

Prof. Dr. Ismail Hababeh

Computer Science Department
School Of Computing
German Jordanian University
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Biography

Ismail Hababeh is a Professor in Computer Science Department at German Jordanian University. He received the bachelor's degree in computer science from the University of Jordan at Jordan, the master's degree in computer science from Western Michigan University at USA, and the PhD degree in computer science from Leeds Metropolitan (Beckett) University at UK. He is engaged in research mainly on deep learning medical images processing, big data security and analysis, telemedicine data communication systems, and interactive and innovative e-learning environments for human disabilities. He has authored and co-authored couple of research articles and served as academic editor and reviewer in many international scientific journals. Additionally, he serves as a co-chair and technical program committee member of reputable international conferences. Also, he has been invited as a keynote speaker at international conferences. Prof. Hababeh worked as a primary investigator and active member in several national and international funded research projects. Throughout his service, he received many scientific and recognition awards, IEEE award in international publications, scientific innovation award, recognition and appreciation awards from German Jordanian University. He is Microsoft Certified Instructor, Oracle Certified Administrator, Designer, and Developer. Prof. Hababeh is active in teaching, research, and contributing to institutional services and strategic plans.

Education

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| • PhD in Computer Science, Leeds Metropolitan (Beckett) University, Leeds, UK | 2008 |
| • M.Sc. Western Michigan University, Michigan, USA | 1996 |
| • B.Sc. in Computer Science, The University of Jordan, Amman, Jordan | 1985 |
| • Postgraduate Certificate, Leeds Metropolitan (Beckett) University, Leeds, UK | 2005 |
| • Postgraduate Diploma, The University of Jordan, Amman, Jordan | 1989 |

Research Interests

Research interests span the areas of deep learning applications development, big data security and analysis, telemedicine data communication systems, and medical image processing.

Experience

Academic Positions

- **Professor** Jul. 2026 – present
School of Computing, German Jordanian University, Amman, Jordan.
- **Associate Professor** Oct. 2018 – Jul.2026
School of Electrical Engineering and Information Technology/School of Computing, German Jordanian University, Amman, Jordan.
- **Assistant Professor** Sep. 2011 – Oct. 2018
School of Electrical Engineering and Information Technology, German Jordanian University, Amman, Jordan.
- **IT Lecturer** Aug. 2008 – Aug. 2011
United Arab Emirates University, United Arab Emirates.
- **Research Assistant** Sep. 2003 – Apr. 2008
School of Information and Technology, Leeds Metropolitan (Beckett) University, Leeds, UK.
- **IT Lecturer** Jul. 1997 – Jul. 2003
United Arab Emirates University, United Arab Emirates.
- **Teaching Assistant** Feb. 1995 – Aug. 1997
Faculty of Science, Qatar University, State of Qatar.

Administration Positions

- **Acting Head of Computer Science Department** Sep. 2023 – Sep. 2024
School of Electrical Engineering and Information Technology, German Jordanian University, Amman, Jordan.
- **Acting Vice Dean** Sep. 2015 – Sep. 2016
School of Electrical Engineering and Information Technology, German Jordanian University, Amman, Jordan.
- **Acting Head of Computer Science Department** Sep. 2012 – Sep. 2015
School of Electrical Engineering and Information Technology, German Jordanian University, Amman, Jordan.

Publications

Journals

- [1] **Hababeh, I.**, Al-Sayyed, R., Moshref, M. et al. Artificial intelligence platform for promoting learning skills of people with autism spectrum disorder. Sci Rep (2026). DOI: <https://doi.org/10.1038/s41598-026-61183-5>.
- [2] **Hababeh, I.**, Daoud, M.I., Al Ali, A., Alsharman, N., Al-Najar, H., Alfarrarjeh, A., Jabal, A.A. and Hababeh, L., 2025. Deep learning-based automation framework for detecting multiple human disabilities in secure medical imaging systems. PeerJ Computer Science 11 (2025): e3381. DOI: <https://doi.org/110.7717/peerj-cs.3381>
- [3] Jabal, A.A., Alfarrarjeh, A., Shtaiwi, R., Nofal, S., Class, C.B. and **Hababeh, I.**, 2025. PublicPulse: A Social Media Analysis Framework for Citizen Reactions to Government Actions. IEEE Access. Vol. 13, pp.157600-157620, IEEE. DOI: <https://doi.org/10.1109/ACCESS.2025.3606907>

- [4] Alsharman, N., **Hababeh, I.**, Alqudah, M., Nairokh, K. and Alshorman, D., 2025. Allocating constraint tasks schedules to promote on-demand cloud services by utilizing the Hungarian Algorithm. *PeerJ Computer Science*, 11, p.e3385. DOI: <https://doi.org/10.7717/peerj-cs.3385>
- [5] Alsharman, N., **Hababeh, I.**, Alshorman, D., Jawarneh, I. and Alqudah, M., 2025. Leveraging Machine Learning with Feature Selection to Enhance Business Intelligence in Predicting E-Commerce Acquiring Behaviors. *International Journal of Advances in Soft Computing & Its Applications*, 17(3). DOI: <https://doi.org/10.15849/IJASCA.251130.07>
- [6] **Hababeh, I.**, Hammad, L.R., Daoud, M.I. and Al-Najar, M.S., 2023. Empowering ultrasound image filtering precision by reducing speckles and preserving edge cues. *International Journal of Imaging Systems and Technology*, 34(1), p.e22946. DOI: <https://doi.org/10.1002/IMA.22946>
- [7] **Hababeh, I.**, Khalil, I., Al-Sayyed, R., Moshref, M., Nofal, S. and Rodan, A., 2023. Competent Time Synchronization Mac Protocols to Attain High Performance of Wireless Sensor Networks for Secure Communication. *Cybernetics and Information Technologies*, 23(1). DOI: <https://doi.org/10.2478/cait-2023-0004>
- [8] **Hababeh, I.**, Mahameed, I., Abdelhadi, A.A. and Barghash, A., 2020. Utilizing convolutional neural networks for image classification and securing mobility of people with physical and mental disabilities in cloud systems. *IEEE Access*, 8, pp.163730-163745. IEEE. DOI: <https://doi.org/10.1109/ACCESS.2020.3020866>
- [9] **Hababeh, I.**, Thabain, A. and Alouneh, S., 2019. An effective multivariate control framework for monitoring cloud systems performance. *KSII Transactions on Internet and Information Systems (TIIS)*, 13(1), pp.86-109. DOI: <https://doi.org/10.3837/tiis.2019.01.006>
- [10] **Hababeh, I.**, Gharaibeh, A., Nofal, S. and Khalil, I., 2018. An integrated methodology for big data classification and security for improving cloud systems data mobility. *IEEE Access*, 7, pp.9153-9163. IEEE. DOI: <https://doi.org/10.1109/ACCESS.2018.2890099>
- [11] Gharaibeh, A., **Hababeh, I.** and Alshawaqfeh, M., 2018. An Efficient online cache replacement algorithm for 5G networks. *IEEE Access*, 6, pp.41179-41187. IEEE. DOI: <https://doi.org/10.1109/ACCESS.2018.2856913>
- [12] Alouneh, S., Al-Hawari, F., **Hababeh, I.** and Ghinea, G., 2018. An effective classification approach for big data security based on GMPLS/MPLS networks. *Security and Communication Networks*, 2018(1), p.8028960. DOI: <https://doi.org/10.1155/2018/8028960>
- [13] **Hababeh, I.**, Khalil, I. and Khreishah, A., 2014. Designing high performance web-based computing services to promote telemedicine database management system. *IEEE transactions on services computing*, 8(1), pp.47-64. IEEE. DOI: <https://doi.org/10.1109/TSC.2014.2300499>
- [14] **Hababeh, I.**, Al-Sayyed, R.M., Alqatawna, J.F., Majdalawi, Y. and Nabelsi, M., 2014. Modeling and Simulation Study of Space Data Link Protocol. *International Journal of Communications, Network and System Sciences*, 7(10), pp.440-452. DOI: <http://dx.doi.org/10.4236/ijcns.2014.710045>
- [15] **Hababeh, I.**, Khalil, I., Khreishah, A. and Bataineh, S., 2013. Performance evaluation of wormhole security approaches for ad-hoc networks. *Journal of Computer Science*, 9(12), pp.1626-1637. DOI: <https://doi.org/10.3844/jcssp.2013.1626.1637>

