

HAZEM KATHEM QATTOUS

PERSONAL INFORMATION



Email h.qattous@psut.edu.jo
Mobile +962 79 9433369
Address P.O.Box 1344
Aljubiha 11941
Amman - Jordan
Nationality Jordanian
Languages Arabic, English
Marital Status Married
Birth Date 4th May, 1976

EXPERIENCE

- **2020 – Until now Princess Sumaya University for Technology (PSUT) Amman Jordan**

Director of Quality Assurance and Accreditation Center (2023 – Until now)

I am currently working as an associate professor and the Quality Assurance and Accreditation Center director. My duties in this position include:

- Coordination with the Accreditation and Quality Assurance Commission for Higher Education Institutions for local accreditation at PSUT
- Coordination with the schools at PSUT for national and international accreditations
- Internal quality assurance audit
- Visualizing Data using PowerBi
- Managing and running induction week for the new faculty members joining PSUT
- Managing several levels of surveys at PSUT and presenting results to the deans council
- Preparing data for international ranking and rating

Head of Software Engineering Department (2021 – 2023)

King Hussein School of Computing Sciences
Princess Sumaya University for Technology (PSUT)

Some of my duties while being the head of the software engineering department were building the timetable of the department and managing students problems.

Associate Professor (2024)

King Hussein School of Computing Sciences
Princess Sumaya University for Technology (PSUT)

One of my main duties at PSUT is teaching. Some of the courses I am teaching include:

- Software Architecture and Design
- Software Requirements
- Structured Programming
- Server-Side-Programming
- Object-Oriented Programming

Assistant Professor (2020 - 2024)

King Hussein School of Computing Sciences
Princess Sumaya University for Technology (PSUT)

- **2011 – 2020 Applied Science Private University (ASU) Amman Jordan**

Associate Professor

I worked as associate professor at the Faculty of Information Technology, Applied Science University (ASU). I was promoted to Associate Professor in April, 2017. One of my main duties at ASU is teaching. Teaching duties include selecting an appropriate textbook for the course, preparing the syllabus, prepare the slides and other materials, prepare the exams and mark them, and prepare and mark the course project. If the course is lab-based, my duties extend to include preparing the lab materials (lab manual), lab sessions exercises, helping students during the lab, preparing and marking the lab exams. I teach several courses in the domain of Software Engineering and Computer Science including:

- Visual Programming, which is taught with lab using Xamarin.
- Android Programming, taught with lab using Android Studio.
- Requirements Engineering, taught with lab using RequestPro, Visio and Visual Paradigm.
- Software Design, taught with lab using Rational Rose, Visio and Visual Paradigm.
- Project Management, taught with lab using MS Project and Excel.
- Structured Programming, C++ as an application language (taught with lab).
- Digital Design (Logic Design).
- OOP 1, considering the basics of OOP using Java language (taught with lab).
- OOP 2, including advanced topics of OOP including GUI using Java language. Lately this course moved to use JavaFx as an application language (taught with lab).
- Data Structures, using Java (taught with lab).

- Web Development (HTML)
- Social Media and Computer Skills.

Vice Dean (2015 – 2016)

Faculty of Information Technology
Applied Science Private University (ASU)

Head of Computer Science Department (2012 – 2014)

Faculty of Information Technology
Applied Science Private University (ASU)

- **2007 – 2011 University of Glasgow Glasgow, UK**

Lab tutor for Java and Image Processing labs

My responsibilities included instructing and supervising the labs, preparing and tutoring the lab material, and marking the student submissions.

- **2006-2007 Philadelphia University Amman, Jordan**

Lecturer at the department of Software Engineering

During my work at Philadelphia University, I taught Requirements Engineering, Object Oriented Design and Modelling, and Object Oriented Programming courses.

- **2004 Applied Science Private University (ASU) Amman, Jordan**

Networks Lab Tutor

I taught Networks Lab course (1 credit hour) as a part of my responsibilities. This task was not usually assigned to lab tutors. However, the administration assigned me to teach the course because of my distinction in the bachelor degree at that time. I was also responsible for tutoring C++ lab.

- **2000–2001 MEDMAC Amman, Jordan**

Company Representative

- I worked as a sales manager at MEDMAC Company. I was responsible for sales of the MEDMAC agricultural products.

EDUCATION

- **2007-2011 University of Glasgow Glasgow, UK**

PhD Computing Science / Software Engineering.

My PhD research was in the field of Meta-CASE tools and constraint specification by example. The thesis title is “Constraint Specification by Example in a Meta-CASE Tool”.

- 2004–2006 University of the West of England Bristol, UK

MSc. Software Engineering.

My master thesis was in the field of Cybersecurity (Steganography) and titled as “**Investigating Combining Steganography, Cryptography, and Compression for Higher Data Protection**”. I hid data, after encryption and compression, in audio files with ".wav" format. I finished my degree in 2006 with merit. My thesis was between the best submitted and selected to be published in the library as a prototype for other students to learn from it.

