issue.4, pp.31-40.

12. Haruna, C. Adamu, A. **Mueen U.,** & Akram, Z. (2016). "Utilizing key Climate Element Variability for Prediction of Future Climate Change using Support Vector Machine Model”, International Journal of Global Warming, Vol.9, Issue.2, pp.129-151 (**IF= 1.12**).

13. **Mueen U.,** Yasaman, D. Asadullah, S. & Jamshed M. (2015). “Evaluating Power Efficient Algorithms for Efficiency & Carbon Emissions in Cloud Data Centers: a Review”, Renewable & Sustainable Energy Reviews, Vol.51, Issue.11, pp.1553-1563 (**IF=5.91**).

14. **Mueen U.,** Jamshed, M., Mohd Zaidi A.R, Raed A. & Amjad R. (2015). “Virtualized Load Management Algorithm to Reduce CO2 Emissions in Data Center Industry”, International Journal of Global Warming, Vol.7, Issue.1, pp.3-20 (**IF=0.765**).

15. Raed, A. **Mueen U.,** Rashid, S. Maha, A. Ola A. Mohammad Al H. (2015). “Dynamic Packet Beaconing for GPSR Mobile Ad hoc Position-based Routing Protocol using Fuzzy Logic”, journal of Network and Computer Applications, Vol.47, Issue.1, pp.32-46 (**IF=1.772**).

16. Hoshang, K. Mohd S, S. Amjad, R. & **Mueen U.,** (2015). “Shadow Mapping Algorithms: Applications and Limitations”, Applied Mathematics and Information Sciences, Vol.9, Issue.3, pp.1307-1315 (**IF=1.232**).

17. Adamu, A. Akram M. Z. Haruna C. Sanah, A. M. **Mueen U.,** & Tutut, H. (2015). “Visualisation of a Three-Dimensional (3D) Object’s Optimal Reality in a 3D Map on a Mobile Device”, Applied Mathematics and Information Sciences, Vol.9, Issue.6, pp.3133-3145 (**IF= 1.231**).

18. **Mueen U.,** Asadullah, S. & Roop, C. Raed, A. (2015). “Knowledge Management Framework using Green IT to Implement Sustainable Entrepreneur Eco System”, Applied Mathematics and Information Sciences Vol. 9, Issue.5, pp.2703-2714 (**IF= 1.231**).

19. **Mueen U.,** Asadullah S. & Amjad, R. (2014). “Metrics for Computing Performance of Data Center for Instigating Energy Efficient Data Centers”, Journal of Scientific and Industrial Research (JSIR), Vol.73, Issue.1, pp.11-15 (**IF=0.500**).

20. **Mueen U.,** Raed, A. Asadullah, S. & Tanzila S. (2014). “Power Usage Effectiveness Metrics to Measure Efficiency and Performance of Data Centers”, Applied Mathematics and Information Sciences Vol.8, Issue.5, pp.2207-2216 (**IF=1.232**).

21. Muhsin, Z. F. Amjad, R. **Mueen U.,** & Tanzila S. (2014). “Improved Quadtree Image Segmentation Approach to Region Information”, The Imaging Science Journal, Vol.62, Issue.1, pp.56-62 (**IF=0.506**).

22. Alireza, N. Mohd Shafry, M. R. Ayman A. Tanzila S. **Mueen U.,** & Amjad R. (2014). “Medical Image Segmentation Methods: Algorithms and Applications”, IETE Technical Review Vol.31, Issue.3, pp.199-213 (**IF=0.925**).

23. Amjad, R. Tanzila, S. & **Mueen U.,** (2014). “Annotated Comparisons of Proposed Processing Techniques for Script Recognition”, Neural Computing and Applications Vol.25, Issue.6, pp.1337-1347 (**IF=1.763**).

24. **Mueen, U.** Jamshed, M. & Mohd Zaidi, A. R. (2013). “Green Postal Service Framework to Reduce CO2 Emissions in Postal Service Industry”, International Journal of Global Warming, Vol.5, Issue.3, pp.255-269 (**IF=0.588**).

