

Faculty C.V.

1. **Name and date of birth**

Iyad Abu Doush, 2-March-1979

2. **Academic Rank**

Professor of Computer Science– Full time

3. **Degrees**

- Ph.D., Computer Science, New Mexico State University, USA, 2009
- M.Sc., Computer Science and Information Systems, Yarmouk University, Jordan, 2003
- B.Sc., Computer Science, Yarmouk University, Jordan, 2001

4. **Service at this Institution**

8 years, date of appointment: 18-Aug-2016

5. **Professional Experience**

- Professor in Computer Science, College of Engineering and Applied Sciences, American University of Kuwait, Oct, 2021 – Now.
- Director of the Office of Research and Grants, American University of Kuwait, July, 2021 – Now.
- Associate Professor, American University of Kuwait, Department of Computer Science and Information Systems, Salmiya, Kuwait, Aug, 2016 - Sep, 2021.
- Visiting Associate Professor, Dartmouth College, Hanover, NH, US, 22-Jun-2018 to 22-Aug-2018.
- Associate Professor, YARMOUK UNIVERSITY, Department of Computer Science, Irbid, Jordan, May 2014 - Aug 2016.
- Assistant Professor, YARMOUK UNIVERSITY, Department of Computer Science, Irbid, Jordan, Jan 2010 to May-2014.
- Visiting Researcher, Vilnius University, Vilnius, Lithuania, 13-Aug-2013 - 12-Sep-2013.
- Visiting Researcher, UNIVERSITI SAINS MALAYSIA (University of Science, Malaysia), School of Computer Sciences, Penang, Malaysia, 10-Aug-2012 - 10-Sep-2012.
- Department Head, YARMOUK UNIVERSITY, Department of Computer Science, Irbid, Jordan, Sep, 2011 – Sep-2012.
- Research Assistant, NEW MEXICO STATE UNIVERSITY, Computer Science Department, Las Cruces, USA, Sep 2007 – November 2009.

- Research Assistant, NEW MEXICO STATE UNIVERSITY, Department of Distance Education, Las Cruces, USA, August 2005 – Sep 2007.
- Teaching Assistant, NEW MEXICO STATE UNIVERSITY, Department of Computer Science, Las Cruces, USA, August 2005 – December 2008.
- Instructor, YARMOUK UNIVERSITY, Department of Computer Information Systems, Irbid, Jordan, 2003 – 2005.

6. Consulting Experience

- Worked as an expert in web accessibility and assistive technologies for a USAID funded project titled "Improving the right of people with disabilities in accessing information in higher education", 30/9/2012 to 15/6/2013.
- Worked as an expert in web accessibility and assistive technologies for a Microsoft funded project titled "Improving the Accessibility of E-government Websites in Jordan". This project is proposed to the Higher Council for the Affairs of Persons with Disabilities, 1/8/2012 to 1/9/2013.
- Worked as a specialist in assistive technologies for a USAID funded project titled "AccessTech: Accessible E-services and Computers in Yarmouk University for People with Disabilities", 1-Feb-2016 to 10-Aug- 2016.

7. Professional Registration

N/A

8. Publications

a) Refereed Journals.

1. Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Malik Shehadeh Braik, Sharif Makhadmeh; Iyad Abu Doush. Elk Herd Optimizer: A novel nature-inspired metaheuristic algorithm (2024). Artificial Intelligence Review, <https://doi.org/10.1007/s10462-023-10680-4> (Impact Factor 12.0).
2. Mohammed Al-Betar, Iyad Abu Doush, Sharif Naser Makhadmeh, Ghazi Al-Naymat, Osama Ahmad Alomari, Mohammed A. Awadallah. Equilibrium optimizer: A review. Multimedia Tools and Applications, <https://doi.org/10.1007/s11042-023-16764-1> .
3. Sharif Naser Makhadmeh, Mohammed Azmi Al-Betar, Iyad Abu Doush, Mohammed A. Awadallah, Seyedali Mirjalili, Sofian Kassaymeh, Raed Abu Zitar. Recent advances in Grey Wolf Optimizer, its versions and applications: Review. IEEE Access (Impact factor 3.9).
4. Mohammed A. Awadallah, Malik Shehadeh Braik, Mohammed Azmi Al-Betar, Iyad Abu Doush (2023). Binary Global-best Artificial Rabbits Optimization for Feature Selection in Medical Diagnosis. Neural Computing and Applications (Impact factor 5.102).
5. Iyad Abu Doush, Khalid Sultan, Mohammed Azmi Al-Betar, Zainab AlMeraj, Zaid Abdi Alkareem Alyasseri, and Mohammed A. Awadallah (2023). Web

