CURRICULUM VITAE

Muhammad Anan, Ph.D.

PO Box 50927 Riyadh 11533 Saudi Arabia, Tel. +966 11 215 7744, Email: manan@alfaisal.edu

EDUCATION

2008   Ph.D., Electrical Engineering and Telecommunications Networking,
University of Missouri-Kansas City, MO, USA
Dissertation: A Slotted Wavelength Assignment Pipeline (SWAP) Scheduler for
Next-Generation Optical Burst Switches (OBS)

2003   M.Sc., Computer Science,
University of Kansas, KS, USA
Thesis: Evaluating Maintainability of Software Architectures

1999   M.Sc., Electrical Engineering,
University of Missouri-Columbia, MO, USA
Thesis: A New Fault Tolerant ATM Switching Architecture

1997   B.S., Computer Engineering,
King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

WORK EXPERIENCE

ACADEMIC APPOINTMENTS:

Jan. '25 – Present   Dean, College of Engineering & Advanced Computing
Alfaisal University, Riyadh, Saudi Arabia

Feb. '17 – Dec. '24   Acting Dean, College of Engineering
Alfaisal University, Riyadh, Saudi Arabia

Aug. '15 – Jan. '17   Vice Dean of Academic and Students Affairs, College of Engineering
Alfaisal University, Riyadh, Saudi Arabia

Aug. '14 – Dec. '16   Chair of Software Engineering Department
Alfaisal University, Riyadh, Saudi Arabia

Aug. '14 – Present   Associate Professor of Software Engineering
Alfaisal University, Riyadh, Saudi Arabia

May. '14 – Aug. '15   Associate Professor of Computer Engineering
Electrical & Computer Engineering Department
Purdue University Northwest, IN, USA

Aug. '08 – May. '14   Assistant Professor of Computer Engineering
Electrical & Computer Engineering Department
Purdue University Northwest, IN, USA

Dec. '10 – Dec. '14   Adjunct Visiting Professor
Master of Engineering Management Program
Abu Dhabi University, UAE

Aug. '06 – Dec. '07   Graduate Teaching Assistant
Electrical and Computer Engineering Department
University of Missouri-Kansas City, MO, USA

Aug. '97 – Dec. '98   Graduate Research Assistant
Electrical and Computer Engineering Department
University of Missouri-Columbia, MO, USA

INDUSTRIAL APPOINTMENTS:

Nov. '07 – Aug. '08	IT Consultant, IT Department, Kansas City Power & Light (KCPL) Midwest Consulting Group, Overland Park, KS, USA
Feb. '06 – Apr. '07	Applications Developer, IT Network Services and Service Assurance Group, Sprint Nextel, Lenexa, KS, USA
Sept. '04 – Feb. '06	IT Specialist, Integrated Service Assurance, Global Services, IBM, Overland Park, KS, USA
Dec. '98 – Sept. '04	Software Engineer, Broadband Network Management Development and Service Establishment Technology Solutions Groups, Sprint, Overland Park, KS, USA
Jul. '96 – Sept. '96	System Engineer Intern, Schlumberger-GeoQuest, Saudi Arabia and Oman

RESEARCH & TEACHING INTERESTS

My main research and teaching interests are in the areas of computer networks, cloud computing, Internet of Things, software defined networking, future Internet architectures, wireless sensor networks, embedded systems, computer architecture, software engineering and visualization.

