

Dr. Ala' Khalifeh

Associate Professor, Vice-dean, Deanship of Innovation, Technology Transfer and Entrepreneurship (DI-TECH).

Electrical Eng. Department, Faculty of Electrical Eng. and Information Technology, German Jordanian University, Amman- Jordan

GJU webpage:

http://www.gju.edu.jo/content/dr-ala%E2%80%99-khalifeh-1363 Email: ala.khalifeh@gju.edu.jo

Google scholar:

https://scholar.google.com/citations?user=sHJovAQAAAAJ&hl=en&oi=ao

- Scopus
 - https://www.scopus.com/authid/detail.uri?authorId=23004872200

Web of Science

 https://www.webofscience.com/wos/author/record/ACU-7567-2022

Orcid

• https://orcid.org/0000-0003-3600-8090

Selected videos:

NATO SPS project:

- https://www.youtube.com/watch?v=J9_FWiR6Sd8
- Distinguished Achievements/awards
 - http://www.gju.edu.jo/ar/node/8880
 - https://www.afcea.org/site/40U40Winners
 In the TV
 - https://www.youtube.com/watch?v=3BDIuleHoBE
 - https://www.youtube.com/watch?v=hrxwHqWxlQM
 - https://www.youtube.com/watch?v=5GHgzNIDAxA

Biographical Sketch

Dr. Khalifeh received his Bachelor and master's degrees from the University of Jordan in 2001, 2004, respectively, after that; Dr. Khalifeh received the prestigious Fulbright scholarship in 2005, which enabled him to pursue his PhD degree from the University of California- Irvine in the US. While pursuing his PhD degree, and due to his excellent leadership and academic merits, Dr. Khalifeh was awarded several fellowships and scholarships such as: The Center for Pervasive Communications and Computing fellowship, the Pedagogical Fellow (PF) from 2008-2009, Phi Beta Kappa (PBK) Alumni Award in 2008. As the Fulbright program aims at transferring the gained knowledge to the participating countries. In 2010, Dr. Khalifeh went back to the Arab developing countries, after finishing his PhD, to transfer the obtained knowledge, skills, and education to the Arabic students and community. Consequently, Dr. Khalifeh Joined the German University in Cairo (GUC) in 2010, then he moved to the German Jordanian University (GJU) in Jordan, where he was appointed in the faculty of Electrical Eng. and Information Technology as a faculty member. Currently he is associated professor and is the vice-dean for the Deanship of Innovation, Technology Transfer and Entrepreneurship (DI-TECH). In 2021, Dr. Khalifeh became a fellow in the leader of innovation fellowship program (LIF), managed by the Royal academy of Engineering- UK. During his service at GJU, he was awarded two distinguished prizes, the first one is the GJU excellence award for research, which was awarded to him in 2015, due to his contributions in applied research. The second award entitled as GJU excellence award for industrial collaboration, which was granted to him due to his efforts in establishing connections with the industry. In 2015, Dr. Khalifeh received the Arab-American frontiers of science, engineering, and medicine fellowship.

In addition, Dr. Khalifeh is active in voluntary and service work, as he served as the IEEE Communication Society chapter chair- Jordan section from 2014-2017, the IEEE Secretary-General Activities, GJU IEEE student branch councilor from 2017-2019. Recently, he was elected as the IEEE Jordan section Chair for the period from 2020

to 2021 and recently re-elected for another round 2022-2024. Furthermore, Dr. Khalifeh has been recently awarded the Young AFCEA 40 under 40 international award from AFCEA-USA for his significant contributions in a technical science, technology, engineering and mathematics (STEM) field by providing innovation, thought leadership, and support to the Jordanians clients and organizations using information technology (IT). In the past period, Dr. Khalifeh has been awarded several research grants, where he used it to verify the research results by having prepared a prototype of the developed research work, from which he started several entrepreneurial activities and work, and because of that, Dr. Khalifeh has been awarded in the field of entrepreneurship, industrial links, and innovations. Mainly Dr. Khalifeh received the 1st place in Queen Rania National Entrepreneurship Competition (QRNEC). 2016, GJU award for industrial links 2016, GJU best researcher award, 2015, the Arab Technology Business Plan Competition (2014, 2nd place), the U.S. Department of State's Global Innovation through Science and Technology (GIST, Tech-I) Competition (2013, 3rd place), and ArabNet Ideathon competition (2011, 1st place). Dr. Khalifeh is interested in bridging the gap between the academic institutes and the industry by continuously working toward establishing links and joints programs with them, and by encouraging students to be innovative and entrepreneurs. Dr. Khalifeh's research is in the field of Wireless sensor networks, IoT and networking. He has published more than 115 Scopus indexed conference and Journal papers.

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WORK EXPERIENC

PERSONAL

INFORMATION

1/07/2018– Present

Vice-dean, Deanship of Innovation, Technology Transfer and Entrepreneurship (DI-TECH).

Associate Professor in the faculty of Electrical Engineering and Information Technology

German Jordanian University, Amman (Jordan)

1. Responsible for managing all related activities and tasks to innovation, Intellectual Property and Entrepreneurship at the , Deanship of Innovation, Technology Transfer and Entrepreneurship (DI-TECH)- German Jordanian University such as: Drafting the instructions and regulations for the IP, incubation and spin-offs. Arranging work ships and hackathons, meet different stakeholders from the Entrepreneurship echo-system.

2. Responsible for teaching several computer and communication courses such as:(Electronics, Digital and Analog communication, numerical analysis and linear algebra, computer networks, computer programming using C and Java, Multimedia Eng., Cloud computing, real-time computer interfacing).