- [16] **Hababeh, I.**, 2012. Improving network systems performance by clustering distributed database sites. The Journal of Supercomputing, 59(1), pp.249-267. Springer Nature. DOI: <https://link.springer.com/article/10.1007/s11227-010-0436-9>
- [17] **Hababeh, I.O.**, Ramachandran, M. and Bowring, N., 2007. A high-performance computing method for data allocation in distributed database systems. The Journal of Supercomputing, 39(1), pp.3-18. Springer Nature. DOI: <https://link.springer.com/article/10.1007/s11227-006-0001-8>
- [18] **Hababeh, I.O.**, Ramachandran, M. and Bowring, N., 2006. Dynamical Processing Technique for data fragmentation in Distributed Database Systems: Design and Tool Support. Journal of Dynamical Systems and Geometric Theories, 4(2), pp.103-116. DOI: <https://doi.org/10.1080/1726037X.2006.10698507>

Conferences

- [1] **Hababeh, I.**, Daoud, M.I. and Omar, M., 2024, April. A Robust Genetic Based Constraint Scheduling Algorithm to Promote On-Demand Cloud Services. In 2024 11th International Conference on Electrical and Electronics Engineering (ICEEE) (pp. 504-510). IEEE. DOI: <https://doi.org/10.1109/ICEEE62185.2024.10779235>
- [2] Daoud, M.I., Al-Ali, A., Ali, M.Z., **Hababeh, I.** and Alazrai, R., 2023, May. Detecting the regions-of-interest that enclose the tumors in breast ultrasound images using the RetinaNet model. In 2023 10th International Conference on Electrical and Electronics Engineering (ICEEE) (pp. 36-40). IEEE. DOI: <https://doi.org/10.1109/ICEEE59925.2023.00014>
- [3] Nofal, S., Abu Jabal, A., Alfarrarjeh, A., **Hababeh, I.** On the Characteristic Functions in Listing Stable Arguments. In 2023 International Conference on Advanced Engineering, Technology and Applications. Istanbul, Turkiye. March 10–11, 2023. Springer Nature, pp 384–398. DOI: https://link.springer.com/chapter/10.1007/978-3-031-50920-9_30
- [4] Nofal, S., Abu Jabal, A., Alfarrarjeh, A. and **Hababeh, I.**, 2022, June. Validation of labelling algorithms for abstract argumentation frameworks: The case of listing stable extensions. In International Conference on Artificial Intelligence and Soft Computing (pp. 423-435). Published in Lecture Notes in Computer Science, vol 13588. Springer, Cham. Springer International Publishing. DOI: https://doi.org/10.1007/978-3-031-23492-7_36
- [5] Daoud, M.I., Saleh, A., **Hababeh, I.** and Alazrai, R., 2019, April. Content-based image retrieval for breast ultrasound images using convolutional autoencoders: A feasibility study. In 2019 3rd international conference on bioengineering for smart technologies (BioSMART) (pp. 1-4). IEEE. DOI: <https://ieeexplore.ieee.org/abstract/document/8734190>
- [6] Nofal, S., Atkinson, K., Dunne, P.E. and **Hababeh, I.O.**, 2019. A New Labelling Algorithm for Generating Preferred Extensions of Abstract Argumentation Frameworks. In International Conference on Enterprise Information Systems (ICEIS), pp. 340-348. 2019. DOI: <https://doi.org/10.5220/0007737503400348>
- [7] Alouneh, S., **Hababeh, I.** and Alajrami, T., 2018, September. Toward big data analysis to improve enterprise information security. In Proceedings of the 10th International Conference on Management of Digital EcoSystems (pp. 106-109). ACM. DOI: <https://dl.acm.org/doi/10.1145/3281375.3281393>

- [8] **Hababeh, I.**, Alouneh, S. and Khalifeh, A.F., 2016, January. A position aware mobile application for e-health services. In 2016 7th International Conference on Intelligent Systems, Modelling and Simulation (ISMS) (pp. 144-148). IEEE. DOI: <https://doi.org/10.1109/ISMS.2016.69>
- [9] Khalil, I., **Hababeh, I.** and Khreishah, A., 2016, April. Secure inter cloud data migration. In 2016 7th International Conference on Information and Communication Systems (ICICS) (pp. 62-67). IEEE. DOI: <https://doi.org/10.1109/IACS.2016.7476087>
- [10] Alouneh, S., **Hababeh, I.**, Al-Hawari, F. and Alajrami, T., 2016, December. Innovative methodology for elevating big data analysis and security. In 2016 2nd International Conference on Open-Source Software Computing (OSSCOM) (pp. 1-5). IEEE. DOI: <https://doi.org/10.1109/OSSCOM.2016.7863685>
- [11] **Hababeh, I.**, 2011. A novel cloud computing data fragmentation service design for distributed systems. In Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA) (p. 1). The Steering Committee of The World Congress in Computer Science, Computer Engineering and Applied Computing (WorldComp). <https://www.proquest.com/openview/598b31f6f87d39e95f5a452d1c8dbb2b/1?pq-origsite=gscholar&cbl=1976343>
- [12] **Hababeh, I.O.**, 2010, April. Intelligent network communications for distributed database systems. In 2010 Second International Conference on Advances in Databases, Knowledge, and Data Applications (pp. 69-74). IEEE. DOI: <https://doi.org/10.1109/DBKDA.2010.11>
- [13] **Hababeh, I.O.**, 2009, December. A software development tool for improving Quality of Service in Distributed Database Systems. In 2009 International Conference on Innovations in Information Technology (IIT) (pp. 210-214). IEEE. DOI: <https://doi.org/10.1109/IIT.2009.5413375>
- [14] **Hababeh, I.O.**, Ramachandran, M., Bowring, N. "Design and Implementation of Data Fragmentation in Distributed Database Systems". In the 2005 International Symposium on Performance Evaluation of Computer and Telecommunication Systems. The Society for Modeling and Simulation International. Simulation Series Vol. 37, No. 3 (2005). pp. 609 – 616. NJ, USA. <https://www.scopus.com/pages/publications/84870032369?inward>
- [15] **Hababeh, I.O.**, Ramachandran, M., and Bowring, N. Performance Evaluation for Data Fragmentation Method in Distributed Database Systems. In the 2005 International Conference on Parallel and Distributed Processing Techniques and Applications (ICPDPTA). June 27 - 30, 2005, pp. 911-917. Las Vegas, USA. <https://www.scopus.com/pages/publications/60749116030?inward>
- [16] **Hababeh, I.O.**, Bowring, N. and Ramachandran, M., 2004. A Method for Fragment Allocation in Distributed Object-Oriented Database Systems. In Proceedings of the 5th Annual PostGraduate Symposium on The Convergence of Telecommunications, Networking & Broadcasting (PGNet). Liverpool, UK. https://www.scielo.org.mx/scielo.php?script=sci_nlinks&ref=2029267&pid=S1405-5546200700040000300004&lng=en