PUBLICATIONS

1. M. Anan, K. Kanaan, D. Benhaddou, N. Nasser, B. Qolomany, H. Talei, A. Sawalmeh, "Occupant-Aware Energy Consumption Prediction in Smart Buildings Using a LSTM Model and Time Series Data," *Energies*, 17(24), 6451, 2024. DOI: https://doi.org/10.3390/en17246451
2. C. Vizcarra, S. Alhamed, A. Algosaibi, M. Alnaeem, A. Aldalbahi, N. Aljaafari, A. Sawalmeh, M. Nazzal, A. Khreishah, A. Alhumam, M. Anan, "Deep learning adversarial attacks and defenses on license plate recognition system," *Cluster Computing*, Springer US, vol. 27, pp. 11627-11644, 2024
3. B. Igried, A. Alsarhan, A. Sawalmeh, Anan, M. Anan, and I. Alkhawaldeh, "A novel game theoretic approach for market-driven dynamic spectrum access in cognitive radio networks," *Wireless Networks,* vol. 6, 5771-5786, 2024 DOI: 10.1007/s11276-023-03341-5
4. F. El Aidos, S. Abongmbo, S. Bourhnane, D. Benhaddou, F. Lei, L. Johnsson, C. Gamarra, T. Zhang, M. Anan, M. Abid, "Performance Evaluation of District Energy Microgrids Planning Tool for Non-Technical Users," *2024 IEEE Texas Power and Energy Conference (TPEC)*, 2024
5. R. Khalil, A. Sawalmeh, M. Anan, T. Jan, S. A. Shah, and S. M. Shah, "Fractional Processing Based Adaptive Beamforming Algorithm," CMC-Computers, Materials & Continua (CMC), *Computers, Materials & Continua*, *76* (1), 1065-1084, 2023 https://doi.org/10.32604/cmc.2023.039826
6. M. Nazzal, N. Aljaafari, A. Sawalmeh, A. Khreishah, M. Anan, A. Algosaibi, M. Alnaeem, A. Aldalbahi, A. Alhumam, C. P Vizcarra, S. Alhamed, "Genetic Algorithm-Based Dynamic Backdoor Attack on Federated Learning-Based Network Traffic Classification, " *Eighth International Conference on Fog and Mobile Edge Computing (FMEC),* 2023 DOI:10.1109/FMEC59375.2023.10306137
7. Z. Maqour, H. El Bakkali, D. Benhaddou, H. Benbrahim, W. Abou-Zbiba, H. El Gadi, A. Al-Fuqaha, M. Anan, A. Taha, "An Overview of Funded Research Projects in The MENA Region on Intelligent Transportation Systems," *2023 International Wireless Communications and Mobile Computing (IWCMC)*, Marrakesh, Morocco, pp. 313-320, 2023

8. N. Aljaafari, M. Nazzal, A. Sawalmeh, A. Khreishah, M. Anan, A. Algosaibi, M. Alnaeem, A. Aldalbahi, A. Alhumam, C. Vizcarra, "Investigating the Factors Impacting Adversarial Attack and Defense Performances in Federated Learning," *IEEE Transactions on Engineering Management*, vol. 71, pp. 12542-12555, 2022
DOI: 10.1109/TEM.2022.3155353

9. Z. Albataineh, K. Hayajneh, H. Shakhatreh, R. Al Athamneh, and M. Anan, "Channel estimation for reconfigurable intelligent surface-assisted mmWave based on Re'nyi entropy function," *Science Reports*, vol. 12, article no. 22301, 2022, https://doi.org/10.1038/s41598-022-26672-3

10. S. Bourhnane, S. Abongmbo, L. Fan, J. Shi, C. Gamarra, M. Riduan Abid, M. Anan, and D. Benhaddou, "A Parallelized Genetic Algorithms approach to Community Energy Systems Planning," *2022 14th International Conference on Computational Intelligence and Communication Networks (CICN)*, Al-Khobar, Saudi Arabia, 2022, pp. 266-272, doi: 10.1109/CICN56167.2022.10008362

11. M. Nazzal, A. Sawalmeh, S. Shao, M. Anan, A. Khreishah and A. Alanazi, "Retro-VLP: Towards Single Light Source-based Real-time Indoor Positioning," *2022 13th International Conference on Information and Communication Systems (ICICS)*, pp. 485-490, 2022

12. I. Alsmadi, N. Aljaafari, M. Nazzal, S. AlHamed, A. Sawalmeh, C. Vizcarra, A. Khreishah, M. Anan, A. Algosaibi, M. Alnaeem, A. Aldalbahi, A. Alhumam, "Adversarial Machine Learning in Text Processing: A Literature Survey," IEEE Access, pp.1-1, 2022, doi: 10.1109/ACCESS.2022.3146405

13. H. Shakhatreh, K. Hayajneh, K. Bani-Hani, A. Sawalmeh, and M. Anan, "Cell on Wheels-Unmanned Aerial Vehicle System for Providing Wireless Coverage in Emergency Situations," *Complexity*, no. 8669824, 2021