- Accessibility Automatic Evaluation Tools: To which extent can they be automated? CCF Transactions on Pervasive Computing and Interaction. <https://doi.org/10.1007/s42486-023-00127-8> (Impact factor 2.1).
6. Iyad Abu Doush, Mohammed Awadallah, Mohammed Al-Betar, Osama Alomari, Sharif Makhadmeh, Ammar Abasi, Zaid Alyasseri (2023). Archive-based Coronavirus Herd Immunity Algorithm for Optimizing Weights in Neural Networks. *Neural Computing and Applications*, 35(21), 15923–15941, <https://doi.org/10.1007/s00521-023-08577-y> (Impact factor 4.774).
 7. Mohammed A. Awadallah; Mohammed Azmi Al-Betar; Iyad Abu doush; Sharif Naser Makhadmeh; Ghazi Al-Naymat (2023). Recent Versions and Applications of Sparrow Search Algorithm. *Archives of Computational Methods in Engineering*, 30, 2831–2858 (2023). <https://doi.org/10.1007/s11831-023-09887-z> (Impact factor 8.171).
 8. Majdi Mafarja; Thaer Thaher; Mohammed Azmi Al-Betar; Jingwei Too; Mohammed A. Awadallah; Iyad Abu Doush; Hamza Turabieh (2023). Classification Framework for Faulty-Software using Enhanced Exploratory Whale Optimizer-based Feature Selection Scheme and Random Forest Ensemble Learning. *Applied Intelligence*, <https://doi.org/10.1007/s10489-022-04427-x> (Impact factor 5.019).
 9. Sharif Makhadmeh; Mohammed Azmi Al-Betar; Ammar Kamal Abasi; Mohammed A. Awadallah; Iyad Abu Doush; Zaid Abdi Alkareem Alyasseri; Osama Ahmad Alomari (2023). A recent advances in Butterfly optimization algorithm, its versions and applications. *Archives of Computational Methods in Engineering*, 30, 1399–1420 (2023). <https://doi.org/10.1007/s11831-022-09843-3> (Impact factor 8.171).
 10. Iyad Abu Doush, Basem Ahmed, Mohammed A. Awadallah, Mohammed Al-Betar, Aaron Rababah (2023). Enhancing Multilayer Perceptron Neural Network using Archive-based Harris Hawks Optimizer to Predict Gold Prices. *Journal of King Saud University-Computer and Information Sciences*, 35 (5), 101557 (Impact factor 9.006).
 11. Sharif Naser Makhadmeh, Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Ammar Kamal Abasi, Zaid Abdi Alkareem Alyasseri, Iyad Abu Doush, Osama Ahmad Alomari, Robertas Damasevicius, Audrius Zajanckauskas, Mazin Abed Mohammed (2022). Modified Coronavirus Herd Immunity Optimizer for Discrete Power Scheduling Problem. *Mathematics*, 2022, 10(3), 315; <https://doi.org/10.3390/math10030315> (Impact factor 2.592).
 12. Ammar Abasi, Sharif Makhadmeh, Mohammed Al-Betar, Osama Alomari, Mohammed Awadallah, Zaid Alyasseri, Iyad Abu Doush, Ashraf Elnagar, Eman H. Alkhamash, Myriam Hadjouni (2022). Lemurs optimizer: a new metaheuristic algorithm for global optimization. *Applied Sciences*, 12(19), 10057; <https://doi.org/10.3390/app121910057> (Impact factor 2.838).
 13. Iyad Abu Doush, Ahmad Al-Jarrah, Nancy Alajarmeh, Mrim Alnfai (2022). Learning Features and Accessibility Limitations of Video Conferencing Applications : are people with disabilities left behind. *Universal Access in the Information Society*, DOI: <https://doi.org/10.1007/s10209-022-00917-4> (Impact factor 2.629).
 14. Mohammed Azmi Al-Betar; Mohammed A. Awadallah; Sharif Naser Makhadmeh; Iyad Abu Doush; Raed Abu Zitar; Samah Alshathri, Mohamed Abd

- Elaziz (2022). A Hybrid Harris Hawks Optimizer for Economic Load Dispatch Problems. *Alexandria Engineering Journal*, DOI: <https://doi.org/10.1016/j.aej.2022.09.010> (Impact factor 6.626)
15. Mohammed Azmi Al-Betar; Mohammed A. Awadallah; Iyad Abu Doush; Osama Ahmad Alomari; Ammar Kamal Abasi; Sharif Naser Makhadmeh; Zaid Abdi Alkareem Alyasseri (2022). Boosting the Training of Neural Networks Through Hybrid Metaheuristics. *Cluster Computing*, DOI: <https://doi.org/10.1007/s10586-022-03708-x> (Impact factor 2.303).
 16. Zaid Abdi Alkareem Alyasseri; Osama Ahmad Alomari; Mohammed Azmi albetar; Sharif Naser Makhadmeh; Iyad Abu Doush; Mohammed Awadallah; Ammar Kamal Abasi; Ashraf Elnagar (2022). A Recent Advances of Bat-inspired Algorithm, Its Versions and Applications. *Neural Computing and Applications*, 34, 16387–16422 (Impact factor 5.102).
 17. Iyad Abu Doush, Mohammed Azmi Al-Betar; Mohammed A. Awadallah, Zaid Abdi Alkareem Alyasseri, Sharif Naser Makhadmeh, and Mohammed El-Abd (2022). Island Neighboring Heuristics Harmony Search Algorithm for Flow Shop Scheduling with Blocking. *Swarm and evolutionary computation*, 74, 101127, DOI: <https://doi.org/10.1016/j.swevo.2022.101127> (Impact factor 10.267).
 18. Sharif Makhadmeh, Ammar Kamal Abasi, Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Iyad Abu Doush, Zaid Abdi Alkareem Alyasseri, Osama Ahmad Alomari (2022). A Novel Link-based Multi-objective Grey Wolf Optimizer for Appliances Energy Scheduling Problem. *Cluster Computing*, DOI: <https://doi.org/10.1007/s10586-022-03675-3> (Impact factor 1.809).
 19. Mohammed A. Awadallah, Mohammed Azmi Al-Betar; Malik Shehadeh Braik; Abdelaziz I. Hammouri; Iyad Abu Doush; Raed Abu Zitar (2022). An Enhanced Binary Rat Swarm Optimizer based on Local-best Concepts of PSO and Collaborative Crossover Operators for Feature Selection. *Computers in Biology and Medicine*, DOI: <https://doi.org/10.1016/j.combiomed.2022.105675> (Impact factor 4.589).
 20. Zainab Almeraj, Iyad Abu Doush, Dari Alhuwail, Shok Shama, Ahmed Albahar, and Mohmammad Al-Ramahi (2022). Access and Experiences of Arabic Native Speakers with Disabilities on Social Media During and After the World Pandemic. *International Journal of Human-Computer Interaction*, DOI: <https://doi.org/10.1080/10447318.2022.2051887> (Impact factor 3.353).
 21. Mohammed A. Awadallah, Mohammed Azmi Al-Betar, Iyad Abu Doush, Sharif Naser Makhadmeh, Zaid Abdi Alkareem Alyasseri, Ammar Kamal Abasi, Osama Ahmad Alomari (2022). Cellular Crow Search Algorithm with Topological Neighbourhood shapes for optimization. *Expert Systems with Applications*, 194, DOI: <https://doi.org/10.1016/j.eswa.2021.116431> (Impact factor 6.954).
 22. Raed Abu Zitar, Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Iyad Abu-Doush, Khaled Assaleh (2022). An intensive and comprehensive overview of JAYA algorithm, its versions and applications. *Archives of Computational Methods in Engineering*, 29, 763–792, DOI: <https://doi.org/10.1007/s11831-021-09585-8> (Impact factor 6.730).
 23. Zaid Abdi Alkareem Alyasseri, Mohammed Al-Betar, Iyad Abu Doush, Mohammed Awadallah, Ammar Kamal Abasi, Osama Ahmad Alomari, Sharif Naser Makhadmeh, Raed Abu Zitar, Karrar Hameed Abdulkareem, Afzan