3. Responsible for teaching several master's degree courses such as: The Internet of Things, Cloud computing and Big Data, Computer networks.

4. Conducting research in the field of the Internet of Things, Wireless sensor networks, wireless communication, multimedia, and computer networking.

5. Supervising graduate students to complete their MSc Thesis.

6. Supervising undergraduate students to complete their BSc Thesis.

01/02/2012– Assistant Professor in the faculty of Electrical Engineering and Information Technology

01/07/2018

German Jordanian University, Amman (Jordan)

1. Responsible for teaching several computer and communication courses such as:(Electronics, Digital and Analog communication, numerical analysis and linear algebra, computer networks, computer programming using C and Java,

Multimedia Eng., Cloud computing, real-time computer interfacing).2. Responsible for teaching several master's degree courses such as: The Internet of Things, Cloud computing and Big Data, Computer networks.

3. Conducting research in the field of the Internet of Things, Wireless sensor networks, wireless communication, multimedia, and computer networking.

3. Supervising graduate students to complete their MSc Thesis.

4. Supervising undergraduate students to complete their BSc Thesis.

01/09/2010– Assistant Professor in the faculty of Media Engineering and Technology 01/02/2012

German University in Cairo, Cairo (Egypt)

Worked as an Assistant Professor in the faculty of Media Engineering and Technology

1. Responsible for teaching several networking and multimedia courses such as: Multimedia and networking, audio and video technologies, Voice over IP (VoIP), audio and acoustics, computer networks, operating systems).

2. Conducting research in the field of multimedia and networking.

3. Supervising undergraduate/graduate students to complete their BSc/MSc Thesis

Teaching	National level		
activities	A In the past years I have tought the following source at the Connect I his south in Coine and the Connect		
	Jordanian University.		
	BSC level: Computing Fundamentals, Linear Algebra and Numerical Analysis, Communication Transmission Systems, Communication Networks, Digital Communication Systems, Digital Signal Processing, Analog Communication Systems Electronics 1, Microcomputer Interface and Peripheral Devices, Audio and acoustics, Multimedia systems.		
	 MSC level: Special Topics In Computer Engineering- Cloud computing and Big data, Real-time and Multimedia Communication over Internet 		
	International level		
	I have participated in several international events where I have taught crash courses. I have participated in the following events:		
	International Week at HSB Bremen, Germany (2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)		
	Taught crash courses in the following topics: Audio signal processing and transmission, Multimedia signal processing, VoIP technology, Multimedia streaming and cloud computing.		
	In Jun 7, 2019, I conducted a crash course (Computer Networking for Automotive Industry) at University of Upper Austria- Wels campus for the MSC students enrolled in the master's in automotive Mechatronics & Management program.		
Industrial Experience			
Experience	Technical and research development manager		
01/02/2001– 01/08/2005	Quick Internet Service Provider, Amman (Jordan)		
	Responsible for administrating and running the technical department, developing, and implementing new services and projects. Also acted as the contact person for the technical issues with the company's main branch in the United States and the Jordanian Telecommunications company.		
EDUCATION	Ph.D. in Electrical and Computer Engineering		
	University of California-Irvine, Irvine (United States)		
TRAINING	Ph.D. in Electrical and Computer Engineering		
01/10/2005– 01/10/2010	Dissertation topic: Apparatus and techniques for improving audio and voice transmission over noisy wireless links. Advisor: Prof. Homayoun Yousefi'zadeh		
01/09/2001– 01/02/2004	Master of Science in Electrical Engineering University of Jordan, Amman (Jordan)		
	Thesis topic: Performance Evaluation of VoIP under different QoS routing algorithms		
01/09/1996-	Bachelor of Science in Electrical Engineering		
01/01/2001	University of Jordan, Amman (Jordan)		
additional Information			
Publications	Book chapters		
	Abualigah, L., Mirjalili, S., Abd Elaziz, M., Jia, H., Şahin, C. B., Khalifeh, A. & Gandomi, A. H. (2022). Hybrid Aguila Optimizer with Moth-Flame Optimization Algorithm for Global Optimization. In		

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 A. Khalifeh, Gupta, M., Almomani, O., Khasawneh, A. M., & Darabkh, K. A. (2022). Smart remote sensing network for early warning of disaster risks. In Nanotechnology-Based Smart Remote Sensing Networks for Disaster Prevention (pp. 303-324). Elsevier.
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- M. Z. Mouasher, A. Khalifeh, "Quality Analysis of VoIP in Real-Time Interactive Systems over Lossy Networks, Book chapter (pages 261-274) from " "Handbook of Research on Interactive Information Quality in Expanding Social Network Communications." IGI Global, 2015.1-435. Web. 6 Jul. 2015. doi:10.4018/978-1-4666-7377-9
- A. Khalifeh, K. Darabkh," Current Challenges and Opportunities in VoIP over Wireless Networks", Mobile Multimedia - User and Technology Perspectives", Book chapter, ISBN 978-953-307-908-0, InTech publishers, 2012.