14. G. Merabet, M. Essaaidi, M. Ben-Haddou, B. Qolomany, J. Qadir, M. Anan, A. Al-Fuqaha, M. Abid, D. Benhaddou, "Intelligent Building Control Systems for Thermal Comfort and Efficient Energy: A Systematic Review of Artificial Intelligence-Assisted Techniques," *Renewable and Sustainable Energy Reviews*, no. 144, 2021

15. S. Abdel-Razeq, H. Shakhatreh, A. Alenezi, A. Sawalmeh, M. Anan, and M. Almutiry, "PSO-based UAV Deployment and Dynamic Power Allocation for UAV-Enabled Uplink NOMA Network," *Wireless Communications and Mobile Computing*, no. 2722887, 2021

16. K. F. Hayajneh, K. Bani-Hani, H. Shakhatreh, M. Anan, and A. Sawalmeh, "3d deployment of unmanned aerial vehicle-base station assisting ground-base station," *Wireless Communications and Mobile Computing*, vol. 2021, 2021

17. G. Liu, I. Khalil, A. Khreishah, A. Algosaibi, A. Aldalbahi, M. Alaneem, A. Alhumam, and M. Anan, "ManiGen: A Manifold Aided Black-box Generator of Adversarial Examples," *IEEE Access,* vol. 8, pp. 197086-197096, 2020,
doi: 10.1109/ACCESS.2020.3029270

18. D. Benhaddou, F. Attia, M. Anan, L. Afugbuom, "Autonomous Living Building: Adapting to Occupant's Behavior," *IEEE International Wireless Communications and Mobile Computing Conference (IWCMC),* Morocco, pp. 1803-1808, 2019

19. N. Nasser, A. El Ouadrhiri, M. El Kamili, A. Ali, M. Anan, "Crowd Management Services in Hajj: A Mean-Field Game Theory Approach," *IEEE Wireless Communications and Networking Conference (WCNC)*, Morocco, 2019

20. O. Darwish, A. Alfuqaha, G. Ben Brahim, I. Jenhani, M. Anan, "Towards a Streaming Approach to the Mitigation of Covert Timing Channels," *IEEE International Wireless Communications and Mobile Computing conference (IWCMC),* Cyprus, 2018

21. N. Nasser, L. Karim, A. Ali, M. Anan, N. Khelifi, "Routing in the Internet of Things," *IEEE GLOBECOM,* Singapore, 2017

22. N. Nasser, M. Anan, M. Chikh Awad, H. Bin-Abbas, L. Karim, "An Expert Crowd Monitoring and Management Framework for Hajj," *The International Conference on Wireless Networks and Mobile Communications (WinCom), Rabat, Morocco,* 2017

23. M. Anan, A. Al-Fuqaha, N. Nasser, T. Mu, and H. Bustam, "Empowering Networking Research and Experimentation through Software Defined Networking," *Journal of Network and Computer Applications,* vol. 70, pp.140-155, 2016

24. A. Ahmad, N. Nasser and M. Anan, "A Secure Cloud Infrastructure through Power Consumption Statistics," *International conference on selected topics in Mobile and Wireless Networking (MoWNet)*, Cairo, Egypt, 2016

25. M. Anan, A. Ahmed, A. Alfuqaha, and N. Nasser, "Optimization of Power and Migration Cost in Virtualized Data Centers," *IEEE Wireless Communications and Networking Conference (WCNC)*, Doha, Qatar, 2016

26. M. Anan, and N. Nasser, "SLA-based Optimization of Energy Efficiency for Green Cloud Computing," *IEEE GLOBECOM,* San Diego, CA, USA, 2015

27. O. Darwish, A. Al-Fuqaha, M. Anan, N. Nasser, "The Role of Hierarchical Entropy Analysis in the Detection and Time-Scale Determination of Covert Timing Channels," *IEEE International Wireless Communications and Mobile Computing conference (IWCMC),* pp. 153-159, Dubrovnik, Croatia, 2015

28. M. Guizani, M. Anan, "Smart Grid Opportunities and Challenges of Integrating Renewable Sources: A Survey," *IEEE International Wireless Communications and Mobile Computing conference (IWCMC),* pp. 63-68, Nicosia, Cyprus, 2014