- 2001-2004 Applied Science University Amman, Jordan

B.Sc. Computer Science.

I ranked the first in my faculty with GPA 87.5

- 1997-2000 University of Jordan Amman, Jordan

MSc. Agricultural Science – Horticulture and Plant Protection Dept.

- 1993-1997 University of Jordan Amman, Jordan

BSc. of Agricultural Science – Plant Protection Dept.

GRANTS

- ICT/1/16/2022 (51,325 JD)

I participated with a team of researchers at PSUT and outside the university in applying and running a research grant from Research and Innovation fund - Ministry of Higher Education and Scientific Research - Jordan. The research involves King Hussein Cancer Foundation and King Abdullah University Hospital.

INTERESTS

I am interested in teaching, working and research in the following fields:

- **Health Information Technology.**
- **Project Management.**
- **Software Engineering Design especially Design Patterns.**
- **Java Programming.**

MEMBERSHIPS AT UNIVERSITY COMMITTEES

I am heading the **Quality Assurance Committee** at the Software Engineering department. I headed the team responsible for **EUR-ACE** accreditation for the BSc

Software Engineering program while I was heading the department. **It is the first Software Engineering program accredited with EUR-ACE in Jordan and in the Middle East area.** Currently, we are working on EUR-ACE accreditation for Computer Science BSc and Computer Graphics and Animation BSc programs.

I am currently also heading the **Graduation Project Committee** and a member of many other committees in the department.

I headed the Quality Assurance Committee at the Faculty of Information Technology at ASU. I was heading a team to improve the quality level of the faculty based on the national standards produced by the Accreditation and Quality Assurance Commission for Higher Education Institutions (AQACHEI). We achieved the SILVER level based on their evaluation. The University achieved the GOLDEN level which was an achievement of a team I was part of.

I was also heading the **Faculty Schedule Committee** and a member at the **Exam Schedule Committee** at the Faculty of Information Technology, ASU.

PhD.

During my PhD at the University of Glasgow, I developed an Eclipse plugin using **Java** programming language. The plugin works as a Meta-CASE tool for domain-specific modeling language generation. Empirical studies were also conducted on the program to verify its usefulness.

AWARDS

I was awarded "**The Best Researcher at the Faculty of Information Technology**" award at ASU for the academic year 2016 / 2017 **2017**

I was awarded a scholarship during my PhD studies from the department of Computer Science at University of Glasgow because of my distinction as a PhD student. I was the only foreigner who got this scholarship. **2009 - 2011**

I was awarded a full scholarship from Applied Science Private University (ASU) to study PhD at University of Glasgow. One reason of being awarded this scholarship was my distinction during the BSc degree at ASU (I ranked the first in the faculty when graduated in 2004) **2007 – 2011**

- **Bilal Sowan, Ahmad Altarawneh, Mohammad Azzeh, Hazem Qattous (2026).** AEGIS-Chain: Agentic AI for Auditable Human-in-the-Loop Supply Chain Decision Support. *2nd International Conference on Computational Intelligence Approaches and Applications (ICCIAA)*, Amman, Jordan, 2026, pp. 1-8, IEEE, doi: 10.1109/ICCIAA68481.2026.11543973.
- **Bilal Sowan, Li Zhang, Essam H Houssein, Hazem Qattous, Mohammad Azzeh, Bayan Massad (2025).** DOVE-FELM: A fusion-optimized feature selection and heterogeneous ensemble learning framework for early prediction of chronic kidney disease risk. *Array*, (28) 1, pp. 1-37
- **Mohammad Azzeh, Noor Afeshat, Hazem Qattous, Abedrahman Alkhateeb (2025).** Integrative multi-omics approach for identifying and classifying high-risk patients in prostate cancer management. *Neural Computing and Applications*, (37) 1, pp. 18721–18742
- **Amro Sayed Ahmad, Firas Alghanim, Bashier Elkarami, Mousa AbuGhosh, Hazem Qattous, Abedalrhman Alkhateeb (2025).** Explainable AI for Clinical Decision-Making: Unlocking the Potential of MSI Thresholds in Bladder Cancer. *International Work-Conference on Bioinformatics and Biomedical Engineering, IWBBIO 2025*, Gran Canaria, Spain. Lecture Notes in Computer Science, vol 16051. Springer, Cham. https://doi.org/10.1007/978-3-032-08452-1_14.
- **Rand Habashneh, Hazem Qattous, Malek Alsmadi, Abedalrhman Alkhateeb (2025).** Machine Learning Models for Assessing Depression in Syrian Adolescent Refugees in Jordan. *International Work-Conference on Bioinformatics and Biomedical Engineering, IWBBIO 2025*, Gran Canaria, Spain. Lecture Notes in Computer Science, vol 16051. