

# CURRICULUM VITAE

## Osama M.F. Abu-Sharkh

Associate Professor of Electrical and Computer Engineering

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### 1. Education

- Ph.D. (Electrical Engineering) 2006, *University of Minnesota Twin Cities*, Minneapolis, MN, USA.
- M.Sc. (Electrical Engineering) 2001, *University of North Carolina*, Charlotte, NC, USA.
- B.Sc. (Electrical Engineering) 1999, *University of Jordan*, Amman, Jordan.

### 2. Ph.D. Dissertation

*“Performance Evaluation and Enhancements of the MAC Layer for Multi-Rate SISO and MIMO IEEE 802.11 Wireless Local Area Networks”*, University of Minnesota Twin Cities, Minneapolis, Minnesota, United States of America.

### 3. Employment

#### Administrative Positions at Princess Sumaya University for Technology (PSUT)

- *Vice Dean of King Abdullah II School of Engineering* (Sep 2021 – Present)
- *Chair of Communications Engineering Department* (Sep 2016 – Sep 2017)
- *Anchor and Responsible Person for ABET Accreditation* (2011 – 2017)  
Osama led the efforts to attain ABET accreditation for the Communications Engineering Program for the first time at PSUT. It is worth mentioning that the Communications Engineering Program at PSUT is the *first* ABET-accredited program in this specific specialization in Jordan.
- *Acting Dean of King Abdullah II School of Engineering* (Feb 20 to Feb 25, 2017),  
(Jun 26 to Jul 14, 2022),  
& (Jun 18 to Jun 24, 2023)
- *Chair of Communications Engineering Department* (Feb 2012 – Sep 2014)
- *IEEE Student Branch Counselor and Advisor* (Jan 2010 – Jan 2016)

#### Academic Positions at Princess Sumaya University for Technology

- *Associate Professor*, (Oct 2016 – Present)\*  
Computer Engineering Department,  
Networks and Information Security Engineering Program.  
\*Sabbatical Leave followed by Unpaid Leave in UAE from Aug 2017 to July 2020.
- *Assistant Professor*, (Sep 2014 – Oct 2016)  
Computer Engineering Department,  
Networks and Information Security Engineering Program.

- Assistant Professor, (Sep 2007 – Sep 2014)  
Communications Engineering Department,  
Communications Engineering Program.

**Previous Appointments (Outside PSUT)**

- **Program Coordinator (Department Head),** (Aug 2018 – Jul 2020)  
Electrical Engineering Technology Program,  
Higher Colleges of Technology (HCT), Al Ain, UAE
- Faculty Member, (Aug 2017 – Jul 2020)  
Electrical Engineering Technology Program,  
Higher Colleges of Technology (HCT), Al Ain, UAE
- Assistant Professor, (Feb 2007 – Sep 2007)  
Computer Engineering Department,  
Computer Engineering Program,  
Faculty of Engineering,  
Al-Ahliyya Amman University,  
Amman, Jordan.
- Graduate Assistant (Sep 2001 – Jun 2006)  
(TA and RA for various periods of time)  
Electrical and Computer Engineering Department,  
College of Science and Engineering,  
University of Minnesota Twin Cities,  
Minneapolis, MN, USA.
- Graduate Assistant, TA (Sep 2000 – Jun 2001)  
Electrical and Computer Engineering Department,  
The William States Lee College of Engineering,  
University of North Carolina,  
Charlotte, NC, USA.

**4. Membership in Scientific Societies and Associations**

- IEEE member, 2004 – Present.  
(IEEE Computer Society)  
(IEEE Communications Society)  
(IEEE Signal Processing Society)  
(IEEE Vehicular Technology Society)  
(IEEE Intelligent Transportation Systems Society)  
(IEEE Computational Intelligence Society)
- ACM member, 2006 – Present.
- Jordan Engineers Association member, 1999 – Present.

## 5. Awards and Recognition/Appreciation

- The “*Distinguished Researcher Award*”, awarded in 2018 from Princess Sumaya University for Technology, Amman, Jordan.
- The Region 8 “*IEEE Outstanding Branch Counselor and Advisor Award*”, awarded in 2012. (The geographical area of IEEE Region 8 includes Europe, Middle-East and Africa).
- **IEEE Empower a Billion Lives II 2023** “Student Team First Prize”, awarded in 21 March 2023 at Orange County Convention Center, Orlando, Florida, USA.
- The *Best Presenter Award* for presenting a scientific paper at the 6<sup>th</sup> International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2019).
- PSUT student branch won the Region 8 IEEE Regional Exemplary Student Branch Award, two times in a row, in 2010 and 2011, *under my supervision*.
- Several financial awards were obtained at PSUT for publishing *scientific research papers* in prestigious journals which are indexed by *Clarivate* (formerly Thomson Reuters - ISI) with good impact factors.
- A Letter of Appreciation was obtained from the president of PSUT for the distinguished contributions that have been achieved during the period of chairing the Communications Engineering Department from 2012 to 2014.
- A Letter of Appreciation was obtained from the president of PSUT for the contributions that have been achieved during the period of chairing the Communications Engineering Department from 2016 to 2017.
- A Letter of Appreciation was obtained from the president of PSUT for the contributions that have been made to accredit the Communications Engineering program by *ABET*.
- A Letter of Appreciation was obtained from the Dean of King Abdullah II School of Engineering at PSUT for the contributions that have been made to the 2016/2017 ABET accreditation cycle for the Electronics Engineering program.
- The 3<sup>rd</sup> National Technology Parade’s First Place Award for supervising the senior design project titled "Wireless Appliances Control Using Microcontrollers and ZigBee Technology", Jordan University for Science and Technology, Irbid, Jordan, 2010.
- The 7<sup>th</sup> National Technology Parade’s Third Place Award for supervising the senior design project titled "Design of a Hybrid Positioning System", Yarmouk University, Irbid, Jordan, 2014.