Journal papers

- A. Almasri, A. Khalifeh, and S. Al-Agtash. "SCSAP: Spiral Clustering Based on Selective Activation Protocol for industrial tailored WSNs." *Journal of Industrial Information Integration* 27 (2022): 100332.
- Khalifeh, A., AlQammaz, A. Y., Abualigah, L., Khasawneh, A. M., & Darabkh, K. A. A machine learning-based weather prediction model and its application on smart irrigation. Journal of Intelligent & Fuzzy Systems, (Preprint), 2022, 1-8.
- D. e. D. I. Abou-Tair and A. Khalifeh, "Distributed Self-Sovereign-Based Access Control System," in IEEE Security & Privacy, 2022, doi: 10.1109/MSEC.2022.3148906.
- Darabkh, K. A., Al-Akhras, M., A. Khalifeh., Jafar, I. F., & Jubair, F. (2022). An Innovative RPL Objective Function for Broad Range of IoT Domains Utilizing Fuzzy Logic and Multiple Metrics. *Expert Systems with Applications*, 2022, 117593.
- H. Baniabdelghany, R. Obermaisser and A. Khalifeh, "Reliable Task Allocation for Time-Triggered IoT-WSN using Discrete Particle Swarm Optimization," in *IEEE Internet of Things Journal*, doi: 10.1109/JIOT.2021.3132452.
- Z. Zinonos, S. Gkelios, A. Khalifeh, D. G. Hadjimitsis, Y. S. Boutalis and S. A. Chatzichristofis, "Grape Leaf Diseases Identification System Using Convolutional Neural Networks and LoRa Technology," in IEEE Access, vol. 10, pp. 122-133, 2022, doi: 10.1109/ACCESS.2021.3138050.
- Khalid A. Darabkh, Muna Al-Akhras, A. Khalifeh, Iyad F. Jafar, Fahed Jubair, An Innovative RPL Objective Function for Broad Range of IoT Domains Utilizing Fuzzy Logic and Multiple Metrics, Expert Systems with Applications, https://doi.org/10.1016/j.eswa.2022.117593.
 Darabkh, Khalid A., Bayan Z. Alkhader, Khalifeh A., Fahed Jubair, and Mohammad Abdel-Majeed.
 "ICDRP-F-SDVN: An innovative cluster-based dual-phase routing protocol using fog computing and software-defined vehicular network." Vehicular Communications (2022): 100453.
- Khalifeh, A., Alakappan, K., Sathish Kumar, B.K. et al. A Simulation Analysis of LEDs' Spatial Distribution for Indoor Visible Light Communication. Wireless Pers Commun 122, 1867–1890 (2022). https://doi.org/10.1007/s11277-021-08972-5
- Khasawneh, A.M., Altalhi, M., Kumar, A., Aggarwal, G., Kaiwartya, O., Khalifeh, A., Al-Khasawneh, M.A. and Alarood, A.A., 2021. An Efficient Void Aware Framework for Enabling Internet of Underwater Things. Journal of Marine Science and Engineering, 9(11), p.1219.
- Charilaou, Christia, Spyros Lavdas, A. Khalifeh, Vasos Vassiliou, and Zinon Zinonos. "Firmware Update Using Multiple Gateways in LoRaWAN Networks." Sensors 21, no. 19 (2021): 6488.
- Wazirali, R., Ahmad, R., Al-Amayreh, A., Al-Madi, M., Khalifeh, A. "Secure watermarking schemes and their approaches in the iot technology: An overview", Electronics 2021, 10(14), 1744
- Khalifeh, A., Saadeh, M., Darabkh, K.A., Nagaradjane, P. "Radio frequency based wireless charging for unsupervised clustered WSN: System implementation and experimental evaluation", Energies, 2021, 14(7), 1829
- Khalifeh, A., Mansour, M., Alouneh, S., "QUIC transmission protocol: Test-bed design, implementation and experimental evaluation", Journal of Electrical Engineering, 2021, 72(1), pp. 20– 28
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- Darabkh, K.A., Zomot, J.N., Al-qudah, Z., Khalifeh, A., "Impairments-aware time slot allocation model for energy-constrained multi-hop clustered IoT nodes considering TDMA and DSSS MAC protocols", Journal of Industrial Information Integration, 2021, 100243.
- Khalifeh, A., Khaled Aldahdouh, and Sahel Alouneh. "LoRaWAN Energy Optimization with Security Consideration." Int. Arab J. Inf. Technol 18 (2021): 476-483.
- Alkasassbeh, Jawdat, Aws Al-Qaisi and A. Khalifeh. "BER Performance Using Linear Phase Orthogonal Binary Codes for Multi-users Mobile Communication." *Wireless Personal Communications* (2021): 1-16.
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- Ahmad, R., & Sundararajan, E. A., Khalifeh, A. (2020). A survey on femtocell handover management in dense heterogeneous 5G networks. *Telecommunication Systems*, 1-27.
- Bartolini, N., Coletta, A., & Maselli, G., Khalifeh, A. (2020). A Multi-Trip Task Assignment for Early Target Inspection in Squads of Aerial Drones. *IEEE Transactions on Mobile Computing*.
- Dhiah el Diehn, I., Khalifeh, A., Alouneh, S., & Obermaisser, R. (2020). Incremental, Distributed, and Concurrent Service Coordination for Reliable and Deterministic Systems-of-Systems. *IEEE Systems Journal*.
- Khasawneh, A. M., Kaiwartya, O., Khalifeh, A., Abualigah, L. M., & Lloret, J. (2020). Green Computing in Underwater Wireless Sensor Networks Pressure Centric Energy Modelling. IEEE Systems Journal.
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- R Balakrishnan, P Nagaradjane, A. Khalifeh, Guest Editorial: Future of Intelligent Wireless LANs, IET COMMUNICATIONS 13 (19), 3125-3126
- Khalifeh, A.; Rajendiran, K.; Darabkh, K.A.; Khasawneh, A.M.; AlMomani, O.; Zinonos, Z. On the Potential of Fuzzy Logic for Solving the Challenges of Cooperative Multi-Robotic Wireless Sensor Networks. Electronics 2019, 8, 1513.
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- Khalifeh, A., AlFasfous, N., Theodory, R., Giha, S., & Darabkh, K. A. (2018). An experimental evaluation and prototyping for visible light communication. *Computers & Electrical Engineering*, 72, 248-265.
- S. Althunibat, A. Khalifeh, and R. Mesleh. "On the performance of wireless sensor networks with QSSK modulation in the presence of co-channel interference." Telecommunication Systems, Volume 68, Issue 1, pp 105–113, 2017
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- K. Darabkh, J. Al-Maaitah, I. Jafar, and A. Khalifeh," EA-CRP: A Novel Energy-aware Clustering and Routing Protocol in Wireless Sensor Networks", Computers & Electrical Engineering, (2017).
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- M. AlTaee , A. Khalifeh, A. Mershed A Testbed for Experimental Evaluation of Efficient Multimedia Delivery over Lossy Networks". International Journal of Digital Signals and Smart Systems, Vol. 1, No. 1, 2017.