Book Chapters

- [1] **Hababeh, I.**, and Ramachandran, M. Trends in improving performances in distributed database management systems. Handbook of Research on Software Engineering and Productivity

Technologies: Implications of Globalization. 2009. DOI: <https://doi.org/10.4018/978-1-60566-731-7.ch026>

- [2] **Hababeh, I.**, and Ramachandran, M. A Software Tool and a Network Simulation for Improving Quality of Service Performance in Distributed Database Management Systems. Handbook of Research on Software Engineering and Productivity Technologies: Implications of Globalization 2009. DOI: <https://doi.org/10.4018/978-1-60566-731-7.ch018>
- [3] **Hababeh, I.**, Ramachandran, M. and Bowring, N., 2008. Designing a high- performance integrated strategy for secured distributed database systems. Frontiers in Artificial Intelligence and Applications 16(1), 2008. DOI: https://www.researchgate.net/publication/268028859_Designing_a_high_performance_integrated_strategy_for_secured_distributed_database_systems
- [4] Nofal, S., Jabal, A.A., Alfarrarjeh, A. and **Hababeh, I.** On the Characteristic Functions in Listing Stable Arguments. Communications in Computer and Information Science. pp. 384-398, Springer Nature Switzerland AG 2024. DOI: <https://doi.org/10.1007/978-3-031-50920-9>

Postgraduate Thesis Supervisor and Examiner

PhD Thesis External Examiner

- [1] Thesis title: Social Media Based Personality Prediction Models. **Mar. 2022**
Thesis Submitted in Fulfillment of the Requirements for the PhD Degree, Faculty of Digital Engineering, University of Potsdam, Germany.

Masters' Thesis Supervisor and Co-Supervisor

- [1] Thesis title: Ultrasound image smoothing to reduce ultrasound speckle and preserve edge cues. **May 2020**
Role: Supervisor
Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of MSc. in Computer Engineering, German Jordanian University, Jordan.
- [2] Thesis title: Content-based Image Retrieval for Breast Ultrasound Images. **Jan. 2019**
Role: Co-Supervisor
Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of MSc. in Computer Engineering, German Jordanian University, Jordan.
- [3] Thesis title: Toward Big Data Analysis to Improve Enterprise Information Security. **Jan. 2018**
Role: Co-Supervisor
Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of MSc. in Computer Engineering, German Jordanian University, Jordan.
- [4] Thesis title: Cost-aware Stochastic Task Scheduling over Cloud Systems. **May 2017**
Role: Co-Supervisor
Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of MSc. in Computer Engineering, German Jordanian University, Jordan.

Masters' Thesis External Examiner

- [1] Thesis title: Real-Time Horse Detection and Speed Tracking in Tent Pegging using Deep Learning. **Jan. 2024**
Thesis Submitted in Partial Fulfillment of the Requirements for the Master of Science in Computer Engineering/ Industrial Automation Engineering, Scientific Research & Graduate Studies Deanship, Yarmouk University, Jordan.
- [2] Thesis title: Detection of Cyberbullying in Social Media in Jordanian Dialects. **Aug. 2022**
Thesis Submitted in Partial Fulfillment of the Requirements for the Master of Science in Computer Engineering, Scientific Research & Graduate Studies Deanship, Yarmouk University, Jordan.
- [3] Thesis title: Improving Feature Selection Using Hybrid Wind Driven Optimization and Simulating Annealing Algorithms Based on Arabic Text Classifier. **Nov. 2020**
Thesis Submitted in Partial Fulfillment of the Requirements for the Master of Science in Computer Science, Faculty of Graduate Studies, Al-Balqa Applied University, Jordan.
- [4] Thesis title: Squirrel Search Algorithm for Feature Selection. **Aug. 2020**
Thesis Submitted in Partial Fulfillment of the Requirements for the Master of Science in Computer Science, Faculty of Graduate Studies, Al-Balqa Applied University, Jordan.
- [5] Thesis title: Ontology-Based System for Matching Job Descriptions to Job Seekers. **Jul. 2019**
Thesis Submitted in Partial Fulfillment of the Requirements for the Master of Science in Web Intelligence, Faculty of Graduate Studies, The University of Jordan, Jordan.
- [6] Thesis title: Improving the Accuracy of Ovarian Cancer Classification. **Dec. 2018**
Thesis Submitted in Partial Fulfillment of the Requirements for the Master of Computer Engineering, Yarmouk University, Jordan.
- [7] Thesis title: Smart-EIS: Toward an End-To-End Enterprise System Framework. **Aug. 2016**
Thesis Submitted in Partial Fulfillment of the Requirements for the Master of Science in Enterprise Systems Engineering, Princess Sumaya University for Technology, Jordan.

Masters' Thesis Internal Examiner

- [1] Thesis title: Lora Mesh Wireless Network Establishment, Parameters' Selection and Potential Applications for the Internet Of Things Applications. **Aug. 2026**
Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.
- [2] Thesis title: 3D Map Reconstruction for Mobile Robot Applications. **Jan. 2026**
Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.
- [3] Thesis title: A Framework to Solving Interoperability and Scalability Challenges in Industrial Internet of Things. **Jan. 2026**
Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.
- [4] Thesis title: Solar Panel Soiling and Shading Classification using Machine Learning Algorithms. **Feb. 2025**

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [5] Thesis title: Analyzing Electrical Signal's Signature of Industrial Motors **May 2024**
using Machine Learning for Fault Detection.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [6] Thesis title: A Robust Wireless Sensor Network Architecture **Jan. 2023**
Against Denial-of-Service Attack.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [7] Thesis title: Performance Comparison of the Dynamic Distributed Dimensional **Aug. 2021**
Data Model Utilizing the SciDB and Apache Accumulo databases.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [8] Thesis title: An Improved Filling Algorithm for 3-D Freehand Ultrasound Systems. **Dec. 2020**

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [9] Thesis title: Factors that Affect the Performance of MapReduce Applications **Aug. 2020**
Running on a Hadoop Cluster.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [10] Thesis title: Computerized Assessment Method to Evaluate the Performance **Aug. 2019**
of Cerebral Palsy Patients During Computer Game-Based Rehabilitation Exercises.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [11] Thesis title: Bandwidth Using Forecasting & Network Anomaly Detection **Jan. 2019**
Based on Neural Network Approach.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [12] Thesis title: Topology management and selective activation algorithm for wireless **Jan. 2018**
sensor network with minimum interference.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

- [13] Thesis title: Enhancing Energy efficiency of IEEE 802.15.4 for Wireless **Dec. 2017**

Sensor Networks.

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

[14] Thesis title: Study Analysis and Performance Evaluation of Google QUIC Transmission Protocol. **Mar. 2017**

Thesis Submitted to the Department of Computer Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Computer Engineering at the German Jordanian University, Jordan.

Funded Projects

External Funded Projects

[1] Global Innovation for Sustainable Futures - Sustainable Software Development (GISF-SSD) **May 2023 – Mar. 2024**

Grant Agreement: German Academic Exchange Service (DAAD)

Reference Number: 57603333

Start date: 01.05.2023

End date: 31.03.2024

Project Partners:

Trier University of Applied Sciences, Germany

German Jordanian University

German Jordanian University Share: € 7,554 (\$ 8,913.72)

Role: Primary Investigator (Project Leader), German Jordanian University

Project Description:

GISF-SSD project implemented in cooperation between Trier University of Applied Sciences, Germany, and the German Jordanian University, Jordan was intended to realistically depict the cycle of sustainable software projects based on the division of labor. Students at both Universities went from analysis and planning to implementation and delivery, thereby preparing students for the international job market.