## 6. Fellowships and Scholarships

- A scholarship gained from the Ministry of Higher Education & Scientific Research, Amman, Jordan, to pursue a 5-years B.Sc. degree in Electrical Engineering at the University of Jordan, Amman, Jordan (1994 – 1999).
- A fellowship gained from the European Union under the Erasmus Mundus Mobility Program AVEMPACE II as a Visiting Scholar to Technische Universität Berlin (TU-Berlin), Berlin, Germany in the Summer of 2015.

- A fellowship gained from the European Union under the Erasmus Mundus Mobility Program PEACE II as a Visiting Scholar to the University of Minho, Guimarães, Portugal in Summer 2017.

## 7. Grants and Funds

A grant has been obtained by ARUBA (a Hewlett Packard Enterprise Company) in the form of equipment to establish an Aruba Academy at PSUT and also utilize it in the educational process and the scientific research at PSUT. ***I was the responsible and primary contact for securing the fund.*** A scientific journal paper was published out of research that used the provided equipment. The published paper is “Abu-Sharkh, O.M.F., AlQaralleh, E.A. and Hasan, O.M.; "Adaptive Device-to-device Communication Using Wi-Fi Direct in Smart Cities", *Wireless Networks* (IF = 1.584), Vol. 23 (7), 2017, 2197-2213.”

***(An estimate of the equipment value is more than \$20,000)***

## 8. Research Interests

- Wireless Networks,
- Smart Cities,
- Wireless Networks Security,
- Internet of Things,
- Multimedia Processing and Networking,
- Artificial Intelligence,
- E-learning and Education.

## 9. Publications

### Journals

- Noman, H. A., **Abu-Sharkh, O.M.F.**; "Code Injection Attacks in Wireless-Based Internet of Things (IoT): A Comprehensive Review and Practical Implementations", *Sensors (Impact Factor (IF) = 3.9, Clarivate, Journal Citation Reports®)*, Vol. 23 (13), 2023, 6067.
- **Abu-Sharkh, O.M.F.**, AlQaralleh, E.A. and Hasan, O.M.; "Adaptive Device-to-device Communication Using Wi-Fi Direct in Smart Cities", *Wireless Networks (Impact Factor (IF) = 3.0, Clarivate, Journal Citation Reports®)*, Vol. 23 (7), 2017, 2197-2213.
- **Abu-Sharkh, O.M.F.** and Dabain, Z.; "GreenBikeNet: an Intelligent Mobile Application with Green Wireless Networking for Cycling in Smart Cities", *Mobile Networks and Applications (Impact Factor (IF) = 3.8, Clarivate, Journal Citation Reports®)*, Vol. 21 (2), 2016, 352-366.
- AlQaralleh, E.A. and **Abu-Sharkh, O.M.F.**; "Low-complexity motion estimation design using modified XOR function", *Multimedia Tools and Applications (Impact Factor (IF) = 3.6, Clarivate, Journal Citation Reports®)*, Vol. 75 (24), 2016, 16809-16834.

- Hasan, O.M., Taha, M. and **Abu-Sharkh, O.M.F.**; "Outage Capacity and Outage Rate Performance of MIMO Free-space Optical System over Strong Turbulence Channel", *Journal of Modern Optics (Impact Factor (IF) = 1.3, Clarivate, Journal Citation Reports®)*, Vol. 63 (11), 2016, 1106-1114.
- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "Toward Accurate Modeling of the IEEE 802.11 e EDCA under Finite Load and Error-prone Channel", *IEEE Transactions on Wireless Communications (Impact Factor (IF) = 10.4, Clarivate, Journal Citation Reports®)*, Vol. 7 (7), 2008, 2560-2570.
- **Abu-Sharkh, O.M.F.** and AlQaralleh, E.A.; "A Hardware-efficient Block Matching Unit for H.265/HEVC Motion Estimation Engine Using Bit-Shrinking", *Jordanian Journal of Computers and Information Technology*, Vol. 2 (2), 2016, 138-154.

### Book Chapters

- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "Analyzing the Impact of Various Modulation and Coding Schemes on the MAC Layer of IEEE 802.11 WLANs", *Analytical and Stochastic Modeling Techniques and Applications, Lecture Notes in Computer Science series*, Vol. 5513, 2009, 103-115.