- F. Bagci, A. Khalifeh, "Cluster Communication Protocol for Wireless Sensor Networks", Int. J. Sensor Networks, Inderscience, Vo.20 No. 2, 2016
- K. Darabkh, A. Awad and A. Khalifeh, "New video discarding policies for improving UDP performance over wired/wireless networks", International Journal of Network Management, Volume 25, Issue 3, pages 181–202, Wiley publishers, May/June 2015.
- K. Darabkh, A. Awad, A. Khalifeh, "Efficient PFD-Based Networking and Buffering Models for Improving Video Quality over Congested Links", Wireless Personal Communications: Volume 79, Issue 1, Page 293-320, Springer publisher, 2014.
- K. Darabkh, A. khalifeh, Baraa A. Bathech, and Saed W. Sabah,"A Yet Efficient Communication System with Hearing-Impaired People Based on Isolated Words of Arabic Language", International Journal of Computer Science, 2013.
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- A. Khalifeh, A. El-Mousa," Performance Evaluation of VoIP using Shortest-Widest and Modified Widest-Shortest QoS Routing Algorithms", Lecture Notes in Engineering and Computer Science Year: 2007 Vol: 2165 Issue: 1 Pages/record No.: 232-237.

Conferences/workshops

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- Alouneh, S., Khalifeh, A., Dhiah El Diehn, I., Aldahdouh, K., & Al-Hawari, F. (2021, December). An Open Source LoRaWAN Simulator Framework for the Internet of Things Applications. In 2021 8th International Conference on Internet of Things: Systems, Management and Security (IOTSMS) (pp. 1-5). IEEE.
- Khalifeh, A., Alqudah, M., & Alouneh, S. (2022, April). An Optimal Cluster Head Selection in Wireless Sensor Network Utilizing an Unsupervised Learning Algorithm. In 2022 2nd International Conference on Computing and Machine Intelligence (ICMI) (pp. 1-5). IEEE.
- M. Almana'seh, A. Khalifeh and A. Ghraybeh, "A Wake-up Receiver Sensor Node Model for WSNs," 2021 3rd IEEE Middle East and North Africa COMMunications Conference (MENACOMM), 2021, pp. 158-163.
- Yousef O. Sharrab, Sana'a Al-shboul, Mohammad Alsmira, A. Khalifeh, Zyad Dwekat;Izzat Alsmadi;Ahmad Al-Khasawneh "Performance Comparison of Several Deep Learning-Based Object Detection Algorithms Utilizing Thermal Images," 2021 Second International Conference on Intelligent Data Science Technologies and Applications (IDSTA), 2021, pp. 16-22.
- A. Khalifeh, A. Alsaid, D. Khankan, K. A. Darabkh and Z. Zinonos, "A New Approach Towards LoRa Wireless Technology Parameters' Selection," 2021 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), 2021, pp. 283-287.
- K. A. Darabkh, M. Al-Akhras and A. Khalifeh, "Improving Routing Protocol for Low-Power and Lossy Networks over IoT Environment," 2021 30th Wireless and Optical Communications Conference (WOCC), 2021, pp. 31-35.
- Baniabdelghany, H., Obermaisser, R., Khalifeh, A., "A Reliable Job Allocation Scheduler for Time-Triggered Wireless Networks", Proceedings - 2021 IEEE 24th International Symposium on Real-Time Distributed Computing, ISORC 2021this link is disabled, 2021, pp. 1–10, 9470339
- Khalifeh, A., Al-Qammaz, A., Darabkh, K.A., Khasawneh, A.M., Zinonos, Z., "An AI Based Irrigation and Weather Forecasting System utilizing LoRaWAN and Cloud Computing Technologies", Proceedings of the 2021 IEEE Conference of Russian Young Researchers in Electrical and Electronic Engineering, ElConRus 2021, 2021, pp. 443–448, 9396431.
- Khalifeh, A., AlQammaz, A., Darabkh, K.A., Sha'ar, B.A., Ghatasheh, O., "A Framework for Artificial Intelligence Assisted Smart Agriculture Utilizing LoRaWAN Wireless Sensor Networks", Advances in Intelligent Systems and Computing, 2021, 1222 AISC, pp. 408–421.
- Darabkh, K.A., Alsheikh, R.M., Haddad, R.F., Khalifeh, A., "Scene Change Based Video Watermarking Algorithm", 2020 International Conference on Innovation and Intelligence for Informatics, Computing and Technologies, 3ICT 2020, 2020, 9311977.
- Alaeddin, F., Khalifeh, A., Darabkh, K.A., "An Overview on Big Data Mining Using Evolutionary Techniques", 2020 International Conference on Innovation and Intelligence for Informatics,

Computing and Technologies, 3ICT 2020, 2020, 9312016.