The project was divided into three phases:

- A condensed version of software development was simulated during a workshop in Jordan. The students then developed ideas for creating a mobile app in the context of the UN's 17 Sustainable Development Goals (SDGs) and formed international teams.
- The students developed their mobile apps virtually and received input from international guest lecturers and experts in software engineering.
- The students presented their apps at a final conference at Trier University of Applied Sciences. Entrepreneurship workshops enabled students to develop a business plan, and pitch and commercialize ideas for their start-ups.

[2] Capacity-building in the Field of Higher Education **Oct. 2017 - Oct. 2020**

(JOVITAL, Jordan opportunity for virtual innovative teaching and learning)

Acronym: JOVITAL

Project Number: 586468-EPP-1-2017-1-DE-EPPKA2-CBHE-JP

Grant Agreement: European Commission, Erasmus+, Key Action 2 – Capacity building in the Field of Higher Education

Start Date: 15/10/2017

End Date: 14/10/2020

Project Partners:

- Technische Universität Dresden (TUD), Germany
- Coventry University (CU), UK
- International School for Social and Business Studies (ISSBS), Slovenia
- Mediterranean Universities Union (UNIMED), Italy
- German Jordanian University (GJU), Jordan
- Princess Sumaya University for Technology (PSUT), Jordan
- Jordan University of Science and Technology (JUST), Jordan
- Al Hussein bin Talal University (AHU), Jordan
- Tafila Technical University (TTU), Jordan

Total project budget: € 999,901.00 (\$ 1,179,883.18)

Role: Project Member, German Jordanian University

Project description:

JOVITAL project offers Higher Education Institutions (HEIs) in Jordan a chance to explore, implement, and disseminate state of the art academic practices to enhance teaching quality and improve learning outcomes. A comprehensive capacity building program is implemented to facilitate intensive know-how transfer between the consortium members to address the problems of outdated instructor-centered frontal teaching methods, limited physical academic mobility, and ineffective use of ICT in formal higher education in Jordan.

Project objectives:

- Qualify academic staff at Jordanian HEIs on modern pedagogical and didactical methodologies for innovative virtual teaching and learning settings.
- Support Jordanian HEIs in adopting and implementing effective ICT-based internationalization at home activities and integrate Jordanian HEIs in a global network for “Virtual Mobility”.
- Open-up higher education in Jordan to integrate disadvantaged groups including women, rural areas inhabitants and refugees in inclusive virtual classroom settings.

[3] A Bottom-Up Approach for Opening Up Education in South-Mediterranean Countries **Oct. 2015 - Oct. 2018**

Acronym: OPENMED

Project Number: 561651-EPP-1-2015-1-IT-EPPKA2-CBHE-JP

Grant Agreement: European Commission, Erasmus+ - Key Action 2 - Capacity Building in the Field of Higher Education.

Principal Investigator: M. Scalisi (UNIMED - the Mediterranean Universities Union, Rome, Italy)

Partners: The project involves fifteen universities and associations from Italy, United Kingdom, Spain, Jordan, Palestine, Morocco, and Egypt.

Start Date: 15.10.2015

End Date: 14.10.2018

Total Project Budget: € 871,229.00 (\$ 1,028,050.22)

Role: Project Member, German Jordanian University

Project Description:

The OPENMED project is aimed at raising awareness and facilitates the adoption of Open Educational Resources (OER) and Open Educational Practices (OEP) in the South-Mediterranean countries, with a particular focus on Higher Education in Egypt, Jordan, Morocco, and Palestine. OPENMED is structured in three main phases, review of good practices in Open Education, widening participation in OER, and Training of Trainers. The review of good practices focuses on a case analysis of current practices in open education globally and, particularly, the South-Mediterranean region. It generates a reliable and evidence-based body of knowledge on OER in the region.

Extending participation in Higher Education (HE) by means of OER adoption is a strategic priority for the HE sectors in general and for the OER movement. Expanding participation will be achieved by increasing HE engagement with OEP and involving key stakeholders from HEIs in the definition of the Regional Agenda of Open Education, i.e., a long-term common strategy for opening-up education in South-Mediterranean countries. The Regional Agenda will serve as a guideline for the definition of institutional roadmaps, i.e., short-term action plans for the implementation of OEP at the local/institutional level. An OER blended training course will be designed and delivered to university educators for building capacity to make use of OER and to start up OEPs relevant to the educational ecosystem.

As a long-term impact, OPENMED will increase OER adoption in the South-Mediterranean countries, fostering the role of universities as knowledge providers. Opening-up education can truly change Higher Education and make it better, accessible, and more relevant. Sharing information about OER initiatives can inspire others to reflect, develop their own initiatives, make connections, celebrate diversity, and work together to defend education as a public good and a basic human right.

[4] Support Jordan Educational Institutions in Offering Labor Market Oriented **Mar. 2018 – Oct. 2021**

Vocational Training

Reference Number: 16.2158.0-002.00

Grant Agreement: The Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), Germany.

Start Date: 01.03.2018

End Date: 31.10.2021

German Jordanian University part: € 203,750.71 (\$ 240,425.83)

Role: Dual Studies Coordinator – School of Electrical Engineering and Information Technology, German Jordanian University.

Project Objective:

Vocational Training and Higher Education increasingly meet the needs of the Jordanian labor market.

Project Description:

This project is based on the idea that a labor market-oriented educational system can only be established if all relevant actors work closely together. In line with this, the project supports the Jordan Ministry of Labor and relevant stakeholders in instigating strong and effective public-private partnerships, establishing private-led dialogue platforms as well as the implementation and development of the Jordanian National Qualifications Framework.

Furthermore, the project supported the establishment and implementation of dual study programs in higher education institutions, as well as the establishment of Centers of Excellence (CoE). This leads to

reducing the gap between supply and demand in the labor market and improving the qualification and employability of higher education graduates.

[5] New Horizons Biomedical Informatics Observatories in Mediterranean Region **Oct. 2012 – Sep. 2017**

Acronym: BIOMED

Grant Agreement: European Commission, FP7.

Proposal Number: 318905

Grant Agreement Number: PIRSES-GA-2012

Start Date: 1/10/2012

End Date: 30/09/2017

Total Project Budget: € 328,700.00 (\$ 387.866)

Role: Project Member, German Jordanian University

Project Description:

The main strategic objective of BIOMED is to enhance the scientific collaboration between Europe-Mediterranean countries. In addition, BIOMED aims to:

- Initiate the establishment of national BioMedical Informatics (BMI) associations for modeling the national strategies.
- Define the requirements for targeted BMI new projects and initiatives.
- Encourage and support the establishment of Biomedical Informatics Centers of Excellence advising for Future reformation.

BIOMED will synergistically apply up-to-date European and International methodologies & standards. The defined challenges are integrating multiple segregated BMI initiatives and policies, overcoming obstructions, political, economic, recommendation adaptation, assessing the current and proposed solutions, defining the national health systems real demands, and identifying different European best practices. The European eHealth Area action plan (COM 2004/ 356) focused on improving the healthcare services, defining best practices, and exchanging the knowledge between different health practitioners. eHealth's central role in the European Union is to improve the efficiency of the health system, the quality of the delivered services and accessibility of the medical data. These commission priorities are not only restricted to European citizens but extended also to cover another neighborhood regions. BIOMED Strategic plans aim to enhance collaboration and network biomedical informatics initiatives to maximize its impact world-wide and intend to integrate different European expertise in BMI in a single Comprehensive Framework.