### Conferences

- **Abu-Sharkh, O.M.F.**; "Performance Analysis of Smartphone-based Mobile Wi-Fi Hotspots Operating in a Congested Environment", the 6<sup>th</sup> International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2019), September 18-20, 2019, Bandung, Indonesia.
- J. Haimour and **Abu-Sharkh, O.M.F.**; "Energy Efficient Sleep/Wake-up Techniques for IOT: A survey", the IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT 2019), April 9-11, 2019, Amman, Jordan.
- **Abu-Sharkh, O.M.F.**; "Performance Anomalies of Smartphone-based Mobile Wi-Fi Hotspots", the 3<sup>rd</sup> International Conference on Recent Advances in Signal Processing, Telecommunications & Computing (SigTelCom 2019), March 21-22, 2019, HaNoi, Vietnam.
- **Abu-Sharkh, O.M.F.**; "A Joint Frequency Band and Channel Adaptation Algorithm for Wi-Fi based Single-hop MANETs", The 2016 International Conference on Computational Science and Computational Intelligence (CSCI'16), December 15-17, 2016, Las Vegas, NV, USA.
- Van der Heijden, R. W., Al-Momani, A., Kargl F. and **Abu-Sharkh, O.M.F.**; "Enhanced Position Verification for VANETs using Subjective Logic", The 84<sup>th</sup> IEEE Vehicular Technology Conference (VTC2016-Fall), September 2016, Montréal, Canada.

- Shnoudi, T., Abu Hadba, L., Zabadne, M., **Abu-Sharkh, O.M.F.** and Sababha, B.H., "Digitizing the Content of a Whiteboard to Aid Traditional Educators and Enhance the Learning Experience of Students", The 12<sup>th</sup> International Conference on Frontiers in Education: Computer Science & Computer Engineering within The 2016 World Congress in Computer Science, Computer Engineering, & Applied Computing, July 2016, Las Vegas, NV, USA.
- AlQaralleh, E.A., **Abu-Sharkh, O.M.F.** and AlQaralleh, B.A.Y.; "MATLAB/Simulink-based Verification Environment for Motion Estimation in H. 264/AVC", The 5<sup>th</sup> International Conference on Digital Information and Communication Technology and its Applications (DICTAP2015), April 2015, Beirut, Lebanon.
- AlWreikat, L., Chai, R. and **Abu-Sharkh, O.M.F.**; "Energy-Efficiency Based Resource Allocation for D2D Communication and Cellular Networks", The 4<sup>th</sup> IEEE International Conference on Big Data and Cloud Computing (BDCloud 2014), December 2014, Sydney, Australia.
- **Abu-Sharkh, O.M.F.**, Al-Hamad, A.M., Abdelrahim, T.M. and Akour, M.H.; "Dynamic Multi-band Allocation Scheme for a Stand-alone Wireless Access Point", The 26<sup>th</sup> Biennial Symposium on Communications (QBSC 2012), May 2012, Kingston, Canada.
- **Abu-Sharkh, O.M.F.**, Qandah, R., Baba, M. and Sabah M.; "Dynamic Frequency Allocation Scheme for a Standalone Wireless Access Point", The 35<sup>th</sup> IEEE Sarnoff Symposium, May 2012, Newark, NJ, USA.
- **Abu-Sharkh, O.M.F.** and Abdelhadi, M.J.; "The Impact of Multi-Rate Operation on A-MSDU, A-MPDU and Block Acknowledgment in Greenfield IEEE802.11n Wireless LANs", The 7<sup>th</sup> IEEE International Conference on Wireless Advanced (WiAd 2011), June 2011, London, UK.
- **Abu-Sharkh, O.M.F.**; "Cross-layer Design for Supporting Infrastructure and Ad-hoc Modes Integration in MIMO Wireless Networks", The 7<sup>th</sup> IEEE International Conference on Wireless Advanced (WiAd 2011), June 2011, London, UK.
- Abu-Sharkh, M.F., **Abu-Sharkh, O.M.F.**, Alkhusaibi, T.M. and Alhadi, H.S.; "False Operation of Protective Relays in Oman Electricity Power System and Its Remedies", The 12<sup>th</sup> International Middle East Power System Conference (MEPCON 2008), March 2008, Aswan, Egypt.
- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "Cross-layer-based Modeling of IEEE 802.11 Wireless LANs with MIMO Links", The IEEE Global Communication Conference (GLOBECOM 2006), November 2006, San Francisco, CA, USA.
- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "Multi-Rate 802.11 WLANs", The IEEE Global Communication Conference (GLOBECOM 2005), November 2005, St. Louis, MO, USA.

- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "Performance Analysis of Multi-Rate 802.11 WLANs Under Finite Load And Saturation Conditions", The 62<sup>nd</sup> IEEE Vehicular Technology Conference (VTC2005-Fall), September 2005, Dallas, TX, USA.
- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "A Scheduling Scheme to Enhance Throughput In Infrastructure-mode 802.11 WLANs", The International Symposium on Wireless Systems and Networks, November 2005, Dhahran, Saudi Arabia.
- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "Throughput Evaluation and Enhancement in 802.11 WLANs with Access Point", The 61<sup>st</sup> IEEE Vehicular Technology Conference (VTC2005-Spring), May 2005, Stockholm, Sweden.
- **Abu-Sharkh, O.M.F.** and Tewfik, A.H.; "A TDMA based scheduling scheme in 802.11b WLANs with Access Point", The International Conference on Information Technology: Coding and Computing (ITCC'05), April 2005, Las Vegas, NV, USA.