- An Experimental Evaluation of the Khalifeh, A., Alsyayid, F., Armoush, H., Darabkh, K.A., "Advanced Encryption Standard Algorithm and its Impact on Wireless Sensor Energy Consumption", 2020 International Conference on Innovation and Intelligence for Informatics, Computing and Technologies, 3ICT, 2020, 2020, 9312023.
- Mashalh, O., Gharaibeh, A., & Khalifeh, A. (2019, October). Bandwidth Usage Forecasting and Network Anomaly Detection Based on Neural Network Approach. In *Proceedings of the 2019 3rd International Conference on Advances in Artificial Intelligence* (pp. 42-46).
- Khalifeh, A., Bartolini, N., Silvestri, S., Bongiovanni, G., Al-Assaf, A., Alwardat, R., & Alhaj-Ali, S. (2019, September). Hybrid wireless sensor networks: A prototype. In *IFIP Conference on Human-Computer Interaction* (pp. 549-553). Springer, Cham.
- Ishaq, I., Jayousi, R., Odeh, S., Edwan, E., Shaheen, A., Elnaggar, M., ... & Khalifeh, A. Kirner, R. (2019, October). Work in Progress–Establishing a Master Program in Cyber Physical Systems: Basic Findings and Future Perspectives. In 2019 International Conference on Promising Electronic Technologies (ICPET) (pp. 4-9). IEEE.
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- Amal Almasri, A. Khalifeh, and Khalid A. Darabkh, "A Comparative Analysis for WSNs Clustering Algorithms," In proceedings of the Sixth International Workshop on Internet of Things: Networking Applications and Technologies (IoTNAT 2020) in conjunction with 5th IEEE International Conference on Fog and Mobile Edge Computing (FMEC 2020), Paris, France, 2020
- Khalid A. Darabkh, J. Zomot, Z. Al-qudah and A. Khalifeh, "IEDB-CHS-BOF: Improved Energy and Distance Based CH Selection with Balanced Objective Function for Wireless Sensor Networks,". In proceedings of the Sixth International Workshop on Internet of Things: Networking Applications and Technologies (IoTNAT 2020) in conjunction with 5th IEEE International Conference on Fog and Mobile Edge Computing (FMEC 2020), Paris, France, 2020.
- Khalid A. Darabkh, W. Kassab and A. Khalifeh, "Maximizing the Lifetime of Wireless Sensor Networks Over IoT Environment," In proceedings of the Sixth International Workshop on Internet of Things: Networking Applications and Technologies (IoTNAT 2020) in conjunction with 5th IEEE International Conference on Fog and Mobile Edge Computing (FMEC 2020), Paris, France, 2020.
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- M. Daoud, M. Al-Ashi, F. Abawi, and A. Khalifeh, "In-house Alert Sounds Detection and Direction of Arrival Estimation to Assist People with Hearing Difficulties", 14th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2015), Las Vegas, USA
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- K. Darabkh, A. Khalifeh, M. Naser, and E. AlQarallelh," New Arriving Process for Convolutional Codes with Adaptive Behavior", IEEE SSD 2012.
- A. Khalifeh, K. Darabkh, and A. Kamel," Performance Evaluation of Voice-Controlled Online Systems", IEEE SSD 2012.
- R. Khalil, A. Khalifeh," System Design and Software Engineering Challenges in Building an Android

Application: a Case Study", Mobile Software Engineering workshop - ACM Mobicase Conference, 2011.

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- A. Khalifeh, H. Yousefi'zadeh," Optimal Rate Adaptation for VoIP over Wireless Tandem Links", IEEE Milcom 2010.
- A. Khalifeh, A. Elmousa, A. Shaout "A Telemedicine Video Conferencing System: Implementation Challenges and Solutions", International Conference on Information and Communication Systems (ICICS), 2009.
- A. Khalifeh, H. Yousefi'zadeh," An Optimal UEP Scheme of Audio Transmission over MIMO Wireless Links", IEEE WCNC 2008.
- A. Khalifeh, "An End-to-End Measurement Based Call Admission Control Policy for VoIP over Wireless Networks", IEEE WCNC 2008.
- A. Khalifeh, H. Yousefi'zadeh," Optimal Audio Transmission over Wireless Tandem Channels", IEEE DCC 2008.
- A. Khalifeh, A. Elmousa," QoS Routing of VoIP using a Modified Widest-Shortest Routing Algorithm", ACS/IEEE International Conference on Computer Systems and Applications, AICCSA Amman-Jordan, 2007.

Honours and awards and Grants	Academic awards, fellowships, and honors		
	*	Award name: the leader of innovation fellowship program (LIF)	
		Award level: National Award	
		Brief description: The LIF programme is managed by the Royal academy of Engineering- UK which brings together emerging leaders who have an engineering-based innovation that could contribute to the social and economic development of their country through commercialisation.	
		Fellowship duration: 1 st Feb 2021 to 25 th Nov 2021	
		Fellowship URL:	
		https://raeng.org.uk/programmes-and-prizes/programmes/international-programmes/leaders-in-innovation- fellowships	
		http://www.gju.edu.jo/news/gju%E2%80%99s-faculty-member-receives-leaders-innovation-fellowships-lif-2021- 12162	
	*	Award name: The Young AFCEA 40 under 40 Award. March 2018. Baltimore, USA.	
		Award level: International Award	
		Brief description: The Young AFCEA 40 Under 40 Award is given to 40 individuals ages 40 and under for their significant contributions in a technical science, technology, engineering and mathematics (STEM) field by providing innovation, thought leadership, and support to their client or organizations using information technology (IT)	
		Award URL: https://www.afcea.org/site/40U40Winners	
	*	Award name: Arab-American frontiers of science, engineering, and medicine fellowship, 2016. UAE	
		Award level: International Award	
		Brief description: This program brings together outstanding young scientists, engineers, and medical professionals from the United States and the 22 countries of the Arab League for a series of symposia to discuss exciting advances and opportunities in their fields.	
		Award URL: http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga 174800.pdf Page: 16	
	*	Award name: The German Jordanian University award for the industrial relationship Jul, 2016.Amman, Jordan.	
		Award level: National Award	
		Brief description: This award aims at honouring distinguished faculty members who have accomplished collaborative research and development projects with the industry.	
		Award URL: http://www.gju.edu.jo/sites/default/files/yearbook 2016-2017-web version.pdf Page :446	