[6] Open-Source Software Communities

Dec. 2013 - Nov. 2016

Acronym: OSSCOM

Grant Agreement: European Commission, Tempus

Reference Number: 544520-TEMPUS-1-2013-1-DETEMPUS-JPHES

Start Date: 1/12/2013

End Date: 30/11/2016

Total Project Budget: € 868,625.96 (\$ 1,024,978.63)

Role: Project Member, German Jordanian University.

Project Description:

OSSCOM project built on the successful cooperation between German Jordanian University (GJU) and Bonn-Rhein-Sieg University (BRSU) on developing quality and relevance to information and communication technology (ICT) education and spotlights the cooperation between Europe and the East Mediterranean for open dialogue and exchange of knowledge and technology. OSSCOM aims to install innovative partnership structures that link with enterprises towards a wider spread of open-source software (OSS) and strengthening quality and relevance to OSS technology. It will leverage the project partners' experiences in linking to enterprises and create synergies among national partner institutions with a goal to support the development of OSS communities and innovative environments. Partners will contribute to developing OSS resources and products at a larger scale through inviting regional key stakeholders, such as ministries, educational institutions, enterprises, and civil society. OSSCOM plans to support installing OSS as feasible alternative to proprietary software in many institutions, enterprises, and communities at the national levels, providing a means of reducing the cost of ICT investment and offering potential for more flexible and faster technology innovation.

OSSCOM Objectives:

- Improve the quality and relevance of higher education structures in ICT through links with enterprises
- Establish Centers of Excellence in OSS technologies to provide support to communities and PC societies at large
- Develop relevant technical and educational resources at partner countries' institutions with focus on OSS technologies
- Promote the adoption of open-source technologies as feasible alternatives to proprietary software
- Enhance collaboration with enterprises for building sustainable and viable communities of practice in OSS
- Reach out to businesses through an entrepreneurial effort to create companies providing services and support for OSS
- Promote the concept of entrepreneurship and facilitation of incubators and business startups in higher education structures

[7] MSC.ESE: Exporting Master Program in Enterprise Systems Engineering **Oct. 2012 – Oct. 2015**

to Jordan, Syria, Tunisia, and Egypt

Grant Agreement: European Commission, Tempus

Reference Number: 530260-TEMPUS-1-2012-1-DE-TEMPUS-JPCR.

Start Date: 15/10/2012

End Date: 14/10/2015

Total Project Budget: € 1,184,351.97 (\$ 1,397,535.32)

Role: Project member, German Jordanian University.

Project Description:

MSC.ESE project aims to create a master's curriculum in ESE at Jordan, Syria, Tunisia, and Egypt universities to be taught in a new master's program that will be established through the project at one university in each country (4 in total) where the lectures will take place. The curriculum will include also single-subject courses that target professionals and employees from interested companies. MSC.ESE ensures the ability of targeted universities to offer an advanced curriculum in ESE based on successful

course materials, teaching methods and faculty expertise available at European Union universities. Courses will be adapted to the partner universities teaching practices and business environment.

Project objectives:

- Create 5-6 new courses and update 6-8 available ones in a way that conforms to ECTS and Bologna Process
- Incorporate information and communication technology ICT through a Web-based E-learning, course management and admission system
- Apply new teaching methods, Project-Based Learning PBL/ Problem-Based Learning PBL, and Professional Group Leader PGL, that are based on comprehension rather than memorization and obtain case studies from real industrial problems.
- Explore the possibility for this program's graduates to continue their studies at European Union universities based on performance and availability
- ESE labs in the targeted universities equipped with advanced software and E-Learning tools
- Organize ESE concluding scientific conference on an international level
- Training of staff from partner universities for the new curriculum, E-Learning and teaching methods
- Explore the possibility of having regular video conferences among European Union /target universities to form an inter-university scientific cooperation.

Internal Funded Projects

[1] A Deep Learning Neural Network Framework for Image Recognition
of Human Physical and Mental Disabilities

Sep. 2022 – Sep. 2025

Reference Number: SEEIT 16/2022

Start date: 2022-09

End date: 2025-09

Funded by: German Jordanian University

Total funding amount: (\$ 41,454.00)

Role: Primary Investigator (Project Leader), German Jordanian University

Project Description:

This project aims to employ deep learning technologies to classify and cluster images of people with mental and physical disabilities. The main contribution of this project is to extract deep features that identify and characterize people with down syndrome, cerebral palsy, blindness, dwarfism, prosthetic arms, and prosthetic legs disabilities. A complete, reproducible pipeline for collecting, curating, and training deep-learning models is built on a multi-class dataset of disability-related images using both facial and full-body cues. The implementation spans data engineering, multi-framework modeling (YOLO, Detectron2, and TensorFlow COCO models: RetinaNet, SSD, CenterNet, EfficientDet, Faster R-CNN), evaluation planning, and engineering for reproducible experiments. To achieve the objectives of this project, a deep learning framework is developed throughout two phases, the first phase aims to identify the images of people with disabilities from images of normal people doing different activities (normal-abnormal image classifier). The outcome of this phase classifies each input image as a normal person or not normal with physical or mental disability. The second phase aims to cluster human disability images into specific disability subgroups. This phase employs a multi-class classifier that is

applied on the collected disability images identified by the first phase and detects the specific human disability.

Project objectives:

- Creating a curated, ethically sourced disability image dataset (faces and bodies) suitable for modern deep learning detectors.
- Implementing training across multiple detector families (YOLO, Detectron2, TensorFlow COCO models).
- Providing a clear evaluation plan with medically relevant metrics.
- Releasing a public repository with scripts that simulate real runs and can be extended for production.

[2] Self-Driving Car Using Machine Learning and Robotics Technologies **Oct. 2020 – Jul. 2021**

Reference Number: GPSEEIT 01/2020

Start Date: 21/10/2020.

End Date: 21/7/2021

Funded by: German Jordanian University

Role: Primary Investigator (Project Leader), German Jordanian University

Project Description:

PiCAR project aims to build an automotive car model by using Machine Learning and Robotics technologies. This model follows path directions and avoids obstacles facing its path. In addition, different types of sensors are used to sense, measure, detect and classify various objects in a heterogeneous environment.

The project results indicate that the automotive car can drive more securely, adhere to, and abide by the street signs. The detected objects in the automotive car environment include other vehicles, sidewalks, buildings, and pedestrians. Relying on the detection of these objects, the vehicle helps in preventing accidents and highly considers the safety of the pedestrians on the street.

[3] Using Estimote Beacons Technology to Enhance Business Advertising **Jun. 2015 – Feb. 2016**

Reference Number: GP 22/2015

Start Date: 1/6/2015

End Date: 29/2/2016

Funded by: German Jordanian University

Role: Primary Investigator (Project Leader), German Jordanian University

Project Description:

Traditional ways of reaching customers are becoming increasingly deprecated. Therefore, finding more advanced and elegant methodologies has become vital. The need for new efficient marketing technologies that respect people's privacy are also highly accepted. In this project, (iBeacon) communication technology uses Bluetooth low energy (BLE) technology is implemented in modern smartphones to trigger an event each time a user enters or exits a region. iBeacon software development kit integrated into a mobile application, allows handling these events (entering/exiting a region) to run any code (such as sending offers to customers). Connected with the fancy Parse.com cloud services, this application will provide users with a smooth, engaging, and charming experience.