## **10. Supervision of Graduate Students**

- Supervising “Mustafa Alzboon” who is currently pursuing his M.Sc. degree in Electrical Engineering at Princess Sumaya University for Technology. The thesis title is “Performance Enhancement of Heterogeneous IoT Networks Using IoT Devices Equipped with Multiple Wireless Technologies”.
- Supervising “Ayat Al-Wraikat” who is currently pursuing her M.Sc. degree in Electrical Engineering at Princess Sumaya University for Technology. The thesis title is “Acknowledgment Spoofing Attack in IEEE 802.11 Wireless Local Area Networks: Detection and Mitigation”.
- Co-supervised “Layanah Al-Wreikat” along with “Dr. Rong Chai” who is an Associate Professor at Chongqing University of Posts and Telecommunications, Chongqing, China. The thesis title is “Energy Efficiency Based Resource Allocation for Cellular and D2D Communication”, 2015.
- Co-supervised “Ala’ Almomani” along with “Prof. Frank Kargl” who is the Director of the Institute of Distributed Systems at Ulm University, Ulm, Germany. The thesis title is “Adaptive Detection of Position Falsification in VANETs”, 2015.

## **11. Supervision of Undergraduate Students**

- Supervised 88 undergraduate students at PSUT while performing their two-semester Capstone Senior Design Projects. The projects are listed below.
  - The Design of an Evil Twin Detection and Mitigation System for Wi-Fi WLANs,
  - The Design of a Real-time Translation System over a Wireless Link,

- The Design of a Real-time Tracking System: A COVID-19 Application,
  - Indoor Positioning System Using Wireless Techniques,
  - Dynamic Frequency Allocation Strategy for a Stand-alone Wireless Access Point,
  - Wireless Advertising System Using Bluetooth Technology,
  - Phone Call Redirecting System,
  - Enhancing Data Transfer in Computer Networks,
  - File Transfer Protocol Using Adaptive Channel Aggregation in Wireless LANs,
  - Wireless Appliance Control Using Zigbee Technology and Microcontrollers,
  - Wireless Flash Storage Device,
  - PSUT Wireless Router Distribution,
  - Smart Control of Home Appliances Using Voice Recognition System,
  - Educational Tool for Primary Level Student,
  - Wireless LANs Operation in the 5GHz Band,
  - Wireless Information System,
  - Evaluating Several Watermarking Techniques Under Various Kinds of Attacks,
  - Performance Analysis of IEEE802.11e EDCA Access Mechanism Using NCTUNS Network Simulator,
  - DCAMP: MAC-based dynamic channel allocation protocol for Infrastructure wireless LANs,
  - The Design of Indoor Localization System of Lost Objects,
  - Design of Video and Audio Transmission System,
  - Design of an Efficient Text-voice Communication System,
  - Design of a Zigbee-Smartphone Interfacing Circuit,
  - Design of a BikeNet,
  - Design of a Hybrid Positioning System,
  - Design of an Android-based Anti-theft Application,
  - Design of a Bike Power Generator,
  - Design of an Indoor & Outdoor Vehicle Localization System,
  - Design of a Multifunctional Whiteboard.
- Supervised more than 76 undergraduate students while performing their “Practical Training”.
  - Supervised 6 executive committees of the IEEE Student Branch at PSUT (PSUT-SB) which is one of the most active student branches at the university,



Jordan and IEEE Region 8. Many activities had been conducted under my supervision from January 2010 to January 2016.

Some of the major activities and accomplishments of the branch, during my supervision, are listed in the following.

- The PSUT-SB won the R8 IEEE Regional Exemplary Student Branch Award, two times in a row, in 2010 and 2011.
- The PSUT-SB won the R8 IEEE Darrel Chong Student Activity Award in 2010.
- The PSUT-SB participated in international conferences and events such as the second and third Region 8 IEEE Middle East Student Branch Congresses held in Qatar and Lebanon, respectively, and the 8th biannual IEEE Region 8 Student Branch and GOLD Congress (SBC 2012) held in Madrid, Spain. They won prizes at the events.
- The PSUT-SB participated in conducting scientific experiments for students at several schools in Jordan. This activity is denoted by “Lab on Wheels” and it was first introduced by the IEEE Student Branch at GJU-SB.
- The PSUT-SB helped in managing international conferences and events such as AEECT 2011, 2012, and 2013.
- The PSUT-SB participated in many missions at King Hussein Cancer Center, Amman, Jordan.
- The PSUT-SB conducted many technical courses for PSUT students outside their curricula with the help of instructors from inside and outside the university and also with the help of well-known training centers in Jordan such as Better Business Training Center.
- The PSUT-SB conducted many technical seminars with the help of many professionals from well-known companies in Jordan such as Orange.
- The PSUT-SB organized the first Jordanian Student Branch Congress (JSBC), Amman, Jordan, in April 2012.
- The PSUT-SB, along with others, participated in managing the IEEE XTREME competition in Jordan.

## **12. Teaching Experience**

The courses and laboratories listed below, belong to one or more of the following programs: Communications Engineering (B.Sc.), Computer Engineering (B.Sc.), Networks & Information Security Engineering (B.Sc.), Electrical Engineering (M.Sc.), and Electrical Engineering Technology (B.Sc.) were taught.

- Advanced Wireless Networks (M.Sc.),
- Advanced Computer Networks (M.Sc.),
- Wireless Networks,
- Network Protocols,
- Computer Networks,
- Communication Networks,
- Cellular Communications,

- Telecommunications and Computer Networks,
- Digital Signal Processing,
- Analog Communications,
- Digital Communications,
- Special Topics in Communications Engineering (Wi-Fi),
- Digital Logic Design,
- Assembly Language,
- Computer Organization & Design,
- Programming Using C Language,
- Communication Networks Laboratory,
- Communications Laboratory,
- Digital Logic Design Laboratory,
- Microcontroller Systems (HCT),
- Signals & Systems (HCT),
- Control Systems (HCT),
- Applied Programming for Engineers (HCT),
- Digital Circuits (HCT),
- Health & Safety (HCT).

***Ranked one of the top faculty members in teaching at King Abdullah II School of Engineering at PSUT (according to the evaluations of students which can be provided upon request).***

### **13. Professional and Scientific Meetings/Events/Conferences**

- ***Participation in organizing scientific meetings/events/conferences,***
  - The 2011 IEEE Engineering Education Conference (EDUCON'11), Amman, Jordan, Apr 2011 (*Exhibits Chair*).
  - The First Jordanian Student Conference on Communication, Technology, and Management, Princess Sumaya University for Technology, Amman, Jordan, May 2012.
  - The First Jordanian Student Branch Congress (JSBC), Amman, Jordan, Apr 2012.
  - The 6<sup>th</sup> Jordan National Technology Parade, Mutah University, Al-Karak, Jordan, May 2013.
  - The 26<sup>th</sup> Biennial Symposium on Communications, Kingston, Canada, May 2012 (*Session Chair*).
- ***Participation in scientific meetings/events/conferences as a member of the International Advisory Committee***

- The Third International Conference on Advanced Computational and Communication Paradigms (ICACCP 2021), Sikkim, India, March 2021.
- The Second IEEE International Conference on Advanced Computational and Communication Paradigms (ICACCP-2019), Sikkim, India, Feb 2019.
- The First IEEE International Conference on Advanced Computational and Communication Paradigms (ICACCP-2017), East Sikkim, India, Sep 2017.
- ***Participation in scientific meetings/events/conferences as a member of the Technical Program Committees (TPC),***
  - The 2<sup>nd</sup> International Conference on Human-Centric Smart Computing (ICHCSC 2023), New Delhi, India, July 2023.
  - The International Conference on Applied Soft Computing and Communication Networks (ACN'23), Bangalore, India, December 2023.
  - The 5<sup>th</sup> International Conference on Computing and Network Communications (CoCoNet'23), Bangalore, India, December 2023.
  - The 10<sup>th</sup> Symposium on Control, Automation, Industrial Informatics, and Smart Grid (ICAIS'23), Bangalore, India, December 2023.
  - The 8<sup>th</sup> International Symposium on Intelligent Informatics (ISI'23), Bangalore, India, December 2023.
  - The 7<sup>th</sup> International Symposium on Intelligent Systems Technologies and Applications (ISTA'23), Bangalore, India, December 2023.
  - The 9<sup>th</sup> International Symposium on Security in Computing and Communications (SSCC'23), Bangalore, India, December 2023.
  - Symposium on VLSI Design and Embedded Computing (VDEC'23), Bangalore, India, December 2023.
  - The 11<sup>th</sup> International Conference on Mobile Services, Resources, and Users (MOBILITY 2022), Porto, Portugal, June 2022.
  - The 7<sup>th</sup> International Symposium on Intelligent Informatics (ISI'22), Trivandrum, India, August-September 2022.
  - The 9<sup>th</sup> Symposium on Control, Automation, Industrial Informatics, and Smart Grid (ICAIS'22), Trivandrum, India, August-September 2022.
  - The International Conference on Connected Systems & Intelligence (CSI'22), Trivandrum, India, August-September 2022.
  - IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT 2021), Amman, Jordan, November 2021.
  - The 11<sup>th</sup> International Conference on Mobile Services, Resources, and Users (MOBILITY 2021), Valencia, Spain, May-June 2021.
  - The 2<sup>nd</sup> International Conference on Innovative and Creative Information Technology (ICITech), Salatiga, Indonesia, September 2021.
  - The 10<sup>th</sup> International Conference on Mobile Services, Resources, and Users (MOBILITY 2020), Lisbon, Portugal, September-October 2020.

- The International Conference on Applied Soft Computing and Communication Networks (ACN'20), Chennai, India, October 2020.
- The Fourth International Conference on Computing and Network Communications (CoCoNet'20), Chennai, India, October 2020.
- The 8<sup>th</sup> Symposium on Control, Automation, Industrial Informatics and Smart Grid (ICAIS'20), Chennai, India, October 2020.
- Symposium on VLSI Design and Embedded Computing (VDEC'20), Chennai, India, October 2020.
- The 9<sup>th</sup> International Conference on Mobile Services, Resources, and Users (MOBILITY 2019), Hannover, Germany, July 2019.
- IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT 2019), Amman, Jordan, April 2019.
- The Third International Conference on Computing and Network Communications (CoCoNet'19), Trivandrum, Kerala, India, December 2019.
- The 7<sup>th</sup> Symposium on Control, Automation, Industrial Informatics and Smart Grid (ICAIS'19), Trivandrum, Kerala, India, December 2019.
- Symposium on Internet of Things, Fog Computing and Wireless Location Technologies (SIFL'19), Trivandrum, Kerala, India, December 2019.
- Symposium on VLSI Design and Embedded Computing (VDEC'19), Trivandrum, Kerala, India, December 2019.
- The 7<sup>th</sup> IEEE International Conference on Advances in Computing, Communications, and Informatics (ICACCI'18), Bangalore, India, September 2018.
- The 6<sup>th</sup> International Symposium on Control, Automation, Industrial Informatics and Smart Grid (ICAIS'18), Bangalore, India, September 2018.
- The 5<sup>th</sup> International Symposium on Intelligent Informatics (ISI'18), Bangalore, India, September 2018.
- The 8<sup>th</sup> International Conference on Mobile Services, Resources, and Users (MOBILITY 2018), Barcelona, Spain, July 2018.
- The 4<sup>th</sup> International IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2017), Aqaba, Jordan, October 2017.
- The International Conference on New Trends in Computing Sciences (ICTCS 2017), Amman, Jordan, October 2017.
- The 6<sup>th</sup> IEEE International Conference on Advances in Computing, Communications, and Informatics (ICACCI'17), Manipal, Karnataka State, India, September 2017.
- The 3<sup>rd</sup> International Symposium on Emerging Topics in Circuits and Systems (SET-CAS'17), Manipal, Karnataka State, India, September 2017.
- The 5<sup>th</sup> International Symposium on Intelligent Informatics (ISI'17), Manipal, Karnataka State, India, September 2017.

- The 5<sup>th</sup> Symposium on Control, Automation, Industrial Informatics and Smart Grid (ICAIS'17), Manipal, Karnataka State, India, September 2017.
- The 6<sup>th</sup> International Conference on Electronics, Communications, and Networks (CECNET 2016), Macau, China, December 2016.
- The 5<sup>th</sup> IEEE International Conference on Advances in Computing, Communications, and Informatics (ICACCI'16), Jaipur, India, September 2016.
- The 4<sup>th</sup> International Symposium on Intelligent Informatics (ISI'16), Jaipur, India, September 2016.
- The 2<sup>nd</sup> International Symposium on Emerging Topics in Circuits and Systems (SET-CAS'16), Jaipur, India, September 2016.
- The 9<sup>th</sup> Jordan National Technology Parade (NTP 2016), Al-Ahliyya Amman University, Amman, Jordan, May 2016.
- The 5<sup>th</sup> International Conference on Electronics, Communications, and Networks (CECNET 2015), Shanghai, China, December 2015.
- The International Conference on Computing and Network Communications (CoCoNet'15), Symposium on Embedded Systems, Robotics, and Automation (ESRA'15), Trivandrum, India, December 2015.
- The 3<sup>rd</sup> International IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2015), Dead Sea, Jordan, November 2015.
- The Central Asian Symposium on Embedded Systems and VLSI, Astana, Kazakhstan, November 2015.
- The 1<sup>st</sup> International Symposium on Emerging Topics in Circuits and Systems (SET-CAS'16), Kochi, Kerala, India, August 2015.
- The 4<sup>th</sup> International Conference on Electronics, Communications, and Networks (CECNET 2014), Beijing, China, December 2014.
- The 2<sup>nd</sup> International IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2013), Amman, Jordan, December 2013.
- The 5<sup>th</sup> Jordan National Technology Parade (NTP 2012), Hashemite University, Al-Zarqa, Jordan, May 2012.
- The 1<sup>st</sup> International IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2011), Amman, Jordan, December 2011.
- The 4<sup>th</sup> Jordan National Technology Parade (NTP 2011), Philadelphia University, Amman, Jordan, May 2011.
- The 3<sup>rd</sup> Jordan National Technology Parade (NTP 2010), Jordan University for Science and Technology, Irbid, Jordan, May 2010.
- The 1<sup>st</sup> IEEE Middle East Student Branch Congress (ME-SBC 2009), Amman, Jordan, May 2009.
- The 5<sup>th</sup> IEEE International Multi-Conference on Systems, Signals, and Devices (SSD 2008), Amman, Jordan, July 2008.

- ***Participation in meetings/events/conferences by presenting and discussing obtained results of the conducted research,***

- The 6<sup>th</sup> International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2019), September 18-20, 2019, Bandung, Indonesia.
- The 3<sup>rd</sup> International Conference on Recent Advances in Signal Processing, Telecommunications & Computing (SigTelCom 2019), March 21–22, 2019, HaNoi, Vietnam.
- The 2016 International Conference on Computational Science and Computational Intelligence (CSCI'16), Las Vegas, NV, USA, December 2016.
- The 12<sup>th</sup> International Conference on Frontiers in Education: Computer Science & Computer Engineering within The 2016 World Congress in Computer Science, Computer Engineering, & Applied Computing, Las Vegas, NV, USA, July 2016.
- The 4<sup>th</sup> IEEE International Conference on Big Data and Cloud Computing (BdCloud 2014) & the 4<sup>th</sup> IEEE International Conference on Sustainable Computing and Communications (SustainCom 2014), Sydney, Australia, December 2014.
- The 26<sup>th</sup> Biennial Symposium on Communications, Kingston, Canada, May 2012.
- The 35<sup>th</sup> IEEE Sarnoff Symposium, Newark, NJ, USA, May 2012.
- The 7<sup>th</sup> IEEE International Conference on Wireless Advanced, London, UK, June 2011.
- The 16<sup>th</sup> International Conference on Analytical and Stochastic Modelling Techniques and Applications, Madrid, Spain, June 2009.
- IEEE Globecom Conference, San Francisco, CA, USA, November 2006.
- IEEE Globecom Conference, St Louis, MO, USA, November 2005.
- The 62<sup>nd</sup> IEEE Vehicular Technology Conference (VTC), Dallas, TX, USA, September 2005.

- ***Participation in organizing and conducting scientific workshops,***

- A workshop has been organized and conducted for engineering students on performing Engineering Senior Design Project according to ABET requirements at PSUT in Fall 2016.
- A workshop has been organized and conducted for engineering students on performing Engineering Senior Design Project according to ABET requirements at PSUT in Spring 2017.
- A workshop has been organized and conducted by the administrating staff (Dean and heads of departments) of King Abdullah II School of Engineering for the faculty on ABET at PSUT in Fall 2016.

- ***Participation as a member of the Evaluation Committee of the Master's thesis defenses of the following theses at PSUT,***
  - “Online Security Protocols for NFC Mobile Payment Applications” by Mayada A. Al-Tamimi (January 2017).
  - “Impact of Co-Channel Interference on Performance of Multi-Hop Wireless Ad-hoc Networks with Cooperative Diversity” by Arwa M. Jwaifel (April 2016).
  - “Performance of Double-Weibull FSO System with Pointing Error and Channel Conditions” by Salah Al-Deen Almousa (December 2015).
- ***Participation as an external examiner and a member of the Evaluation Committee of the Master's thesis defenses of the following theses at national universities in Jordan,***
  - “An Enhanced Hybrid Transport Layer Protocol for H.264 HD Video Streaming over WLANs” by Nawal S. Al-Sboul at University of Jordan (December 2015).
  - "The Effect of Bandwidth of Passive Devices on System Performance in a Hybrid Optical Communication System" by Mais W. Mohammed at Al-Ahliyya Amman University (March 2015).
  - “Improving Quality of Service in Wireless Cognitive Radio Networks Through Cross Layer Design” by Mohammed N. Al-Damluj at Al-Ahliyya Amman University (November 2014).
  - “Designing Long Term Evolution System to Cover West Amman and Calculating the system performance” by Mohannad M. Al-Rawi at Al-Ahliyya Amman University (November 2014).
  - “Performance Enhancement of Relaying Technology in Wireless Communication Systems” by Zaid A. Shafeeq at Al-Ahliyya Amman University (June 2014).
  - “A Credit System for Peer-to-peer Networks” by Loqman R. As-Sayid Ahmad at University of Jordan (November 2009).

#### **14. Reviewer**

1. Wireless Networks Journal, Springer,
2. Journal of Networks and Computer Applications, Elsevier,
3. IEEE Transactions on Intelligent Transportation System, IEEE,
4. Computer Networks Journal, Elsevier,
5. Jordanian Journal of Computers and Information Technology,
6. Several international conferences.

#### **15. Membership in Professional Committees**

- Serves as a Chair member of the Scientific Research Committee at King Abdullah II School of Engineering since Sep 2021.
- Serves as a Chair member of the Student Disciplinary Committee at King Abdullah II School of Engineering since Sep 2021.

- Serves as a Chair member of the Student Concern Committee at King Abdullah II School of Engineering since Sep 2021.
- Serves as a Chair member of the Grade Review Committee at King Abdullah II School of Engineering since Sep 2021.
- Serves as a member of the Academic Quality Assurance Committee at King Abdullah II School of Engineering since Sep 2021.
- Serves as a member of the Health Insurance Committee for Employees at PSUT since Sep 2021.
- Serves as a member of the Health Insurance Committee for Students at PSUT since Sep 2021.
- Served as a member of the Committee which is responsible for establishing the B.Sc. program in Internet of Things - Communications Engineering in 2020/2021.
- Served as a member of the Electrical Engineering Department – Graduate Studies Committee for the academic year 2020/2021.
- Served as a member of the Quality Assurance Committee at the Computer Engineering Department for the academic year 2020/2021.
- Served as a member of the Committee which is responsible of reviewing the Program Educational Objectives (PEOs) and Student Outcomes (SOs) of the M.Sc. program in Electrical Engineering in 2021.
- Serve as a member of the Committee which is responsible of applying for the quality assurance certificate for the Computer Engineering Program in 2021.
- ***Served as a Co-Chair of the ETS - Divisional Promotion Committee at Higher Colleges of Technology in 2018/2019. The committee is responsible for promoting faculty members in the College of Engineering Technology & Science in the 16 campuses of HCT in UAE.***
- Served as a member of the ETS - Divisional Promotion Committee at Higher Colleges of Technology in 2017/2018. The committee is responsible for promoting faculty members in the College of Engineering Technology & Science in the 16 campuses of HCT in UAE.
- Served as a member of the Blended Learning Evaluation Committee at Higher Colleges of Technology in 2017/2018 and 2018/2019.
- Served as a member of the Program Academic Committee (PAC) of the Electrical Engineering Technology Program at Higher Colleges of Technology in 2018/2019 and 2019/2020.
- Served as a member of the Recruiting Committees of Electrical Engineering Staff at Higher Colleges of Technology in 2018/2019 and 2019/2020.
- Served as a Chair member of the Communications Engineering Department Council for the academic year 2016/2017.
- Serves as a member of the Computer Engineering Department Council since 2014.



- Served as a member of the Scientific Research Council of the university for the academic year 2016/2017.
- Served as a member of the Electrical Engineering Department - Higher Education Committee for the academic year 2016/2017.
- Served as a member of the Committee which is responsible of establishing and developing the B.Sc. program in Networks and Information Security Engineering since 2014.
- Served as a member of the Committees which are responsible of the continuous development of the B.Sc. programs in Communications Engineering and Computer Engineering within the Communications and Computer Engineering Departments, respectively, since 2007.
- Served as a member of the Committee which is responsible of the continuous development of the M.Sc. program in Electrical Engineering in 2012-2014 and 2016-2017.
- Served as a member of the King Abdullah II School of Engineering Council for the academic year 2016/2017.
- Served as a Chair member of the committee which is responsible of updating the equipment and training kits of the Communications Engineering Laboratories in 2017.
- Served as a Chair member of the Faculty Appointment Committee at the Communications Engineering Department in 2017.
- Served as a member of the promotion committee within the King Abdullah II School of Engineering Council for the academic year 2016/2017.
- Served as a member of the Electrical Engineering Department – Graduate Studies Committee for the academic year 2016/2017.
- Served as a mentor for the Engineering Student Advisory Committee for ABET accreditation for the academic year 2016/2017.
- Served as a member of the Engineering Industrial Advisory Committee for ABET accreditation since 2012.
- Served as a member of the Communications Engineering Department ABET Accreditation Committee since 2012.
- Served as a member of The King Abdullah II School of Engineering ABET Accreditation Committee since 2012.
- Served as a member of the ABET Joint Accreditation Committee from 2012 to 2014.
- Served as a member of The King Abdullah II School of Engineering - Higher Education Committee from 2012 to 2014.
- Served as a member of The Higher Education Committee of the university from 2009 to 2010.
- Served as a Chair member of the Communications Engineering Department Council from 2012 to 2014.

- Served as a member of the Communications Engineering Department Council from 2007 to 2012.
- Served as a member of the King Abdullah II School of Engineering Council from 2007 to 2008.
- Served as a member of the King Abdullah II School of Engineering Council from 2012 to 2014.
- Served as a member of the Faculty Appointment Committee at the Communications Engineering Department in 2011.
- Served as a member of the Faculty Appointment Committee at the Computer Engineering Department in 2016.
- Served as a member of the Appointment Committee at the PSUT Computer & Training Center in 2012.
- Served as a member of the committee which is responsible for the evaluation and accreditation of the Communication and Computer Engineering Program at the Al-Zaytoonah University of Jordan. The committee had been formed by the Accreditation and Quality Assurance Commission for Higher Education Institutions in Jordan in 2012.

#### **16. ABET Accreditation Related Services**

An anchor and responsible person for ABET (Accreditation Board for Engineering & Technology) accreditation activities in the Communications Engineering Department as well as the School of Engineering since 2011. The efforts led to the **first-time** accreditation of three Electrical Engineering programs: Communications Engineering, Computer Engineering, and Electronics Engineering at the School of Engineering at PSUT. It is worth mentioning that the three programs are the **only** ABET-accredited programs in these specific specializations in Jordan. The accreditation activities were very demanding and they needed a lot of time and effort to be done. Some of my accomplishments related to the accreditation activities are listed below.

- Led the Communications Engineering Department and the Accreditation Committee to successfully achieve the ABET accreditation for the Communications Engineering Program for the first time at PSUT and Jordan.
- Participated actively as a member in the Accreditation Committees of the School of Engineering to successfully achieve the ABET accreditation for the Computer Engineering program and the Electronics Engineering program for the first time at PSUT and Jordan.
- Participated in all the committees related to ABET accreditation in Engineering.
- Developed and implemented the process of determining the Program Educational Objectives (PEOs) and Student Outcomes (SOs) for the Communications Engineering Program.
- Prepared the Self Study Report for the Communications Engineering program.

- Modified the Communications Engineering Curriculum according to the ABET requirements along with members of the Communications Engineering Department and the School of Engineering.
- Developed and conducted Surveys to assess several parts of the Communications Engineering, Computer Engineering and Electronics Engineering programs. The target groups were faculty members, students and people from industry.
- Developed many processes and forms to simplify and systemize the ABET accreditation process at the School of Engineering.
- Provided a documentation (report), according to ABET requirements, for a Senior Design Project which I supervised that was given to the students as a sample documentation at the School of Engineering.
- Developed a recent template for the documentation of the Senior Design Project along with members of the School of Engineering.
- Conducted various workshops and seminars for the faculty members and students in the School of Engineering related to the ABET accreditation process.

**17. References: Available Upon Request**