25. Mohsin, I. Nada, Al Z. Waleed, M. Al-S. Ijaz, A.S. **Mueen U.,** Muhammad, T. Bjorn, L. Albert, Z. (2013). “On the Provisioning of QoS Mapping in Cellular and IP Networks Using a Translation (Function) Matrix”, INFORMATION Journal, Vol.16, Issue.5, pp.3033-3068 (**IF=0.358**).

26. **Mueen U.,** & Azizah, A. R. (2012). “Energy Efficiency and Low Carbon Enabler Green IT Framework for Data Centers Considering Green Metrics”, Renewable and Sustainable Energy Reviews, Vol.16, Issue.6, pp.4078-4094 (**IF=6.018**).

27. **Mueen U.,** Azizah, A. R. Muhammad, T. Asadullah S. Mohsin, I. & Albert, Z. (2012). “Improving Performance of Mobile Ad hoc Networks using Efficient Tactical on demand Distance Vector (TAODV) Routing Algorithm”, International Journal of Innovative Computing, Information and Control (IJICIC), Vol.8, Issue.6, pp.4375-4389 (**IF=1.667**).

28. **Mueen U.,** Muhammad, T. Azizah A. R. Asadullah, S. Jameel A. K. & Jamshed M. (2012). “Green IT Framework for Energy Efficient Data Centers Using Virtualization”, International Journal of Physical Sciences (IJPS), Vol.7, Issue.13, pp.2052-2065 (**IF=0.554**).

29. **Mueen U.,** & Azizah, A. R (2011). “Techniques to Implement in Green Data Centers to achieve Energy Efficiency and Reduce Global Warming Effects”, International Journal of Global Warming, Vol.3, Issue.4, pp.372-389 (**IF=0.4000**).

30. **Mueen U.,** Sandun H. & Roop, C. (2015). “Framework for Streamlining Disaster Recovery Practices for Banking Services among Commercial Banks in Sri Lanka”, Journal of ICT Research & Applications, Vol.9, Issue.3, pp.263-287 (Scopus).

31. Jamshed, M. Mohd Zaidi A. R. **Mueen U.,** & Kamariah, I. (2015). “Mentoring an Entrepreneur: Guide for a Mentor”, Sage Open, Vol.5, Issue.1, pp.1-10 (Scopus).

32. **Mueen U.,** Raed, A. Asadullah, S. & Jamshed, M. (2015). “Mobile Agent based Multi-Layer Security Framework for Cloud Data Centers”, Indian Journal of Science & Technology, Vol.12, Issue.8, pp.1-10 (Scopus).

33. **Mueen U.,** Roop, C. & Asadullah, S. (2015). “A Customer Methodology for Developing Green Cellular Phone: A Case Study of University Malaysia Pahang Students”, Journal of Ecosystem & Echography, Vol.5, Issue.3, pp.1-5 (Scopus).

34. **Mueen U.,** Asadullah, S. & Jamshed, M. (2014). “Energy Efficiency and Environmental Considerations for Green Data Centers”, International Journal of Green Economics, Vol.8, Issue.2, pp.144-157 (Scopus).

35. Safiya, O. **Mueen U.,** Amad, A. & Asadullah, S. (2014). “Cloud Computing Adoption Model for Universities to Increase ICT Proficiency”, SAGE Open, Vol.4, Issue.3, pp.1-10 (Scopus).

36. Jamshed M., **Mueen U.**, Mohd Zaidi, A. R. & Asadullah S. (2014). “Randomized Text Encryption: A new Dimension in Cryptography”, International Reviews on Computers and Software’s (IRECOS), Vol.9, Issue.2, pp.365-373 (Scopus).

37. Jamshed, M. Mohd Zaidi A. R. Kamariah, I. **Mueen U.,** (2014). "A Theoretical Framework for Mentor-Protégé Matchmaking: the role of Mentoring an Entrepreneur", International Journal of Green Economics, Vol.8, Issue.3/4, pp.252-272 (Scopus).