Award name: The German Jordanian University Excellence in Research Award, Sep 2015.
 Award level: National Award

Brief description: This award aims at honouring distinguished faculty members who have excelled in research and published significant research papers.

Award URL: http://www.gju.edu.jo/sites/default/files/gju-_yearbook_2016-up_to_date_version.pdf

Award name: ARAB-AMERICAN FRONTIERS OF SCIENCE, ENGINEERING, AND MEDICINE fellowship, 2015. KSA

Award level: International Award

Brief description: This program brings together outstanding young scientists, engineers, and medical professionals from the United States and the 22 countries of the Arab League for a series of symposia to discuss exciting advances and opportunities in their fields.

Award URL: http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_168988.pdf Page: 17

Award name: Fulbright Alumni Development Grant (2013)
 Award level: international

Award URL: https://www.amideast.org/fulbright/alumni-information/alumni-development-grants

- A listee of Marquis Who is Who in America: Publication of 2010-2015 editions.
- Award name Fulbright grant from 2005-2007 sponsored by the Bureau of Educational and Cultural Affairs of the United States Department of State to pursue my graduate study in the United States at UCI.
 Award level: International scholarship

Brief description: The Fulbright U.S. Student Program is the largest U.S. exchange program offering opportunities for students and young professionals to undertake international graduate study, advanced research, university teaching, and primary and secondary school teaching worldwide.

Award URL: https://www.fulbright-jordan.org/

Award name: Center for Pervasive Communications and Computing fellowship, University of California, Irvine 2008.

Award level: International

Award URL: http://www.cpcc.uci.edu/alumni.php

Award name: Pedagogical Fellow (PF) by the Teaching, Learning and Technology Center 2008-2009 Award level: International

Brief description: The PF Program is a highly regarded "preparing future faculty" program; selection is competitive, based on a record of excellent teaching, promising scholarship, and service to the University, department, and the disciplines' professional community

Award URL: http://dtei.uci.edu/previous-pfs/ (year 2009-2010)

Award name: Phi Beta Kappa (PBK) Alumni Award 2008. Award level: International

Award level: International

Brief description: PBK is the nation's oldest and most prestigious academic honorary society in the United States. Award URL: <u>https://www.pbk.org/</u>

https://www.pbksocalalumni.com/resources/Documents/Key%20Notes%202008.pdf

Note: In the above link, my name is listed under the International Scholarship Awards, University of California, Irvine.

Entrepreneurship awards and prizes

Award name: Fulbright Alumni Community Action Grant 2018

Award level: International

Brief description: This grant enables Fulbright alumni to conduct projects that have an impact on the society. My project entitled as (Early Entrepreneurship Exploration) which aims to give students the ability to develop business plans and learn from top industry professionals in their fields.

Award URL: https://www.amideast.org/our-work/find-a-scholarship/graduate-study/fulbright/alumniinformation/current-and-previous-fulbright-community-action

http://www.gju.edu.jo/news/early-entrepreneurship-exploration-workshop-gju-9179

 Award name: Second prize in the Jordanian Engineers Syndicate Award for Graduation Projects, 2020 Award level: National

Brief description: The Jordanian Engineers Syndicate award has been awarded for best graduation project that showed a strong linkage to the industry.

Award URL: http://www.gju.edu.jo/news/gju-students-win-jordan-engineers-association-competition-2020-12261

Award name: Third prize in the Jordanian Engineers Syndicate Award for Graduation Projects, 2019 for the project" Unmanned Aerial Vehicle Aided Wireless Mesh Network Award level: National

Brief description: The Jordanian Engineers Syndicate award has been awarded for best graduation project that showed a strong linkage to the industry.

Award URL: <u>http://www.gju.edu.jo/news/gju-students-win-prizes-jordan-engineers-association-graduation-projects-and-10th-information</u>

Award name: German Jordanian University award for Industrial link - the 10th National Technology Parade for the project" Infrastructure-less Communication System for Border Monitoring and Sensing ", 2017. Award level: International

Award level: National

Brief description: The German Jordanian University for Industrial link award has been awarded for best graduation project that showed a strong linkage to the industry.

Award URL: http://www.gju.edu.jo/news/gju-won-7-prizes-10th-national-technology-parade-7100

 Award name: 1st place in Queen Rania National Entrepreneurship Competition (QRNEC) 2016 for the project: Teletera, a videoconferencing platform for eHealth services

Award level: National

Brief description: The Queen Rania Center for Entrepreneurship (QRCE) is a Non-Profit organization established in 2004 to help develop Technology Entrepreneurship in Jordan. Each year the center runs a competition to identify and support the top entrepreneurs who have promising ideas that can turn into successful business. Award URL: <u>http://www.gju.edu.jo/news/dr-khalifeh-won-first-prize-queen-rania-entrepreneurship-competition-2016-6946</u>

Award name: The Arab Technology Business Plan Competition (2014, 2nd place)
 Award lavel: Degianal (Arabia world)

Award level: Regional (Arabic world)

Brief description: Arab Technology Business Plan Competition (ATBPC) is a United Arab Emirates-based angel investor group that primarily considers seed and early-stage investments

Award URL: https://www.crunchbase.com/organization/arab-technology-business-plan-competition-atbpc

 Award name: The U. S. Department of State's Global Innovation through Science and Technology (GIST, Tech-I) Competition (2013, 3rd place)

Award level: International

Brief description: The U. S. Department of State's Global Innovation through Science and Technology (GIST) initiative empowers young innovators through networking, skills building, mentoring, and access to financing to develop start-up solutions that address economic and development challenges.