Substantial Students Projects Supervised

[1] German Jordanian University Course Equivalence Portal

Oct. 2025 – Feb. 2026

Students and universities engaged in international mobility regularly face the challenge of comparing courses offered by different higher education institutions and assessing their academic and competency-based equivalence. This challenge is particularly critical for ERASMUS exchanges, study abroad semesters, formal credit recognition procedures, and applications to graduate programs. The objective of these processes is to ensure transparency and comparability of academic achievements while promoting academic mobility. In practice, however, course comparison is often conducted manually based on module handbooks, course descriptions, and individual assessments by academic committees, resulting in considerable time investment and administrative burden. Therefore, there is a growing need for technological solutions that can support the course matching process in a more efficient and consistent manner.

A specific manifestation of this challenge is evident at the German Jordanian University (GJU). Due to its strong emphasis on practical experience and mobility, all GJU students are required to complete a mandatory semester at a partner university in Germany. Prior to this study abroad period, students must identify suitable courses at the host institution and apply for their recognition at GJU. The review of these applications is conducted by designated academic committees, which compare the submitted German courses with existing GJU modules. Such recognition processes are frequently time-intensive and heavily reliant on individual academic judgments, which can compromise the consistency of decisions.

The problem addressed in this work involves developing a system that is user-friendly for students while simultaneously facilitating efficient application processing by staff members. Additionally, the system should accurately measure the similarity between module descriptions to support automated assessment in determining whether modules offered at partner universities are equivalent to local modules at GJU.

[2] A Mobile System for Enhancing Over-the-Counter Medication Safety

Jul. 2025 – Oct. 2025

This project addresses the growing public health issue of unsafe self-medication with over-the-counter drugs, particularly in resource-limited regions such as Jordan. The lack of accessible medical guidance has led to widespread drug-drug interactions that can cause severe health complications. The project aims to mitigate this risk by empowering users with a mobile safety tool that detects harmful medication combinations before they are consumed.

The proposed Android application uses OCR technology to scan medication packaging and extract active ingredients rather than relying on brand names. To ensure accuracy, the system incorporates advanced error-correction techniques and operates on a fully offline, curated database tailored to common OTC drugs. The result is a reliable, real-time warning system that transforms smartphones into proactive tools for harm prevention and patient empowerment.

[3] Dose Guard

Jul. 2025 – Jan. 2026

Dose Guard is a low-cost, portable automated pill dispensing system designed to improve medication adherence while maintaining patient mobility. Unlike bulky commercial dispensers, this solution uses affordable consumer electronics such as an ESP32 microcontroller, a rotary pill isolation mechanism, and a servo-controlled dispenser to automate medication delivery.

The system architecture offloads scheduling and logic to a cloud-based backend developed with Python Flask, enabling remote management through RESTful APIs. A Flutter mobile application allows caregivers to monitor adherence, configure schedules, and receive real-time updates. The project demonstrates that reliable medical assistance devices can be built without proprietary systems or expensive hardware.

[4] Family Server System for Secure Media Storage Parental Monitoring

Jul. 2025 – Jan. 2026

This project proposes a centralized family server that allows secure storage, streaming, and management of multimedia content without relying on third-party cloud services. The system addresses growing concerns around data ownership, privacy, and the fragmented nature of existing parental control and storage solutions.

By integrating AI-based content analysis, the server automatically generates captions and enables semantic media search. Additional parental monitoring tools detect inappropriate content, track application usage, and facilitate secure family communication. The modular client-server design ensures scalability while keeping sensitive family data under direct local control.

[5] NeuroSense: Parkinson's Disease Detection from Keystroke Dynamics

Oct. 2025 – Jan. 2026

Study Buddy Ultimate tackles the challenge students face when dealing with large volumes of unstructured academic material. Traditional search methods lack semantic understanding, and generic AI tools often hallucinate or fail to respect data privacy. This project introduces an intelligent document analysis system that converts static learning materials into an interactive, personalized study assistant. Built on Retrieval-Augmented Generation architecture, the system combines semantic vector search with direct text injections to ensure accurate, hallucination-free responses. Features such as persistent local memory, quiz generation, voice interaction, and citation-based answers significantly enhance learning efficiency. The project demonstrates how AI can function as a trustworthy academic tutor while preserving data privacy.

[6] Study Buddy Ultimate: Intelligent Document Analysis & Learning System

Oct. 2025 – Jan. 2026

Study Buddy Ultimate tackles the challenge students face when dealing with large volumes of unstructured academic material. Traditional search methods lack semantic understanding, and generic AI tools often hallucinate or fail to respect data privacy. This project introduces an intelligent document analysis system that converts static learning materials into an interactive, personalized study assistant. Built on Retrieval-Augmented Generation architecture, the system combines semantic vector search with direct text injections to ensure accurate, hallucination-free responses. Features such as persistent local memory, quiz generation, voice interaction, and citation-based answers significantly enhance

learning efficiency. The project demonstrates how AI can function as a trustworthy academic tutor while preserving data privacy.

[7] Crash Alert

Oct. 2023 – Jan. 2024

Crash Alert is a mobile application designed to reduce the time and frustration associated with handling minor car accidents, particularly in congested urban areas like Amman. The project was motivated by the inefficiencies and traffic delays caused by manual accident reporting and on-site procedures.

The application allows users to quickly report crashes, exchange essential information, and notify relevant authorities through a streamlined digital process. By accelerating incident resolution, Crash Alert aims to reduce traffic congestion and improve overall urban mobility, showcasing how simple technological interventions can solve everyday problems.

[8] Website of Deanship of Scientific Research

Feb. 2023 – Aug. 2023

A website has been developed for the Department of Scientific Research (DSR) at German Jordanian University based on UI/UX, databases, and WordPress technologies. In addition, an external CSS and HTML codes, and plugins “Elementor” tool and “WP mail SMTP” are used to improve the quality of the project. Also, the project is designed so that it allows the administrators to add, edit, and delete records of incentives, conferences, journals, and funded projects using their mobiles. This can be used so an administrator can easily access the website pages and the databases. The result of this project was a very dynamic, modern and well-organized that displays all the DSR official needs.

[9] Utilizing Visual Scripting and AI in Game Development

Oct. 2021 – Jan. 2022

This project involves developing a complete 3D platformer game inspired by the German Jordanian University environment. The goal is to gain hands-on experience in all aspects of game development, including programming, modeling, animation, and debugging, while delivering a polished and enjoyable gameplay experience.

A key focus of the project is implementing enemy AI behavior using Unreal Engine’s visual scripting system (Blueprints). This approach enables more flexible and complex behaviors compared to traditional C++ logic. Through this project, the developer demonstrates how visual scripting and AI tools can streamline game development while maintaining high design quality.

[10] Help Children with Autism

Oct. 2020 – Jun. 2021

This project introduces a Flutter-based mobile application designed to support children with autism in developing cognitive, physical, and social skills. Recognizing that autism cannot be cured, the application focuses on structured exercises, therapy support, and personalized interaction to promote long-term improvement.

The system allows parents to create detailed profiles for their children, including health and developmental information. Based on this data, the application adapts the environment and activities to suit individual needs, demonstrating how technology can play a meaningful role in inclusive education and therapy support.

[11] Aerial Surveillance & Monitoring Using Light Weight UAV Systems (Drones) **Feb. 2019 - Aug. 2019**

This project focuses on designing and developing a lightweight quadcopter efficient of stable indoor and outdoor flight for surveillance and data collection purposes. By leveraging advances in low-power microcontrollers and compact drone frames, the system is designed to navigate restricted spaces such as corridors and doorways, making it suitable for real-world monitoring scenarios. The hardware setup includes a Pixhawk controller, motors, ESCs, sensors, and a mounted camera for live video transmission.

On the software side, the system integrates sensor-based flight stabilization using PID control and hardware-in-the-loop simulation to ensure accurate and reliable maneuvering. A ground station receives and decodes live video streams, applying object detection algorithms to identify targets in real time. The outcome is a semi-automated, cost-effective surveillance solution that demonstrates the feasibility of intelligent UAV-based monitoring systems.

[12] Elevating Public E-Health Communications **Feb. 2019 – Aug. 2019**

WeCare is a web-based platform designed to improve communication between patients, doctors, pharmacists, and pathologists. The project addresses inefficiencies in traditional healthcare communication by providing a centralized digital environment for interaction and information exchange. By leveraging internet technologies, the system enables faster, more reliable, and direct communication between all parties involved in patient care. The platform aims to enhance coordination, reduce delays, and improve the overall quality of public healthcare services.

[13] The Blind Vision **Feb. 2018 – Jul. 2018**

The Blind Vision project aims to assist visually impaired individuals in better understanding their surroundings through a mobile application. The system enables users to recognize nearby objects and environmental features using computer vision techniques.

Additionally, the project includes a machine learning model capable of distinguishing between visually impaired individuals and those merely holding walking sticks. This enhances the contextual accuracy of the system and supports more intelligent assistive functionality, contributing to improved independence for visually challenged users.

This project is extended as research published paper titled (Utilizing Convolutional Neural Networks for Image Classification and Securing Mobility of People with Physical and Mental Disabilities in Cloud Systems <https://doi.org/10.1109/ACCESS.2020.3020866>).

[14] Autonomous Ground Vehicle Navigator (*Win external fund SPS G4936/2017*) **Oct. 2016 – May 2017**

This project focuses on building a fully autonomous ground vehicle capable of navigating to predefined GPS coordinates while avoiding obstacles. The destination can be provided via a web portal or SMS, making the system flexible and accessible for various use cases.

Equipped with multiple sensors and an SD card for data logging, the vehicle can detect environmental conditions and record exceptional events without human intervention. The project demonstrates the integration of GPS navigation, sensor fusion, and automation to create a self-reliant autonomous system.

Journal's Editorial Board

- [1] Editor, International Journal of Web Applications. **2010 - present**
Print ISSN: 0974-7710. Online ISSN: 0974-7729.
- [2] Guest Editor, International Journal of Cloud Applications and Computing **2016**
(IJCAC ISSN 2156-1834), IGI-Global, USA. Vol 6. Issue 2, 2016. Special Issue on Open-Source Software.

Journals Reviewer

- [1] IEEE Access. IEEE Publications, USA. ISSN: 2169-3536. OCLC 820007312. **2019 - present**
- [2] The Journal of Supercomputing. Springer USA. ISSN: 0920-8542 (print version). **2009 - present**
ISSN: 1573-0484 (electronic version). Journal no. 11227.
- [3] IET Software. Print ISSN: 1751-8806. Online ISSN: 1751-8814. **2022 - present**
- [4] Cluster Computing Journal, The Journal of Networks, Software Tools **2023 - present**
and Applications. Springer Nature, ISSN: 13867857. Journal no. 10586.
- [5] PLOS ONE Journal, ISSN 1932-6203, PLOS.org, USA. **2025 - present**
- [6] Applied Soft Computing, ISSN 1568-4946, Elsevier B.V., Netherlands. **2020 - present**
- [7] Progress in Artificial Intelligence, ISSN 2192-6352, 2192-6360, **2020 - present**
Springer Nature, Germany.
- [8] Real-Time Systems, ISSN 0922-6443, 1573-1383, Springer, Netherlands. **2020 - present**
- [9] International Journal of Wireless Information Networks, ISSN 1068-9605, **2019 - present**
1572-8129, Springer Nature, New York, USA.
- [10] Journal of King Saud University - Engineering Sciences, ISSN 1018-3639, **2019 - present**
Springer International Publishing.

Conferences Organization

- [1] Conference Co-Chair. International Conference on Computational and Network Technologies 2013 (ICCNT). December 2-4, 2013, Adelaide, South Australia, Australia.
- [2] Conference technical committee. The 10th International Conference on Electrical and Electronics Engineering (ICEEE 2023). Istanbul, Turkey, May 8-10, 2023.
- [3] Conference technical committee. Cooperative Higher Education Conference (Core 2020). Amman, Jordan. March 29-30, 2020.
- [4] Conference scientific committee. 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT). Amman – Jordan. April 9-11, 2019.
- [5] Conference scientific committee. 5 Edition de la conference JDSIRT sur les Systèmes d'Information, Réseaux et Télécommunications. L'EST de Meknes, Morocco. Nov. 28-29, 2018.
- [6] Conference scientific committee. 1st International Conference on Open-Source Software (OSSCOM 2015). German Jordanian University, Amman, Jordan, April 29-30, 2015.
- [7] Conference Technical Committee. The Third International Conference on Advances in Databases, Knowledge, and Data Applications (DBKDA2011). January 23 - 28, 2011. St.Marten, Netherlands.

- [8] Conference Program Committee. The International Conference on IT Convergence and Security 2011 (ICITCS 2011). Suwon, Republic of Korea. December 14 - 16, 2011.
- [9] Conference Program Committee. International Conference on Information Science and Applications (ICISA-2011). Seoul, Korea, April 26 - 29, 2011.
- [10] Conference Program Committee. International Conference on Information Science and Applications (ICISA-2010). Seoul, Korea, January 27 - 29, 2010.
- [11] Conference Program Committee. 6th International Conference on Innovations in Information Technology (Innovations'09). United Arab Emirates University, Al-Ain, United Arab Emirates, December 15-17, 2009.
- [12] Conference Program Committee. International Computer Science and Technology Conference (ICSTC-2009). National University, San Diego, CA, USA, June 30th - July 1st, 2009.
- [13] Conference Reviewer. The Second International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2009). London Metropolitan University, London, UK, August 4 – 6, 2009.
- [14] Conference Program Committee. International Computer Science and Technology Conference (ICSTC-2008). National University, San Diego, CA, USA, April 1-3, 2008.
- [15] Conference Session Chair. The 2005 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA' 05). Las Vegas, Nevada, USA, June 27 - 30, 2005. (Connectivity, Communication Issues, Embedding & Algorithms).

Courses Taught

- [1] CS116 - Computing Fundamentals
- [2] CS117 - Object-Oriented Programming
- [3] CS201 - Discrete Structures
- [4] CE201 - Computer Architecture and Organization
- [5] CS213 - Component-Based Computing
- [6] CS263-DS - Database Management Systems for Dual Studies
- [7] CS342 - Software Engineering
- [8] CS355 - Web Technologies
- [9] CS355-DS - Web Technologies for Dual Studies
- [10] CS419 - Compiler Construction
- [11] CS462 - Database Design
- [12] CE791 - Graduate course – Special Topics in Comp. Eng. (Cloud Computing and Big Data)
- [13] DS201 - Practical Training II
- [14] CS4921 - Senior Project I for Computer Science
- [15] CS4922 - Senior Project II for Computer Science
- [16] CS492 - Senior Project for Computer Science
- [17] CE592 - Senior Project I for Computer Engineering
- [18] CE594 - Senior Project II for Computer Engineering