29. L. Ilyes, M. Anan, A. Alfuqaha, and M. Ayyash, "Cloud-based Autonomic Service Monitoring In The Future Internet," *IEEE International Wireless Communications and Mobile Computing conference (IWCMC),* pp. 1098-1105, Nicosia, Cyprus, 2014

30. M. Elbes, A. Alfuqaha, and M. Anan, "A precise indoor localization approach based on particle filter and dynamic exclusion techniques," *International Journal of Network Protocols and Algorithms*, vol. 5, no. 2, pp. 50-71, 2013

31. M. Abdelhadi, M. Anan, and M. Ayyash, "Efficient artificial intelligence-based localization algorithm for wireless sensor networks," *Journal of Selected Areas in Telecommunications*, vol. 3, no. 5, pp. 10-18, 2013

32. M. Abdelhadi, and M. Anan, "A Three-Dimensional Localization Algorithm for Wireless Sensor Networks Using Artificial Neural Networks," *The International Workshop on Wireless Sensors, Actuator, and Robot Networks (WiSARN 2012),* pp. 1-5, Las Vegas, 2012

33. M. Abdelhadi, and M. Anan, "A Fuzzy-based Collaborative Localization Algorithm for Wireless Sensor Networks," *International Conference on Collaboration Technologies and Systems (CTS 2012),* pp. 152-156, Denver, 2012

34. M. Anan, C. Velazquezt, D. Benhaddou, and M. Balakrishnan, "Energy Efficient Data Dissemination in Wireless Sensor Networks Based on Natural Selection," *IEEE International Wireless Communications and Mobile Computing Conference (IWCMC)*, pp. 577-582, Istanbul, Turkey, 2011

35. M. Salahuddin, A. Alfuqaha, and M. Anan, "An Efficient Artificial Landmark-based System for Indoor and Outdoor Identification and Localization," *Invited Paper, IEEE International Wireless Communications and Mobile Computing Conference (IWCMC)*, pp. 583-588, Istanbul, Turkey, 2011

36. Y. Wang, Y. Qin, L. Gao, and M. Anan, "Implementing an OpenFlow switch with QoS feature on the NetFPGA platform," *The 2011 NC-IL/IN ASEE*, Mt Pleasant, MI, 2011

37. L. Jin, C. Liu, and M. Anan, "Open-Source VLSI CAD Tools: A Comparative Study," *The 2010 IL/IN ASEE*, West Lafayette, 2010

38. M. Alzubi, and M. Anan, "User Zoning Handover: An Approach for 4G Mobility," *The International Wireless Communications and Mobile Computing Conference (IWCMC 2010)*, pp. 870-874, Caen, France, 2010

39. M. Alzubi, and M. Anan, "An Efficient Handover Technique for 4G Networks," *Next Generation Mobile Applications, Service and Technologies Conference (NGMAST 2010)*, pp. 79-83, Amman, Jordan, 2010

40. M. Anan, H. Saiedian, and J. Ryoo, "An architecture-centric software maintainability assessment using information theory," *Journal of Software Maintenance and Evolution: Research and Practice,* vol. 21, no. 1, pp.1-18, 2009

41. M. Anan and G. Chaudhry, "SWAP: A slotted wavelength assignment pipeline scheduler for next generation optical switches," *Journal of Optical Communications*, vol. 28, no. 2, pp. 103-111, 2007

42. M. Anan, and G. Chaudhry, "A real-time hardware-based scheduler for next-generation optical burst switches," *International Conference on Communications (ICC'07),* pp. 2289-2293, Glasgow, UK, 2007

43. M. Anan, G. Chaudhry, and J. Qaddour, "Performance evaluation of an ultra-fast pipeline scheduler for next-generation networks," *International Conference on Computer Systems and Applications (AICCSA '07)*, pp. 650-654, Amman, Jordan, 2007

44. M. Anan, G. Chaudhry, and D. Benhaddou, "Architecture and performance of a next-generation optical burst switch (OBS)," *International Workshop on Optical Burst/Packet Switching (WOBS'06)*, pp. 1-9, (In conjunction with *IEEE/CreateNet BROADNETS'06*), San Jose, CA, 2006