Award URL: http://www.gistnetwork.org/, http://www.gistnetwork.org/content/news-past-winners

Award name: ArabNet Ideathon competition (2011, 1st place)

Award level: Regional (Arabic world)

Brief description: The Ideathon competition aims to showcase the best of regional entrepreneurs with great ideas to an enthusiastic crowd of investors, incubators, media and digital professionals, and connect them with the latest developments in the digital world

Award URL: http://news.arabnet.me/

Volunteering awards

 IEEE Certificate for outstanding achievement in member retention or the Jordan section during the 2021 membership year.

Capacity building grants

- Erasmus+ Capacity Building in the Field of Higher Education. Project title and duration: The International Master of Science on Cyber Physical Systems (MS@CPS). Sep 2019- Sep 2022.Fund amount: Euro 999,976.18. Project reference number: (598750-EPP-1-2018-1-DE-EPPKA2-CBHE-JP). Project URL: http://erasmusplus.org.jo/Portals/0/Projects-2018/6.pdf. Role: project member.
- Erasmus+ Capacity Building in the Field of Higher Education. Project title and duration: Building Innovation Infrastructure via Technology Transfer Offices COnducted IN JOrdanian Higher Education Institutions (BITTCOIN-JO). Sep 2019- Sep 2022. Fund amount: Euro 846,704.00. Project reference number: 598726-EPP-1-2018-1-JO-EPPKA2-CBHE-JP). Project URL: http://erasmus-plus.org.jo/Portals/0/Projects-2018/5.pdf. Role: project member.
- ◆ Tempus: Partnership with Enterprises Towards Building Open-Source Software Communities and Rejuvenation of Technical Education and Innovation – (OSSCOM), European Commission – Directorate General educational and culture (TEMPUS), €868K, 2013. Role: project member.

Mobility grants

- Erasmus+ International Credit mobility with Berlin University. (Jun 30 Jul 7, 2019).
- European Union Erasmus-Mundus Mobility Grant (program name: Avempace) (2015).
- European Union Erasmus- Mundus Mobility Grant (program name: Phoenix) (2015).

- German Jordanian university Train the trainer mobility grant, Jordan, 2015
- Upper university of applied sciences mobility grant, Austria, 2015
- DAAD Staff and students' mobility grant, 2015
- European Union Erasmus- Mundus Mobility Grant (program name EU EPIC-)(2013)

Research grants and projects

 Design, Development and Demonstration of a future-proof active smart Micro-grid system, European Commission, ERANTMED FP7, €947162, 2015- 2020
 Supporting authority: Different funding entities under the Umbrella of ERANTMED FP7, Role: Principal Investigator (PI from 2018-2020)

Grant amount: €947162

Duration: Jan 2016- Nov 2020.

- Project title: A Testbed for Remote Wireless Sensing Technologies and its Potential Applications in the 5Th Generation Communication System and the Internet of Things Supporting authority: German Jordanian University Role: Principal Investigator (PI) Grant amount: \$47,650 Duration: Aug 2018- Aug 2020.
- Project title: Hybrid sensor networks for emergency critical scenarios Supporting authority: NATO Countries Role: NATO partner director Grant amount: 400,000 Euro Duration: Sep 2015- Sep 2018.
- Project title: A Smartphone-based online video conferencing platform for eHealth services in rural areas Supporting authority: Jordanian Scientific research funding Role: Primary investigator Grant amount: 22,500 JD Duration: April 2015- April 2017
- Project title: A Combined EMG and EEG-based BCI system for Hand and Motor Imagery Task Classification and Controlling Prosthetic Hand Supporting authority: Jordanian Scientific research funding Role: Co-Investigator Grant amount: 95000 JD Duration: Dec 2016- Dec 2018 Project title: Acousto Optical Modulator For Free Space Optical Communication Supporting authority: Jordanian Scientific research funding Role: Co-Investigator Grant amount: 52630 JOD
- Duration: Jun 2017- June 2019.
 Project title: Development of prototypes and experimental testing of artificial feet with adjustable adaptive ankle Joint modular
 Supporting authority: European Union Support to Research, Technological Development, and Innovation in Jordan (SRTD II)
 Role: Co-Investigator
 - Grant amount: 30,000 Euro Duration: Jul 2015- Jul 2016.

Role: Primary investigator

Grant amount: 32.524.8 Euro

Duration: Jul 2015- Jul 2016.