38. Maha, A. Raed, A. Mohammad Al-H. & **Mueen U.,** (2014). "The Impact of Resource Consumption Attack on Mobile Ad-hoc Network Routing", International Journal of Network Security (IJNS), Vol.16, Issue.6, pp.777-482 (Scopus).

39. Raed, A. Maha, A. Rashid, S. Mohammad, Al-H. Ola, A. & **Mueen U.,** (2014). "Effect of Mobility Parameters on the Inaccuracy of the Position Information of Position-based MANET Routing", International Journal of Wireless and Mobile Computing (IJWMC), Vol.7, Issue.1, pp.68-77 (Scopus)**.**

40. Nor, S. Raed, A. Hothefa, S. Maha, A. Ola, A. & **Mueen U.,** (2014). "Review on Web Performance", Journal of Engineering and Applied Sciences, Vol.9, Issue.1, pp.18-23, (Scopus).

41. Afiqah, A. Raed, A. **Mueen U.,** & Muhammad, Al H. (2014). "Review of Error Detection of Data Link Layer in Computer Network", ARPN Journal of Engineering and Applied Sciences, Vol.9, Issue.1, pp.1-4 (Scopus).

42. **Mueen U.,** Asadullah S. & Jamshed M. (2014). "Implementation of Server Consolidation in Tier Level Data Centers to Build Energy Efficient Data Centers", Journal of Power Technologies Vol.92, Issue.2, pp.1-10.

43. **Mueen U.,** Asadullah, S. Raed, A. & Jamshed, M. (2013). "Measuring Efficiency of Tier Level Data Centers to Implement Green Energy Efficient Data Centers", Middle East Journal of Scientific Research (MEJSR), Vol.15, Issue.2, pp.200-207 (Scopus).

44. **Mueen U.,** Asadullah, S. & Raed, A. (2013). "Implementation of Virtualization in Data Centers to Increase Proficiency and Performance", Journal of Applied and Theoretical Information Technology (JATIT), Vol.53, Issue.2, pp.283-290 (Scopus).

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International Conference Publications

68. **Mueen U.,** Sara, H., Baraa, S., Bador, A., (2019). "Cloud based Education as a Service framework for EFFAT University", (**Accepted**) at 8th International Conference on Software and Computer Applications (ICSCA 2019) February 19-22, 2019 Penang Malaysia.

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International Books & Book Chapters

79. **Dynamic Multi-Layer Signature Based Intrusion Detection System Using Mobile Agents** (ISBN 978-3-8465-3695-7) Lambert Academic Publishing (LAP) Germany, 2011

80. **Integration of Web Services and Mobile Agents in Distributed System** (ISBN 978-3-8473-1840-8) Lambert Academic Publishing (LAP) Germany, 2011

81. **Simulation Study on the Performance of Reactive and Position-Based Routing Protocols in MANET,** Innovations and Advances in Computing, Informatics, Systems Sciences, Networking and Engineering, pp.25-29, 2015
    Lecture Notes in Electrical engineering
    Springer International Publishing Switzerland 2015

SERVICE

PROFESSIONAL SERVICE

Demonstrating academic leadership and professional service at the highest level, I am serving as Editorial Board Member and Reviewer of many international reputed journals and conferences. I have served the Information Systems community in similar roles at the Pacific Asian Conference on IS and IRMA conferences. PACIS conference is a leading Information Systems conference on the Pacific Asian region and has an attendance of over 400 delegates Information Systems researchers around the world. Furthermore, I have also served as Program Committee member of many WSEAS & WCIT conferences

on IT, Computers and Networks, where I performed within the "IT Management in Developing Countries"; I encouraged participation, solicited call for papers, and reviewed papers within the track.