45. M. Anan, G. Chaudhry, and D. Benhaddou, "Promises and challenges of Optical Burst Switching (OBS) for next-generation optical networks," *The 7ᵗʰ International Workshop on Optical Networking Technologies: Examining the Case for Optical Burst Switching* (In conjunction with *IEEE GLOBECOM '06*), San Francisco, CA, 2006

46. H. Saiedian, P. Kumarakulasingam and M. Anan, "Scenario-based requirements analysis techniques for real-time software systems: a comparative evaluation", *Journal of Requirements Engineering*, vol. 10, no. 1, pp. 22-33, 2005

47. M. Anan and M. Guizani, "Fault-tolerant ATM switching architectures based on MINs: A survey," *Journal of Informatica*, vol. 25, no. 1, pp. 69-81, 2001

48. M. Anan, and M. Guizani, "Modeling and Simulation of a new ATM switching Architecture", *Advanced Simulation Technologies Conference (ASTC '00),* pp. 42-47, Washington DC, 2000

49. M. Anan, and M. Guizani, "A Fault-tolerant ATM switching architecture", *19ᵗʰ IEEE International Performance, Computing and Communications Conference (IPCCC'00)*, pp. 295-301, Phoenix, Arizona, 2000

BOOK CONTRIBUTIONS:

1. Book chapter entitled: "Smart Grid Opportunities and Challenges in Integrating Renewable Sources" in the book "Renewable Energy Technologies for Water Desalination", Edited by: H Mahmoudi, N Ghaffour, M Goosen and J Bundschuh, CRC Press (Taylor Frances Group) (Balkema NDL), 2017 (in press)

2. Book chapter entitled: "Introduction to Mobile Ad-Hoc and Vehicular Networks" in the book "Wireless Sensor and Mobile Ad-Hoc Networks", D. Benhaddou and A. Alfuqaha, Springer, to be published in 2015

3. Book chapter entitled: "Fault Tolerant ATM Switching Architectures" in the book "Designing ATM Switching Networks", Mohsen Guizani and Ammar Rayes, McGraw Hill, 1998

TECHNICAL PRESENTATIONS & TALKS:

Presented all published papers in the corresponding conferences and workshops and was invited to give several technical presentations to universities and high-tech companies.

1. D. Benhaddou, S. Guizani, H. El Bakkali, M. Anan, A. Alfuqaha, "Future of Intelligent Transportation Systems (FITS)" Workshop, in the IWCMC 2023 Conference, Marrakesh, Morocco, 2023
2. M. Anan, and A. Alfuqaha, "Empowering Future Internet Research and Experimentation through Software Defined Networking," Conference Tutorial, IEEE GLOBECOM 2015
3. M. Anan, and A. Alfuqaha, "The Internet of Things (IoT): Applications and Prospects," Conference Tutorial, IEEE International Wireless Communications and Mobile Computing conference (IWCMC), 2015
4. M. Anan, and A. Alfuqaha, "Empowering Future Internet Research and Experimentation through Software Defined Networking," Conference Tutorial, IEEE International Wireless Communications and Mobile Computing conference (IWCMC), 2014
5. M. Anan, "Service-based Internet Infrastructure for the Qatar World Cup 2022," Qatar Foundation Annual Research Conference ARC'13, Qatar, 2013
6. M. Anan, "Cloud-based Autonomic Video Streaming in GENI Networks," Invited Speaker for the Experimenter Roundtable Session, The 16th GENI Engineering Conference, Salt Lake City, 2013
7. M. Anan, "Empowering Future Internet Research and Experimentation through Active and Programmable Networks," Invited Speaker, Al-Faisal University, KSA, 2012
8. M. Anan, "Implementation of an OpenFlow switch using NetFPGA platform," Research Day, Purdue University Calumet, 2011 (Winner of the 3rd place for the best paper award)
9. M. Anan, "User Zoning Handover: An Approach for 4G Mobility, " Research Day, Purdue University Calumet, 2010
10. M. Anan, "Dynamic CDMA Ad-Hoc Network with Token Ring Topology for Vehicular Communication," Research Day, Purdue University Calumet, 2010
11. M. Anan, "A Real-Time Hardware-Based Scheduler for Next-Generation Metro Optical Networks," Research Day, Purdue University Calumet, 2009
12. M. Anan, "Optical Burst Switching Model using OPNET," Research Day, Purdue University Calumet, 2009
13. M. Anan, "Performance evaluation of multimedia protocols over Gigabit Ethernet based campus network," Research Day, Purdue University Calumet, 2009
14. M. Anan, "Computer Engineering Career," Futurama 2009 Conference, Lowell High School, Indiana 2009
15. M. Anan, "Engineering at Purdue University Calumet", Academic Learning College Conference at IVY Tech, Valparaiso, Indiana 2008