- Adam (2021). Machine Learning and Deep Learning Approaches for COVID-19 Diagnose: A Review. *Expert Systems*, 39 (3), 1-32 (Impact factor 1.546).
24. Noura Al-Ghurair, Ghada Alnaqi, and Iyad Abu Doush (2020). An Augmentative and Alternative Communication Tablet Application for Children with Language Impairment, *Kuwait Journal of Science*, 9 (2),106-123 (Impact factor 0.519).
 25. Osama Ahmad Alomari, Sharif Naser Makhadmeh, Mohammed Azmi Al-Betar, Zaid Abdi Alkareem Alyasseri, Iyad Abu Doush, Ammar Kamal Abasi, Mohammed A. Awadallah, Raed Abu Zitar. Gene Selection for Microarray Data Classification based on Grey Wolf Optimizer Enhanced with TRIZ-inspired Operators. *Knowledge-Based Systems*, 223 (107034) (Impact factor 5.921).
 26. Iyad Abu Doush, Mohammed El-Abd, Abdelaziz I. Hammouri, Mohammad Qasem Bataineh. The Effect of Different Stopping Criteria on Multi-Objective Optimization Algorithms (2021), *Neural Computing and Applications*, DOI: <https://doi.org/10.1007/s00521-021-05805-1> (Impact factor 4.774).
 27. Zaid Alyasseri, Mohammed Azmi Al-Betar, Mohammed Awadallah, Sharif Naser Makhadmeh, Ammar Kamal Abasi, Iyad Abu Doush, Osama Ahmad Alomari (2021). A Hybrid Flower Pollination with β -Hill Climbing Algorithm for Global Optimization. *Journal of King Saud University - Computer and Information Sciences*, DOI: <https://doi.org/10.1016/j.jksuci.2021.06.015>.
 28. Mohammed Azmi Al-Betar, Zaid AbdiAlkareem Alyasseri, Mohammed A. Awadallah, Iyad Abu-Doush. Coronavirus Herd Immunity Optimizer. *Neural Computing and Applications* (Impact factor 4.774) (Accepted).
 29. Mohammed Azmi Al-Betar, Abdelaziz I. Hammouri, Mohammed A. Awadallah, Iyad Abu Doush (2020). Binary B-Hill Climbing Optimizer with S-shape Transfer Function for Feature Selection. *Journal of Ambient Intelligence and Humanized Computing* (Impact Factor 1.598) (Accepted).
 30. Abdelaziz I. Hammouri, Majdi Mafarja, Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Iyad Abu-Doush (2020). An Improved Dragonfly Algorithm for Feature Selection. *Knowledge-Based Systems* (Impact Factor 5.358) (Accepted).
 31. Mohammed A. Awadallah, Mohammed Azmi Al-Betar, Asaju La'aro Bolaji, Iyad Abu Doush, Abdelaziz I. Hammouri, Majdi Mafarja (2020). Island Artificial Bee Colony for Global Optimization. *Soft Computing*, <https://doi.org/10.1007/s00500-020-04760-8> (Impact Factor 2.784)
 32. Iyad Abu Doush and Ayah Sawalha (2020). Automatic music composition using genetic algorithm and neural networks. *Malaysian Journal of Computer Science*, 33 (1), 35-51 (Impact Factor 0.60).
 33. Faisal Alkhateeb, Ra'ed M. Al-Khatib , and Iyad Abu Doush (2020). Applications and variants of nature-inspired immune search algorithm: a survey. *International Journal of Computer Applications in Technology* 63 (4), 354-370.
 34. Mustafa Hammad, Mohammad Alnabhan, Iyad Abu Doush, Gheed Alsalem, Fatima Al-Alem, Mouhammad Al-awadi (2020). Evaluating Usability and Content Accessibility for e-Learning Websites in the Middle East. *International Journal of Technology and Human Interaction* 16 (1), 54-62.
 35. Iyad Abu Doush and Eugene Santos (2020). Best Polynomial Harmony Search with Best β -Hill Climbing Algorithm. *Journal of Intelligent Systems* 30(1), 1-17.

36. Iyad Abu Doush, Wea'am Alrashdan, Mohammed Azmi Al-Betar, and Mohammed A. Awadallah (2020). Multi-objective Bat Algorithm for Community Detection. *International Journal of Mathematical Modelling and Numerical Optimization* 10 (2), 123- 140.
37. Mustafa Hammad, Mohammad Alnabhan, Iyad Abu Doush, Gheed Alsalem, Fatima Al-Alem, Mouhammad Al-awadi (2020). Evaluating Usability and Content Accessibility for e-Learning Websites in the Middle East. *International Journal of Technology and Human Interaction* 16 (1), 54-62.
38. Iyad Abu-Doush, Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Eugene Santos, Abdelaziz I. Hammouri, Majdi Mafarjeh, and Zainab AlMeraj (2019). Flow Shop Scheduling with Blocking using Modified Harmony Search Algorithm with Neighboring Heuristics Methods. *Applied Soft Computing*, <https://doi.org/10.1016/j.asoc.2019.105861> (Accepted) (Impact Factor 4.87).
39. Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Iyad Abu Doush, Abdelaziz I. Hammouri, Majdi Mafarjeh, and Zaid AbdiAlkareem Alyasseri (2019). Island flower pollination algorithm for global optimization. *The Journal of Supercomputing*, <https://doi.org/10.1007/s11227-019-02776-y> (Impact Factor 1.532).
40. Sawsan Alshatnawi, Iyad Abu Doush, and Anas Alsobeh (2019). Personal Tour Schedule Construction using Artificial Bee Colony Optimization Algorithm for an Electronic Tourist Guide Systems. *Journal of Theoretical and Applied Information Technology* 97 (17), 4565 - 4578.
41. Iyad Abu Doush and Zainab AlMeraj (2019). Evaluating the Accessibility of Kuwaiti E-government Websites. *Jordanian Journal of Computers and Information Technology (JJCIT)*, 05 (03), 152 – 169.
42. Iyad Abu Doush, Sanaa Ismail Jarrah (2019). Accessible Interface for Context Awareness in Mobile Devices for Users with Memory Impairment. *International Journal of Biomedical and Clinical Engineering (IJBCE)*, 8 (2), 1-30.
43. Emad Ali, Iyad Abu Doush, Gheed Mufied Alsalem, Wea'am Alrashdan. Evaluating the Web Accessibility of University Online Registration System: case study Jordan (2019). *International Journal of Advanced Science and Technology (IJAST)*, 13 (3): 1-16.

b) Conferences

1. Abdulaziz Althekair, Mohanned Odeh, Mohammad AlBayaa, Marwa Sharawi, and Iyad Abu Doush . Mobile Gaming EMG-Based Brain Computer Interface. 7th International Conference on Computer-Human Interaction Research and Applications (CHIRA) 2023, Rome, Italy.
2. Iyad Abu Doush, Khalid Sultan, Ahmad Alsaber, Dhari Alkandari, and Afsah Abdullah. Improving Neural Network using Jaya Algorithm with Opposite Learning for Air Quality Prediction. *Intelligent Systems Conference (IntelliSys)*, Amsterdam, The Netherlands, 2023.
3. Mustafa Karkour, David Liang, Amir AlAghbar and Rassim Melaab, Iyad Abu Doush. Fit Kit: Mobile Application with Augmented Reality for Better Shopping Experience. 8th International HCI and UX Conference in Indonesia 2022 (Accepted).

1. Iyad Abu Doush, Mohammed Awadallah and Mohammed Al-Betar. A Novel Essential Mutation Method for Evolutionary Algorithms. 2nd International Conference on Computing and Machine Intelligence ICMI-2022, 15-16 July, 2022 [online].
2. Iyad Abu Doush and Khalid Sultan. Can I learn during COVID-19: Accessibility of Arabic online supporting children teaching and learning resources. Computer Applications & Technological Solutions conference (CATS 2022). March 12 - March 14, 2022, Kuwait.
3. Ayman Kandil, Bader Al-Jumaah, and Iyad Abu Doush. Enhancing User Experience of Interior Design Mobile Augmented Reality Applications. 5th International Conference on Computer-Human Interaction Research and Applications (CHIRA), 28-29 Oct, 2021 [online].
4. Mohammed Al-Kandari, Rakan Al-Halak, Rony Hamza, Rawan Mostafa, and Iyad Abu Doush. Mental Balance: a Goal-Oriented Well-Being Mobile Application for Self-Monitoring. 5th International Conference on Computer-Human Interaction Research and Applications (CHIRA), 28-29 Oct, 2021 [online].
5. Zaid Alyasseri, Mohammed Albetar, Mohammed Awadallah, Shareef Makhadmeh, Ammar Abasi, Osama Alomari and Iyad Abo Dosh. EEG Feature Fusion for Person Identification Using Efficient Machine Learning Approach. Third Palestinian International Conference on Information and Communication Technology (PICICT 2021), 28-29 Sep, 2021, Gaza, Palestine.
6. Sharif Naser Makhadmeh, Mohammed Azmi Al-Betar, Ammar Kamal Abasi, Mohammed A. Awadallah, Zaid Abdi Alkareem Alyasseri, Osama Ahmad Alomari and Iyad Abu Doush. Wind Driven Optimization With Smart Home Battery for Power Scheduling Problem in Smart Home. Third Palestinian International Conference on Information and Communication Technology (PICICT 2021), 28-29 Sep, 2021, Gaza, Palestine.
7. Mohammed A. Awadallah, Mohammed Azmi Al-Betar and Iyad Abu Doush (2020). cJAYA: Cellular JAYA algorithm. 2020 International Conference on Promising Electronic Technologies (ICPET 2020). 16-17 Dec. 2020, Jerusalem and Gaza City, Palestine [online].
8. Iyad Abu Doush, Mohammed A. Awadallah, Mohammed Azmi Al-Betar. Web Accessibility of Palestinian Universities: can we access higher education information during COVID-19. 4th International Conference on Computer-Human Interaction Research and Applications (CHIRA), 5-6 Nov, 2020 [online].
9. Iyad Abu Doush, Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Abdelaziz I. Hammouri, Mohammed El-Abd. Island-based Modified Harmony Search Algorithm with Neighboring Heuristics Methods for FlowShop Scheduling with Blocking. 2020 IEEE Symposium Series on Computational Intelligence, 1-4 December, 2020, Canberra Australia [online].
10. Iyad Abu Doush and Eugene Santos (2019). A Sensitivity Analysis for Harmony Search with Multi-Parent Crossover Algorithm. Intelligent Systems Conference (IntelliSys) 2019, 5-6 September 2019, London, United Kingdom.
11. Iyad Abu Doush, Mohammad Qasem Bataineh, and Mohammed El-Abd (2019). On Different Stopping Criteria for Multi-Objective Harmony Search Algorithms. 3rd International Conference on Intelligent Systems, Metaheuristics & Swarm Intelligence (ISMSI 2019), 23-24 March, 2019, Male, Maldives.

c) Books

Book

1. Iyad Abu Doush (2020). Learn Simply: Android Mobile Application Development using Kotlin, ISBN-13: 979-8640493658, Leanpub.
2. Iyad Abu Doush (2020). تعلم من خلال التطبيق: خوارزميات تعلم الآلة. ISBN: 9781785825040, Leanpub.

Book Chapter

3. Fatma Hussain, Issam Damaj, and Iyad Abu Doush (2020). ChildPOPS: Child Pocket Monitoring and Protection System. Book Title: Smart Technologies and Smart Cities: Advances and Recent Trends, Springer.
4. Iyad Abu Doush, Issam Damaj, Mohammed Azmi Al-Betar, Mohammed A. Awadallah, Ra'ed M. Al-khatib, Alaa Eddin Alchalabi, Asaju L. Bolaji (2020). *A Survey on Accessible Context-Aware Systems*. Book Title: Technological Trends in Improved Mobility of the Visually Impaired, Springer.
5. Iyad Abu Doush (2014). Web Accessibility for Persons with Motor Limitations, Book Title: Assistive Technologies, Disability Informatics and Computer Access for Motor Limitations, Editor: Georgios Kouroupetroglou, IGI Global (DOI: 10.4018/978-1-4666-4442-7.ch007).

9. Membership in Professional Societies

Certified ABET program evaluator (PEV) March 2021.

10. Patents, Honors and awards

Scholarships

- 2001 Awarded a scholarship from Yarmouk University to study M.Sc. in computer science and information.
- 2005 Awarded a scholarship from Yarmouk University to study Ph.D. in computer science.

Research Awards

- Awarded best intellectual award from the College of Engineering and Applied Sciences (CEAS) from the American University of Kuwait for the academic year 2022-2023.
- Selected for staff mobility visit through the EPIC program sponsored by the EU Erasmus Mundus to visit Vilnius University in Lithuania, Aug 2013.
- April-2009 Awarded Merit-based Enhancement fellowship from graduate school for outstanding service to New Mexico State University as teaching and research assistant.

IT Students Contests Awards

- The undergraduate capstone project I supervise won the best project "FitKit - a mobile application for sports with AR" by the College of Engineering and Applied Sciences for the CS and IS at the American University in Kuwait, AY 2021-2022.
- Won with two teams the second and third place of the ACM Kuwaiti Collegiate Programming Contest (KCPC) 2017 and qualified to the ACM Arab Collegiate Programming Contest 2017.
- Won with a team of three undergraduate students the ACM Jordanian Collegiate Programming Contest (JCPC) 2014 (out of 96 teams from 19 different Jordanian universities) and qualified to The ACM Arab Collegiate Programming Contest, Applied Sciences University, 1/11/2014.
- Won with a team of three undergraduate students the Sumo Competition (out of 15 teams from different universities) in the Universities Robotics Competition, Jordan University, 27-28/2/2013.

11. Courses taught

a) Academic Courses

Spring 2024

- Artificial Intelligence (CSIS 415, 3 hours per week lectures, day)
- Mobile Computing (CSIS 401, 3 hours per week lectures, day)
- Introduction to Operating Systems (CSIS 310, 3 hours per week lectures, day)

Fall 2023

- Mobile Computing (CSIS 401, 3 hours per week lectures, day)

Summer 2023

- Foundations of Information Systems (CSIS 110, 3 hours per week lectures, day)
- Computer Programming 1 (CSIS 120, 3 hours per week lectures, day)
- Artificial Intelligence (CSIS 415, 3 hours per week lectures, day)

b) Intensive professional short courses

- Attended the workshop titled "3rd Higher Education Policy Dialogue" organized by the British Council. The event, held on January 31st, 2024, brought together

esteemed educators, including Professor Manolis Mavrikis from University College London's Institution of Education.

- Attended the workshop “Foundations for Mobile Accessibility”. M-Enabling Summit 2023, Washington DC, USA.
- Organized and attended the following training workshops by Elsevier PURE by Dr Hong Chen:
 - “PURE Admin” with the AUK Library team, 22/5/2023.
 - “PURE Editors” with College assistants and one faculty from each Colleges, 15/6/2023.
 - “PURE Reporting Tool” with Institutional Research Department, 31/5/2023.
- Organized and attended the workshop “KISR- Recent Research” event on Sunday 14th May 2023 by Dr. Ahmed Almulla, Dr. Husam Arman and Eng. Noura Al Ghurair.
- Organized and attended the workshop “Innovation 101” event on 30th May 2023 by Eng. Mai AlOwaish.
- Attended the workshop titled " ChatGPT- The New Frontier in Higher Education". Pearson, 31-Mar-2023 [Online].
- Attended the workshop by Dr. Shereen Hamadeh titled " Legal Hacks: An Educator's Guide to Using AI Workshop". Center of Teaching Excellence at AUK, 13-Mar-2023.
- Certified DHS Section 508 Trusted Tester, certification # TT-2301-03824, U.S. Department of Homeland Security, Jan 2023
- Organized and attended “Research How-Tos” workshop by Dr. Dari Alhuwail, 9th November 2022.
- Attended the workshop by Wiley titled " Innovations in Delivering Computer Science & Engineering Courses: Maximize Student Learning & Instructor Time in-person/online ", 7-Sep-2022.
- Co-organized with the Center of Teaching Excellence at AUK two workshops by Dr. Abed Alaswad titled "CDIO and Producing the Next Generation of Engineers" and “CDIO and Producing the Next Generation of Engineers” . , 18 and 20 Apr-2022.
- Organized and attended the workshop by Dr. Maitham Safar from KFAS titled "Data Management Plan (DMP) Workshop". The Office of Research and Grants at AUK, 23rd Mar 2022.
- Organized and attended the Panel Discussion by Prof. Ali Bumajdad, Dr. Hamad Alaslawi, and Dr. Yousef Al-Abdullah titled "How to write a research proposal". The Office of Research and Grants at AUK, 20th December 2021.
- Organized and attended the workshop by KFAS team (Dr. Maitham Safar, Dr. Ibtisam Hassan, and Mr. Khaled Al Awadhi) titled "KFAS Launch First Call for Proposals 2022". The Office of Research and Grants at AUK, 14TH FEB 2022.
- Organized and attended the workshop by Dr. Muhammad Al-Betar titled "How to write and publish on high impact journals?". The Office of Research and Grants at AUK, 7 Mar 2022 [Online].
- Attended the 2021 MENA Regional Meeting of the Global Research Council, Oct 26th and 27th, 2021. [Online].

- Attended the workshop by Dr. Yianna Vovides and Ms. Molly Chehak titled "Annotations for Student Engagement & Assessment: Part I". Center of Teaching Excellence at AUK, 5-May-2022.
- Attended the workshop by Dr. Louise Lambert titled "Down with Boring Coffee: It's time to bring back fun". Center of Teaching Excellence at AUK, 5-Jan-2022.
- Attended the workshop by Dr. Nancy W. Gleason titled "Trauma Informed Pedagogy". Center of Teaching Excellence at AUK, 28-Mar-2022.
- Attended the workshop by Dr. Shareefa Al-Adwani titled "Incorporating Transferable Hard Skills in our Assessments". Center of Teaching Excellence at AUK, 13-Apr-2022.
- Attended the workshop by Dr. Norita Ahmad titled "Getting and Keeping Students Engaged". Center of Teaching Excellence at AUK, 6-Dec-2021.
- Attended the online Thakaa Center, King Saud University Webinar titled "AI Products Development in Private Companies", February 16th 2022, by Dr. Fares Al-Qunaieer [Online].
- Attended the online KFAS Webinar titled "Bringing Research into Learning", February 9th 2022, by Dr. Issam Zabalaw [Online].
- Completed the following certificates online on AUK employee learning and development portal:
 - Building Effective Teams 22/11/2021
 - Microsoft Teams 04/11/2021
- Attended the online KFAS Webinar titled "Open Science: It's Basic Pillars and Operationalization in the Middle East and North Africa Region", October 24th 2021, by Dr. Essam Ibrahim [Online].
- Attended the online KFAS Webinar titled "Data Management Plans for Researchers", July 7th 2021, by Dr. Angus Whyte [Online].
- Completed the following certificates online by DeepLearning.AI on Coursera:
 - Structuring Machine Learning Projects course by certificate earned on January 25, 2022.
 - Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization course by DeepLearning.AI certificate earned on January 19, 2022.
 - Neural Networks and Deep Learning course by DeepLearning.AI certificate earned on 23 Dec, 2021.
- Completed the following certificates online by John Hopkins University on Coursera:
 - The Data Scientist's Toolbox course certificate earned on 23 Oct, 2019.
 - R Programming course certificate earned on 20 Oct, 2019.
 - Getting and Cleaning Data certificate earned on 11 Nov 2019.

c) Community Service courses

- Iyad Abu Doush (2021). Web Accessibility: The Case of Kuwaiti E-government. Faculty Speaker Series. American University of Kuwait, 29-Nov-2021. <https://www.youtube.com/watch?v=Y7P11TM1QCI>
- Iyad Abu Doush (2021). Mini-series workshop: PowerPoint Techniques: Creating Effective Presentations. Center for Teaching Excellence, American University of Kuwait, March 15, 2021.
- Iyad Abu Doush (2019). User Experience Design Workshop. Computer Science and Information System Department, American University of Kuwait, 13th of March 2019, Kuwait.
- Iyad Abu Doush (2017). IOT Applications for People with Disabilities. The Internet of Things Conference and Expo. 19th – 21st of December 2017 , Kuwait.
- Established the Wednesday programming competition practice twice a month since 1-Feb-2107 at AUK which takes place in the CSIS lab in Wednesdays from 5:00 PM to 7:00 PM.

12. Other Duties

a) Department

- Member of the computer science department committee (0.5 hour per week).
- Member of the CSIS ABET Steering Committee in the American University of Kuwait, Academic year 2016/2017, 2017/2018, 2018/2019, and 2019/2020. (1 hour per week).
- Member of the computer science department committee for preparing Master program in "Artificial Intelligence and Intelligent Systems" in the 2013/2014 academic year at Yarmouk University (2 hours per week).

b) College level

- Chair of the CEAS faculty promotion committee in the American University of Kuwait for the 2021-2022 academic year.
- Member of the CEAS Dean's council, Academic year 2020/2021 and 2021/2022 at AUK.
- Chair of the Research Forum Committee in the College of Engineering and Applied Sciences, Academic year 2020/2021 and 2021/2022 at AUK.
- Member of the Academic Quality Committee in the College of Engineering and Applied Sciences, Academic year 2020/2021 at AUK.
- Member of the Program Committee in the 5th International Conference on Computer Science and Engineering (CSEN - 2018), Dubai, UAE.
- During the spring semester at AUK I was coaching the students to participate in the computer programming competitions (2 hours per 2 weeks).
- Member of the Articulation Committee in the College of Arts and Science, Academic year 2016/2017 at AUK .

c) Institution level

- Member of the sustainability committee, Academic year 2023/2024 at AUK.
- Member of the AACSB reaccreditation process committee , Academic year 2023/2024 at AUK.
- Member of the CEAS Dean's council, Academic year 2020/2021, 2021/2022, 2022/2023, 2023/2024 at AUK.
- Chair of the CEAS faculty promotion committee in the American University of Kuwait for the 2021-2022 academic year.
- Chair of the CBE faculty promotion committee in the American University of Kuwait for the 2022-2023 academic year.
- Invited member to the College of Engineering and Applied Sciences Industry Advisory Board, 2023.
- Chair of the University Strategic and Planning Committee – Research and Scholarship Working Group, Academic year 2021/2022 at AUK.
- Member of the University Strategic and Planning Committee, Academic year 2020/2021 and 2021/2022 at AUK.
- Developed and proposed with other colleagues at AUK and Dartmouth College the initiation of two new committees at the institution level: Institutional Review Board and Committee on Research and Grants, Academic year 2020/2021.
- Chair of the University Research Board committee in the American University of Kuwait, Academic year 2020/2021.
- Developed and was the chair of the Faculty Speaker Series which is re-initiated in the American University of Kuwait, Academic year 2020/2021.
- Chair of the academic professional development committee in the American University of Kuwait, Academic year 2019/2020 (1 hour per week).
- Mentor for the students in the NASA Space Apps Challenge Kuwait 2019, American University of Kuwait, Kuwait.
- Member of the Library Committee in the American University of Kuwait, Academic year 2018/2019 (0.5 hour per week).
- Mentor for the students in the NASA Space Apps Challenge Kuwait 2018, 2019, and 2022 American University of Kuwait, Kuwait.
- Faculty advisor of the Arab Collegiate Programming Contest (ACPC) club at AUK for the academic year 2016/2017 (1 hour per 2 weeks).
- Member of the Library Committee in the American University of Kuwait, Academic year 2018/2019 (1 hour per 4 weeks).

d) Outside the institution

- Chair of Awards Committee of IEEE Global Engineering Education Conference 2023, Kuwait.
- Chair of Technical Program Committee of IEEE Global Engineering Education Conference 2023, Kuwait.
- Program Committee for the 2024 8th International Conference on Computer-Human Interaction Research and Applications (CHIRA), Porto, Portugal.

- International Program Committee for the 6th International Conference on Advances in Signal Processing and Artificial Intelligence (ASPAI' 2024), 17-19 April 2024, FUNCHAL (MADEIRA ISLAND), PORTUGAL.
- Program Committee for the 14th International Conference on Information and Communication Systems (ICICS2023) which take place at Jordan University of Science and Technology, Jordan, on November 21-23, 2023.
- Program Committee for the Computer Applications & Technological Solutions “CATS'23” conference which take place at Gulf University for Science & Technology, Kuwait on October 29-30.
- Scientific Committee for the Joint International Conference on Digital Inclusion, Assistive Technology & Accessibility - ICCHP-AAATE 2024, Lecco, Italy.
- Reviewer for the ACM Designing Interactive Systems Conference (DIS) 2023, Pittsburgh, Pennsylvania, USA, 2023
- International Program Committee for the fifth International Conference on Advances in Signal Processing and Artificial Intelligence (ASPAI' 2023) Canary Islands, Spain.
- Program Committee for the 2023 7th International Conference on Computer-Human Interaction Research and Applications (CHIRA), Rome, Italy.
- Reviewer for the International Conference on Computing, Intelligence and Data Analytics (ICCIDA 2022), Kocaeli – Turkey.
- Member of the The Arab Digital Accessibility – Mada Expert Group “ADA-MEG”. Volunteer to serve in the Authorized Arabic Translation WCAG 2.1, Mada ICT & Accessibility Glossary, and Mada ICT-AID (ICT Accessibility and Inclusive Design) Competency Framework
<https://staging.madaportal.org/adaeg/members/>
- Reviewer for the International Conference on Computing, Intelligence and Data Analytics (ICCIDA 2022), Kocaeli – Turkey..
- Reviewer for the International Conference on Emerging Trends in Computing and Engineering Applications (ETCEA2022), Mutah University - Dead Sea - Jordan.
- International Program Committee for the fourth International Conference on Advances in Signal Processing and Artificial Intelligence (ASPAI' 2022) Corfu, Greece.
- Scientific Committee for the Joint International Conference on Digital Inclusion, Assistive Technology & Accessibility - ICCHP-AAATE 2022, Lecco, Italy.
- Reviewer for the Soft Computing Journal published by Springer.
- Reviewer for the IEEE Symposium Series on Computational Intelligence (SSCI) (SSCI 2021) , Orlando, Florida, USA, 2021.
- Program Committee for the 2022 6th International Conference on Computer-Human Interaction Research and Applications (CHIRA), Valetta, Malta.
- Program Committee for the 2021 5th International Conference on Computer-Human Interaction Research and Applications (CHIRA), Valetta, Malta.
- Program Committee in ACM 2021 ASSETS Conference, Virtual Event.
- Technical Program Committee in the - International Conference on Smart Technologies in Communication and Computing, India, 2021.

- Reviewer for the IEEE Symposium Series on Computational Intelligence (SSCI) (SSCI 2020) , Canberra, Australia, 2020.
- Reviewer for the Transactions on Accessible Computing journal published by ACM.
- Program Committee in ACM 2020 ASSETS Conference, Athens, Greece.
- International Program Committee for the Second International Conference on Advances in Signal Processing and Artificial Intelligence (ASPAT' 2020) Berlin, Germany.
- Reviewer for the ACM CHI Conference on Human Factors in Computing Systems, Honolulu, Hawai'i, USA.
- International Program Committee for the 17th International Conference on Computers Helping People with Special Needs (ICCHP) 2020, Lecco, Italy.
- Program Committee for the 2020 4th International Conference on Computer-Human Interaction Research and Applications (CHIRA), Budapest, Hungary.
- Program Committee for the 2019 3rd International Conference on Computer-Human Interaction Research and Applications (CHIRA), Vienna, Austria.
- Reviewer for the 2019 IEEE Symposium Series on Computational Intelligence, Xiamen, China.
- Reviewer for the Computer Communications journal published by Elsevier.
- Reviewer for the 2019 IEEE Congress on Evolutionary Computation, Wellington, New Zealand.
- Reviewer for the Swarm and Evolutionary Computation journal published by Elsevier.
- Program Committee for the 2019 IEEE Congress on Evolutionary Computation, Special Session on “Cooperative Evolutionary Computation” IEEE Congress on Evolutionary Computation 2019, Wellington, New Zealand.
- Technical Program Committee in the Second International Conference on Universal Accessibility in the Internet of Things and Smart Environments (SMART ACCESSIBILITY 2019), Athens, Greece.
- Program Committee for the 16th International Conference on Mobile Systems and Pervasive Computing (MOBISPC 2019), Halifax, Canada.
- Scientific Committee for the IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT 2019), Amman, Jordan.
- International Program Committee for the International Conference on Advances in Signal Processing and Artificial Intelligence (ASPAT' 2019), Barcelona, Spain.
- Reviewer for the BCS ICT Conference – Programming Competition, Heriot-Watt University, Dubai, 2018.

13. Research

Research Grants

- Ahmad R. Alsaber (PI), Adeebe Al-Herz, Maryam S Almazedi, Iyad Abu Doush (CO-PI), Afsah Abdullah, Dhary S. Alkandary, Ahmad T Al-Sultan, Parul Setiya,

Jiazhu Pan. Assessing the relationship between air pollutants on rheumatoid arthritis activity score. KFAS 2023 second call, 9,750 KD.

- Marwa Sharawi, Iyad Abu Doush, Abdulaziz Althekair, Mohammed Odeh, and Mohammad AlBayya (2023). Mobile Brain Computer Interface Motor Imagery. Internal AUK grant 776 KD.
- Iyad Abu Doush (PI), Khalid Sultana, Ahmad Alsaberb, and Dhari Alkandari (2022). Air Quality Prediction Using Neural Network Enhanced with Gray Wolf Optimizer During COVID-19 Pandemic: Case Study from Kuwait. Internal AUK grant 500 KD.
- Iyad Abu Doush (PI), Eslam Al Maghayreh, ZaidAlomari, and SamerKhamaiseh. Developing an Interface to Control Mobility Disabled Peoples' Assistant Robot. King Abdullah II Design & Development Bureau (KADDB). 1/11/2011 to 1/5/2013, Amount (1,333 KD).
- Iyad Abu Doush (PI), Ashraf Bany Mohammed, Emad Ali. Microsoft funded project titled "Improving the Accessibility of E-government Websites in Jordan". This project is proposed to the Higher Council for the Affairs of Persons with Disabilities, 1/8/2012 to 1/9/2013 (Amount 5,274 KD).
- Iyad Abu Doush (PI), Faisal Alkhateeb, AbdelraoufAlbsoul . Semi-Automatic Generation of Arabic Digital Talking Books. Jordanian Scientific Research Support Fund (Amount 7,004 KD), 21-Jan-2013 to 21-Jan 2015,
- Iyad Abu Doush (PI), SawsanAlshatnawi, AbdelkarimAltamimi . Using An Integrated Techniques for Developing Indoor Navigation Systems to Allow the Blind and Visually Impaired People to Reach Precise Objects. Deanship of Research & Graduate Studies - Yarmouk University (Amount 1,273 KD), 15-Sep-2013 to 15-Sep- 2015.
- Iyad Abu Doush (PI). AccessTech: Accessible E-services and Computers in Yarmouk University for People with Disabilities. USAID Civic Initiatives Support Program (Amount 37,781 KD), 1-Feb-2016 to 31-Jan- 2017.

14. Participation in Specific Programs

- Certified ABET program evaluator (PEV) March 2021.
- Completed online CSAB Program Criteria Webinar which is part of completing ABET training to become a program evaluator (PEV), 23, April 2021. [Online]
- Completed ABET virtual face-to-face training to become a program evaluator (PEV) 19-21, March 2021. [Online]
- Attended the online Webinar by Prof. Geith Abandah titled "Artificial Intelligence, Machine Learning, and Applications in Arabic Language Processing", 23-Sep-2020, Jordanian Engineers Association [Online]
- Attended the online Webinar by Prof. Ali Bumajdad titled "Make a Successful Research Grant Proposal", 14, Sep, 2020, Kuwait Foundation for the Advancement of Sciences (KFAS) [Online]
- Attended the online Webinar Higher Education in the New Era: The ASU Experience and Top Ten Myths About Online Teaching and Learning, September 2nd 2020, Kuwait Foundation for the Advancement of Sciences (KFAS) [Online].

- Syllabus Clinic Workshop, September 1, 2020, AUK Center for Teaching Excellence [Online].
- Attended the workshop by Dr. Maha Bali titled "Classroom assessment techniques: quick strategies for checking the cognitive and emotional pulse of your class". Center of Teaching Excellence at AUK, 12-Feb-2020.
- Attended the workshop "Science and Technology in the GCC: Building Research Capacity and Vital Linkages" by KFAS which is delivered by a team from Harvard Kennedy School of Government, 22nd of March, 2017.