On average, I review around 10 to 12 papers per year depending on my busy schedule for reputed journals and conferences. I have been a regular reviewer for the following renowned outlets:

- Management Information Systems Quarterly (MISQ)
- Renewable and Sustainable Energy Reviews (RSER)
- Ecological Economics
- Telecommunication Systems
- IEEE Access
- IEEE Cloud Computing
- IEEE Transactions on Parallel and Distributed Systems
- IEEE Systems Journal
- Concurrency and Computation: Practice and Experience
- International Journal of Clinical Practice
- EURASIP Journal on Wireless Communications and Networking
- International Journal of Distributed Sensor Networks
- Information Technology Research Journal (ITRJ)
- Journal of Computer Science
- International Journal of Advance Intelligence Paradigms IJAIP
- Computing Journal Springer
- Journal of Systemics, Cybernetics and Informatics (JSCI)
- International Journal of Global Warming (IJGW)
- International Journal of Green Economics (IJGE)
- Journal of Testing and Evaluation
- International Journal of Wireless and Mobile and Computing (IJWMC)
- WSEAS Transaction on Communications Journal
- The Energy Journal
- WSEAS Conferences

ACADEMIC SERVICE

Despite my strong focus on Research throughout my career, I have been extensively involved in preparing, updating many new modules (subjects) related to cloud computing, and Green IT during my last and current university assignments. I am also member of department curriculum evaluation committee responsible for evaluating courses based on current technology, market trends and university requirements specially related to ABET and NCAAA accreditations. I am also very much involved in supervising Final year projects (FYP's) for undergraduate and graduate students. More specifically I supervised (7) Masters Students for their dissertations and more than (28) undergraduate students for their final year projects during my short academic career at various positions in different universities in Malaysia and Saudi Arabia. Below is the list of students supervised and examined during last three years of my academic service:

- **Successfully supervised (7) Seven Masters Dissertations**
- **Successfully supervised (35) thirty-five undergraduate Final year Projects**
- **External examiner of many masters, Doctoral Thesis, and Dissertations**

EXAMINER DOCTORAL THESIS (Ph.D. & DBA)

- An Investigation into the Cyber Security Preparedness of the Zambian Financial Sector, Binary University Kuala Lumpur Malaysia (March 2016).

EXAMINER MASTERS DISSERTATIONS

- Framework for Streamlining Disaster Recovery Practices for Core Banking Services among Commercial Banks in Sri Lanka (**2012**).
- Framework of green technology & Power efficiency management in APSS data center for reducing power consumptions (**2013**).

- Cloud computing & Green ICT adoption model for effective green practices in Malaysian Universities (**2014**).
- A Study on Consumer Attitudes to Lifebuoy 1 Liter Total 10 Bodywash in the Klang Valley (**April 2016**).
- Effectiveness of Sales Promotion of Unilever Breeze Liquid Detergent (**March 2016**).

MASTERS DISSERTATIONS SUPERVISED

- Green ICT Framework for Implementing Sustainable APU Campus **(Completed 2013)**.
- Performance Analysis of Mobile Ad-Hoc Network through TCP Variants over DSR **(Completed 2013)**.
- Evaluation of Power Convergence Algorithms using Cloudsim Simulator in Cloud System (**Completed 2014**).
- Comparative Analysis and Evaluation of Vyatta and Nexus Virtual Security Appliance in a Cloud System (**Completed 2014**).
- Mobile Agent based Multi-Layer Security Framework for Cloud Data Centers (**Completed 2014**).

DEGREE STUDENTS PROJECTS SUPERVISED

- Encrypted File Transfer on Android via FTP and PHP Server **(Completed 2013)**.
- Text File Encryption Using XML **(Completed 2013)**.
- An Application to hide Digital Watermarks and Metadata on the Noise of JPEG Images for Copyright Purposes **(Completed 2013)**.
- Signature based Campus Network Analyzer with Packet Filtering **(Completed 2013)**.
- Host-Based Intrusion Detection System for Denial of Service (DoS) Attacks **(Completed 2013)**.
- Enhanced QR code Security for Android mobiles **(Completed 2013)**.
- Detecting Cross-Site Scripting Attacks in Social Networks **(Completed 2013)**.
- Iterative files encryption on Cloud Engineering (**Completed 2013**).
- Signature based Campus Network Analyzer with Packet Filtering (**Completed 2013**).
- Intrusion detection system in mobile Ad hoc network (**Completed 2103**).
- Cybercafé Network Monitoring System in Gambian (**Ongoing 2103**).
- Automatic network pen-testing system (**Completed 2013**).
- Intelligent Factory Ordering and Customization Systems for SME's in Yemen (**Completed 2013**).
- Data Security System Using Steganography (DSSUS) (**Completed 2103**).
- "NuCAJ" – Numerical Code Algorithm for Japanese Text Steganography (**Completed 2104**).
- "C-Mors" Public Cloud Monitoring and Recovery Systems (**Completed 2014**).
- Train tracking system-using data from crowdsourcing (**Completed 2014**).
- "VBHAS" Voice Based Home Automation System (**Completed 2014**).
- "Wi-Fi Real-time Inspector" a Network Management System (**Completed 2014**)

- Packet Analyzer and Reporting System (**Completed 2014**)
- Network Protocol Analyzer – Traffic Monitoring through Packet Capturing (PCAP) (**Completed 2014**)
- Network Traffic Monitoring with Packet Sniffing (**Completed 2014**)
- Green Computing in Data Center Infrastructures to measure their Performance using PUE Metrics (**Completed 2014**)
- File Transfer in Client Server Network using Chain Distributed Transfer Protocol in Wireless Networks (**Completed 2014**)
- Preventing Misuse of Network Resources in Strengthening Network Management using Wake On LAN Application and Embedded Free Meter (**Completed 2014**)
- AI based Network Monitoring Tool - Enhancing Network Security Performance using Intelligence Knowledge Base (**Completed 2014**)
- Online Internship Portal System for Effat University Students (**Completed 2016**)
- Online Volunteer Management System Effat University Jeddah (**Completed 2017**)
- School Management System (**Completed 2017**)
- Cloud based Hospital Emergency & Response System (**Completed 2017**)
- Cloud based Education as a Service (E-as-a-Service) Framework for Effat University (**Completed 2018**)
- Android based Math Game for kids in school (**Completed 2018**)
- Green ICT framework for Data Center in Effat University (**Completed 2018**)
- Green BPM: An Urban Framework for Assessing & Improving Sustainability in Water Management in KSA (**Completed 2019**).

During my academic career, I am responsible for the following specific activities:

- Providing academic and research training for students and staff
- Promoting synergy between research and students who work in the areas of research
- Organizing fortnightly colloquia by arranging venues, speakers, and disseminating appropriate invitations and messages
- Organizing group reading workshops/seminars for higher degree teaching and research students
- Coordinating and responding to overseas higher degree student inquiries about their research issues and interest as part of my job at Binary University
- Representing university at various levels within the faculty, University and in the industry, and Uplifting the research quality and quantity of the research tracks.

Moreover, I have chaired and/or served as a panel member in several oral defenses at both masters and doctoral research levels. I have also served as an external examiner for doctoral dissertations at binary university KL Malaysia.

TEACHING PHILOSOPHY

I believe that challenge, respect and enjoyment are required for an effective learning environment. Without challenge, a student will finish a subject with a vague feeling of dissatisfaction, as if nothing was learned. Without respect, a student will finish a course having resisted truly learning the subject and with the desire to forget the experience promptly. Regardless of the skills the teacher aims to provide, without challenge and respect, the skills will not be maintained upon completion of the course. The third aspect, enjoyment, facilitates easy communication and knowledge absorption to promote challenge and respect. I have always endeavored to incorporate all three concepts into my teaching. I have tried to challenge students to learn

quickly, to question what is presented to them, and to search for information beyond what is presented in the classroom. In reality, I have high expectations of their performance, and have never been disappointed. In return, I constantly seek new ways to teach challenging material and work to define assignments and projects that are timely, relevant, and interesting to students. The level of enjoyment would increase the classroom atmosphere that is conducive to learning and encourages dialogue, to counteract difficulties in promoting challenge and respect, where some students may view challenge and respect purely as "extra work"!