Project title: A videoconferencing platform for e-health services
 Supporting authority: European Union Support to Research, Technological Development and Innovation in Jordan (SRTD - II)

Masters' theses supervised or cosupervised

- Master thesis title: Performance Comparison of the Dynamic Distributed Dimensional Data Model utilizing the SciDB and Apache Accumulo databases. Student: Mohammad Abu Mhana. Date: Feb 2022.
 - Master thesis title: Performance Analysis and Improvement of the Low-Power Long-Range Wide Area Network and its Applications on the Fifth-Generation Communication Systems. Student: Khaled AlDahdouh, Date: Feb 2021
- Master thesis title: Unsupervised Learning for Wireless Sensor Networks Clustering. Student: Mahmoud AlQudah, Date March 2020.
- Master thesis title: A Framework for E-Healthcare Services in Jordan Exploiting Cloud Computing and the Internet of Things (IoT). Student: Odai Mohammad Mukhaimer, Date: Aug 2018
- Master thesis title: A Cloud Model for Integrated Healthcare Informatics Solution: HealthGate Cloud (HGC).

Student: Mohamed Daradkeh, Date: Aug 2018.

- Master thesis title: Topology management and selective activation algorithm for wireless sensor network with minimum interference. Student: Amal A. Almasri, Date: 7/2018
- Master thesis title: Enhancing Energy Efficiency of IEEE 802.15.4 for Wireless Sensor Networks. Student: Rabi Tanash., Date: 11/2017
- Master thesis title: Study Analysis and Performance Evaluation of Google QUIC Transmission Protocol. Student: Ma'moun I. Mansour Date: 3/2017

Services and Voluntary work

- IEEE Jordan section chapter (Starting Jan 2020 to date)
- Conference chair for 2021 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)
- A member in the Selection Review Committee (SRC) for the 2019-2020 Jordanian Fulbright Visiting Scholar (Post-Doctoral) Awards, 2018.
- Guest Editor: Special issue on Future of Intelligent Wireless LANs, IET Communication. January 2019. https://digital-library.theiet.org/files/IET_COM_CFP_FIWL.pdf
- Editor in KSII Transactions on Internet and Information Systems Journal (indexed in SCIE Thomson Reuters) from Feb 2018- date.
- IEEE Secretary Activities, Jordan section, 2018- to date.
- IEEE Communication society chair, Jordan section 2014-2017
- Part of the founding and steering committee for the 2018 IEEE Middle East & North Africa COMMunications Conference, (MENACOMM 2018)
- A member of the organizing committee of the IEEE Applied electrical Engineering and Computing Technologies (AEECT 2017) conference Amman- Jordan
- Communication technical track chair for the EEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2015),
- A member of the organizing committee in the IEEE 7th International Conference on Information Technology (ICIT), May 12-15, 2015
- A member of the organizing committee of the IEEE Applied electrical Engineering and Computing Technologies (AEECT 2015) conference Amman- Jordan
- A member of the organizing committee of the 1st International Conference on Open-Source Software Computing (OSSCOM 2015) at the German Jordanian University
- Technical Program Committee member for ACM REHAB Conference 2014, 2015, 2016
- Technical Program Committee member for the 12th ACS/IEEE International Conference on Computer Systems and Applications (Track 11: Networking, Sensor Networks, Mobile Computing), 2015
- Technical Program Committee member for the International Conference on Computing, Networking and Communications (ICNC), 2015
- Technical Program Committee member for Mediterranean Conference on Information & Communication Technologies, 2014- Date
- Technical Program Committee member for IEEE ISM Conference, 2014, 2015
- Technical Program Committee member for IEEE ICC Conference, 2014
- Technical Program Committee member for IEEE 1st International Conference on Open-Source Software Computing (OSSCOM 2015) at the German Jordanian University.
- Conducted a workshop in the field of Multimedia signal processing at the International Week at Bremen Hochschule Bremen, Germany, 2015
- Organized a technical seminar about the 5th Generation wireless technology in coordination with IEEE Jordan section under the IEEE distinguished lecturer program, 2014
- Conducted a workshop in the field of Audio signal processing at the International Week at Bremen Hochschule Bremen, Germany, 2014, 2013
- Reviewer for the 7 and 8th National Jordanian Technology Parade competition, 2014, 2015
- Session chair at the IEEE 4th INTERNATIONAL CONFERENCE on Reliability, Infocom Technologies and Optimization (ICRITO 2015)
- Session Chair at the IEEE International Symposium on Multimedia, 2014
- Session Chair on the IEEE International Symposium on Multimedia (ISM2013)
- Session Chair on the Wireless Communication and Networking Conference (WCNC 2008).

- Technical Program Member at the EEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2013, 2015),
- Technical Program Chair (TPC) for the Smart Phone Vehicular Communications workshop (SPVC), which is part of the ITST-2011 conference, Saint-Petersburg, Russia.
- Editorial Board Member for the International Journal of Embedded Systems and Applications (IJESA) 2014 Date
- Referee for several top conferences and journals such as the INFOCOM 2018, WPMC'17, ICNC'18, AEECT 2017, Globecom2017, IECCO 2017, ICC'17, MECBME 2016, IEEE BlackSeaCom 2016, ICC'16, WCNC 2016, ICNC 2016, Super-computers Springer, International Journal of Signal and Imaging Systems Engineering (IJSISE), Inderscience, IEEE Communication Letters, IEEE Transaction of Multimedia, IEEE Wireless Communications Magazine, IEEE BlackSeaCom 2015, WCNC 2008, CNSR 2008, DCC 2008/2009, Globecom 2008/2009, and ICC 2008/2009.

Professional Memberships

- A member in the Armed Forces Communications and Electronics Association (AFCEA). Member Number: 55248440. Jul 2017 – Date.
- Jordan Computer Society (JCS) member since 2004.
- Jordan Engineers Association (JEA) member since 2001.
- IEEE member since 1996, member No. 40299237.
- IEEE Jordan Communication Society Chair (Starting 2014)
- Member of the IEEE Executive committee Jordan section
- International Association of Engineers (IAENG) Member No: 138109
- German Jordan University Communication club supervisor, 2015