Awards and Honors

- | | |
|---|------------------------------------|
| [1] IEEE Award on International publications. Amman – Jordan. | Nov. 2024 |
| [2] GJU Recognition Award for active publishing in Journals and Conferences.
German Jordanian University, Amman – Jordan. | Nov. 2024 |
| [3] Scientific Innovation Award – ICCNT 2013. International Conference on Computational & Network Technologies. Adelaide, South Australia, Australia. | Dec. 2013 |
| [4] Best Paper Award. Proceedings of the 6th International Conference on Innovations in Information Technology (Innovations'09). United Arab Emirates University, United Arab Emirates. | Dec. 2009 |
| [5] IEEE Recognition Award for reviewing IEEE Access publications, IEEE Access, IEEE. | 2019 |
| [6] Appreciation certificate for dedication efforts and contributions to the Graduation Studies Board. Deanship of Graduation Studies, German Jordanian University, Amman, Jordan. | Oct. 2022, 2023, 2024, 2025 |
| [7] Appreciation certificate for dedication efforts and contributions to the success of the Dual Study Program, Deanship of Innovation, Technology Transfer and Entrepreneurship (DI-TECH), German Jordanian University, Amman, Jordan. | Oct. 2023 |

University Committees and Councils Membership

- | | |
|---|--|
| [1] University Council (University Senate), German Jordanian University | Sep. 2015 – Sep. 2016 |
| [2] Graduate Studies Board, German Jordanian University | Oct. 2021 – Sep. 2025 |
| [3] Industrial Link Committee, German Jordanian University | May 2016 – May 2017 |
| [4] Dual Studies Committee, German Jordanian University | Sep. 2019 – Sep. 2023 |
| [5] Scientific Research Committee, School of Electrical Engineering and Information Technology. | Sep. 2012 – Sep. 2016 |
| [6] National Technology Parade committee, German Jordanian University | May 2016 – May 2019 |
| [7] School Council, School of Electrical Engineering and Information Technology | Sep. 2012 – Sep. 2016
Sep. 2017 – Sep. 2018
Sep. 2023 – Sep. 2024 |
| [8] Strategic Plan Committee, School of Electrical Engineering and Information Technology. | Dec. 2023 |
| [9] Hiring faculty members and teaching assistants committee
School of Electrical Engineering and information Technology (Computing) | Sep. 2011 - present |
| [10] Academic majors/tracks Committee for opening new and joint programs with other universities/schools. | Nov. 2023 – present |
| [11] Projects Competitions Committee, School of Electrical Engineering and Information Technology. | Sep. 2016 – Sep. 2022 |

International Community Collaboration

- | | |
|---|--------------------------|
| [1] Academic exchange staff, "knowledge and experiences in Cooperative Education" Take-Off4Internationalization (TOFI). Bonn, Germany. | Nov. 2024 |
| [2] Visiting professor, short course on Big Data Security at Trier University of Applied Sciences, Trier, Germany. | Jun. 2019 |
| [3] Visiting professor, short course on developing Cloud Computing Applications at Vilnius Gediminas Technical University, Vilnius, Lithuania. | May 2017 |
| [4] Academic exchange staff, "Dual Studies Teaching Strategies at Higher Educational Institutions". Vienna, Austria. | Nov. 2019 |
| [5] Academic exchange staff, "Collaborative Online International Learning". Coventry University, Coventry, UK. | Sep. 2019 |
| [6] Academic exchange staff, "Opening up Education in South-Mediterranean Countries". Politecnico di Torino, Torino, Italy. | Sep. 2017 |
| [7] Academic exchange staff, "New Horizons Biomedical Informatics Observatories in Mediterranean Region". University of Athens, Athens, Greece. | Sep. 2016 |
| [8] Academic exchange staff, "Enterprise Systems Engineering". KTH Royal Institute of Technology, Stockholm, Sweden. | Apr. 2015 |
| [9] Academic exchange staff, "Participative Media". Bremen University of Applied Sciences, Bremen, Germany. | Jun. 2015 |
| [10] Academic exchange staff, "Open-Source Software Computing (OSSCOM)". la Universidad de Castilla-La Mancha (UCLM), Albacete, Spain. | Sep. 2014 |
| [11] Academic exchange staff, "Training Workshop in Teaching Methods and E-Learning Tools within the MSC.ESE Tempus Project". Oldenburg, Germany. | Jul. 2013 |
| [12] Conference Co-Chair invitation, "11th International Congress on Biomaterials and Biosensors", Muğla, Turkey | April 2–5, 2026 |
| [13] Conference Keynote Speaker invitation, "2026 13 th International Conference on Electrical and Electronics Engineering", Antalya, Turkey | April 27–29, 2026 |

International Industrial Collaboration

- | | |
|--|---------------------------------------|
| [1] Academic project leader, "Building Mobile Software Engineering Applications". Trier University of Applied Sciences, Trier, Germany. | Nov. 2023 |
| [2] Participant, "Industrial Partnership Conference". German Jordanian University, Amman, Jordan. | Oct. 29-30, 2025 |
| [3] Participant, "Workshop on Labor Market-oriented Vocational Education, Higher Education and Training MOVE-HET". Organized by the GIZ (German Corporation for International Cooperation). Amman, Jordan. | Jan. 2020 |
| [4] Participant, "MENA ICT Forum". Dead Sea, Amman, Jordan. | Nov. 20-21, 2024 |
| [5] Participant, "Dot Cyber Summit". Amman, Jordan. | Sept. 18-19th, 2024 |
| [6] Participant, "Workshop on Innovative Solutions in the field of Biomedical | Oct. 2019 |

Devices: Hearing Aid and Rehabilitation". Co-organized by the German Jordanian University and Baden Württemberg International. Held in Amman, Jordan.

- [7] Participant, "Meeting with an academic team from Technical University of Applied Sciences Würzburg-Schweinfurt (thws) for opening new academic joint programs". **May 2024**
German Jordanian University, Amman, Jordan.

Community Services

- [1] Participant, "German Jordanian University Industrial Partnership Conference". **Oct. 29-30th,2025**
- [2] Participant, "Workshop on Blockchain, Cybersecurity, and Machine Learning: Strategic Synergies". Al-Ahliyya Amman University, Amman, Jordan. **May 14-15th,2025**
- [3] Participant, "Workshop on Artificial Intelligence in Academic Courses". German Jordanian University, Amman, Jordan. **Dec.23rd ,2024 – Jan.05th,2025**
- [4] Prize board member, "Abdulhameed Shoman Prize for Science". **Sep. 2024 - present**
- [5] Participant, "Lectures' series: Automata and Formal Languages". **Sep. 1st ,2024 – Sep. 5th ,2024**
German Jordanian University, Amman, Jordan.
- [6] Evaluator, "QS Universities ranking". **2022 - present**
- [7] Participant, "Computer Science Department accreditation committee" **2013 - present**
- [8] Participant, "German Jordanian University open house days and career fairs". **2022 - present**
- [9] Participant, "German week activities". **2022 - present**
- [10] Participant, "German Jordanian University Graduation Ceremonies". **2011 - present**

Professional Societies

- [1] Member, Institute of Electrical and Electronics Engineers (IEEE).
- [2] Member, Association for Computing Machinery (ACM).
- [3] Member, World Academy of Science, Engineering, and Technology.
- [4] Member, Jordan Accreditation and Quality Assurance for IT Programs Development.
- [5] Member, Jordan National Researchers Board.

Professional Certifications

- [1] Certified Instructor, Ministry of Higher Education, Amman, Jordan **2023**
- [2] Certified Instructor, Microsoft, IC3, and ExecuTrain. **2006**
- [3] Certified Oracle Administrator, Designer, and Developer **1995 - 2001**