PATENT

SYSTEM AND METHOD FOR LOCALIZATION USING OPTICAL TAGS *(pending)*

COURSES TAUGHT

ALFAISAL UNIVERSITY
- SE 416: Mobile Application Development
- EE 210/SE223: Digital Logic Design
- SE 327: Embedded Systems
- EE 305: Computer Networking
- EE 307: Computer Architecture
- SE 410: Software Architecture
- SE 443: Cloud Computing for Software Engineers
- SE 444: Artificial Intelligence
- SE 490/491: Capstone Projects

ABU DHABI UNIVERSITY:
- MEM 509: Information Technology Management

PURDUE UNIVERSITY CALUMET:
- ECE 595: Digital Logic using VHDL
- ECE 495: Microcomputers in Engineering (Embedded Systems)
- ENGR 151: Software Tools for Engineers using MATLAB
- ENGR 190: Elementary Engineering Design (Robotics)
- ECE 464: Computer Architecture and Organization
- ECE 375: Digital Integrated Circuits
- ECE 595: VLSI Design
- ECE 547: Computer Networks
- ECE 595: Client Server Programming and Applications
- ECE 505: Network Programming
- ECE 354: Software Engineering
- ECE 493: Senior Engineering Design

UNIVERSITY OF MISSOURI-KANSAS CITY:
- ECE 535: HDL-Based Digital Systems Design and Modeling
- ECE 426: Microcomputer Architecture and Interfacing

SERVICE ACTIVITIES

SERVICE AT ALFAISAL UNIVERSITY:
2017-pres.	Member, Council of Deans, Alfaisal University
2016-pres.	Member, University Council, Alfaisal University
2016-2017	Chair, College of Engineering Curriculum Committee
2015-2017	Advisor, ClickIT Students Club
2015-2016	Advisor, Robogals Students Club
2015-2016	Chair, Software Engineering Search Committee
2014-2015	Member, College of Engineering Curriculum Committee
2014-2016	Member, Research and Graduate Studies Committee
2014-2015	Member, Students Recruitment Committee
2014-2016	Member, Students Affairs Committee

SERVICE AT PURDUE UNIVERSITY CALUMET:
2013	Judge, Science Olympiad, Purdue University Calumet
2012	Member, Electrical and Computer Engineering search committee
2012	Campus representative, ASEE IL/IN 2012 conference
2010-2014	Chair, Computer Engineering program committee

2010	Session Chair, Faculty/Student research day
2010	Member, First-Year-Seminar Committee
2009	Judge, Science Olympiad, Purdue University Calumet
2009	Member, Computer Education Day planning committee
2009	Member, Electrical and Computer Engineering search committee
2009-2014	Advisor, Muslim Student Association
2008-2014	Member, Engineering graduate program committee
2008-2014	Member, Engineering undergraduate curriculum committee
2008-2014	Advisor, Graduate Student Association

SERVICE AT PROFESSINAL SOCIETIES:

2013	Organizer and chair, Workshop on Collaborative Mobile Systems and Sensors Networks (CMSSN), San Diego, California
2013	Technical Program Committee (TPC) member. International Conference on High Performance Computing & Simulation, Helsinki, Finland
2013	Technical Program Committee (TPC) member, Workshop on Wireless Sensor, Actuator, and Robot Networks (WiSARN), Cambridge, MA
2012	Technical Program Committee (TPC) member, Workshop on Wireless Sensor, Actuator, and Robot Networks (WiSARN), Las Vegas
2011-2016	Associate Editor, Wiley Journal of Wireless Communications & Mobile Computing
2011-2014	Associate Editor, International Journal of Quality of Service Issues in Networking
2011	Publication co-chair, International Wireless Communications and Mobile Computing Conference (IWCMC), Istanbul, Turkey
2011	Session chair, International wireless communications and mobile computing Conference (IWCMC), Istanbul, Turkey
2010	Technical Program Committee (TPC) member, International Congress on Engineering Education (ICEED), Kuala Lumpur, Malaysia
	Technical Program Committee (TPC) member, International Workshop on Concurrent Communications (ConCom), Seoul, Korea