Teaching Experience

I have committed myself to engage in innovative teaching that goes beyond the standard requirements of a subject coordinator / lecturer. I identified many key areas like methodology, delivery, and motivation and student welfare as methods to improve and enhance your teaching and learning skills. I gained a wealth of teaching and learning experience through a diverse roles and responsibilities that I held over a range of subjects by applying above key areas identified. I have been involved in teaching as a lecturer, Subject coordinator, coordinating lecturer in both core and elective subjects in undergraduate and postgraduate courses, demonstrating my ability to teach in a diverse range of disciplines.

I am a strong advocate of case-based teaching as a favorable method in introducing a conducive teaching environment. In all subjects that I have developed and teach, I employ the case based teaching approach. I am using this case study based approach to exemplify and discuss complex theoretical and management aspects of different courses I teach like IT Infrastructure, Cybercrime & Warfare, E-Commerce, and Risk Assessment & Management. Moreover, exams and assessments are too employing the case study approach. The use of case studies have enabled students to engage in a real-world issues and projects, which otherwise would not have been possible for teaching such type of courses. With the intention of further encouraging students to discover their maximum potential, I introduced Best Student Awards for the subjects that I teach. Since then, I have continued these awards in accordance with the strong support from all the student cohorts. The best student (based on the highest marks) herein receives a special plaques and are awarded in the subsequent semester by an industry expert during the lecture.

I have successfully completed the Teaching Skills Masterclass Certificate from Advance Higher Education UK and learned a lot of new methods of interactive teaching and learning. I am planning for fellowship now from the same training authority. I have been actively involved in the preparation, organization and coordination of a number of courses offered at both the undergraduate and postgraduate levels within the cluster of Information Systems and information sciences. My role generally demands and involves many tasks including developing unit contents, preparing lectures and tutorial activities and notes, preparing lab materials, assignments and final projects, recruiting and supervising of teaching staff and tutors, selecting readings, setting assessment, moderating exam papers, maintaining the unit's on-line delivery site (blackboard and banner) and liaising with the professional community for provision of guest lecturers. I use to teach and prepare the courses listed below assigned to me in various academic positions during last 8 years or so according to the Program Learning Outcome (PLO's) and Course Learning Outcomes (CLO's) requirements at universities I worked:

- Management Information System
- Cybercrime & Warfare
- Computer Forensics
- Information Security & Policy
- Introduction to Information Security & Management
- Risk Assessment & Management
- Business Process Modelling
- Data Management & Information Security Audit
- E-Commerce & its Security
- Business Process Modelling/Engineering
- Cyber Security
- Network Security
- Advance Topics in Security Systems
- Information Technology Management
- Ethics & Professionalism
- Management Information Systems
- Cryptographic systems
- Knowledge Management Systems
- Business Intelligence
- Business Analytics & Visualization
- Cloud Infrastructure and Services

- IS Strategy & Acquisition
- IT Infrastructure
- Industrial Networks
- Problem Solving in ICT
- Information Storage and Management
- Research Methods for Computing and Technology
- Wireless and Mobile Technologies
- Mobile Computer Communication Systems
- Fundamentals of Wireless LAN
- Advance Wireless Networks
- Remote Access Networks
- Design of Corporate Communication Systems
- Operating System
- Advance Operating Systems
- Computer Networks
- Advance Computer Networks

Moreover, in addition to these courses, I also use different tools and software packages for conducting labs and promoting case study based learning approach, some of these tools are listed below:

- Cisco Packet Tracer
- Wireshark Network Analyzer
- Prodiscover Forensic Tool
- FTK Forensic kit
- Virtual Box
- Configuring Different Servers like ISA, DHCP, IIS
- Network Simulator 2 (NS-2)
- RouterSim Network Visualizer
- Nessus Network Visualizer
- Snort Intrusion Detection System
- SPSS 17 and 18
- NVIVIO 8
- PUE and DCE Energy Efficiency Calculators for Data Centers
- Carbon emission Calculator
- Microsoft Hypervisor V Server
- VMware Capacity Planner for Data Centers
- VMware Guided Consolidation for Data Centers
- Cloudsim Simulator

REFEREES

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