REFEREEING:

Regular referee for the following journals and conferences:

- Wiley Journal of Wireless Communications and Mobile Computing (WCMC)
- Journal of Security and Communication Networks (JSAC)
- Journal of Optical Network (JON)
- International Journal of Distributed Sensor Networks
- International Journal of Quality of Service Issues in Networking
- International Journal of Communication Systems
- Journal of Security and Communication Networks
- International Conference on Communications (ICC)
- IEEE Globecom Conference (GLOBECOM)
- IEEE International Conference on Communications and Information Technology
- International Workshop in Concurrent Communication
- IASTED Parallel and Distributed Computing Systems Conference
- IEEE Region 5 Conference
- IEEE International Conference on Mobile Ad-hoc and Sensor Systems

CERTIFICATION

| 2020 | IBM Business Analysis Mastery |
| 2011 | Digital Learning and Distance Education Certificate, Purdue University Calumet |

HONORS, AWARDS & GRANTS

2023	Internal Research Grant (IRG), PI, Alfaisal University, SAR 50,000
2020	R&D Office, Ministry of Education, CO-PI, A framework for generating and defending against adversarial examples, SAR 1,200,000, 2020-2023.
2019	Optical Tags Alternative to RFID tags, PI, KACST, SAR 1M, 2019-2021.
2017	Annual Research Award, Alfaisal University.
2018	Designing and Developing Smart Services and Smart Applications for ICT, BOEING, PI, SAR 187,500, 2018-2019.
2016	RFID-based Multimodal Wireless Framework for Crowd Monitoring and Control in Hajj, GDRG-KACST, Co-PI, SAR 1,260,000, 2014-2016.
2015	Internal Research Grant (IRG), Alfaisal University, Co-PI, SAR 44,000, 2015-2016, A hybrid Web/Standalone internet of things framework with natural user interface and robot-enabled immersive telepresence for home automation.
2015	Internal Research Grant (IRG), PI, Alfaisal University, SAR 50,000, 2015-2016, Design Energy Efficient Computing Framework for Cloud Datacenters.
2015	NSF-REU, $323,846, 2015-2017, Sustained Wireless Communication in Challenging Environments, Senior Personnel
2014	Summer Faculty Research Grant, Purdue Research Foundation (PRF)
2013	International Travel Grant, Purdue Research Foundation (PRF)
2012	Outstanding Leadership Award, Purdue University Calumet
2012	NSF-TCPP Curriculum Initiative Grant on Parallel and Distributed Computing
2012	Driver Distraction Mitigation System, Industry Project Grant, iQ-Telematic Inc., Principal Investigator
2011	International Travel Grant, Purdue Research Foundation (PRF)
2010	Faculty Summer Research Grant, Purdue Research Foundation (PRF)
2009	Faculty Summer Research Grant, Purdue University Calumet
2009-2015	NSF-GENI Travel Grants
2008	Faculty Research Time Release Award, Purdue University Calumet
2003	Sprint Values Excellence Award, Sprint Nextel
2002	Sprint Values Excellence Award, Sprint Nextel
2001	Sprint Values Excellence Award, Sprint Nextel
2003	Sprint Values Excellence Team Award, Sprint Nextel
1999	Electrical Eng. Outstanding Graduate Student Award, Univ. of Missouri-Columbia
1997-1999	Graduate Research Assistantship, University of Missouri

MEMBERSHIPS & AFFILIATINS

2011-2016	Associate Editor, Wiley Journal of Wireless Communications & Mobile Computing
2011-2014	Associate Editor, International Journal of Quality of Service Issues in Networking
1999-pres.	Senior Member, Institute of Electrical and Electronic Engineers
1997-pres.	Member, Jordan Engineers Association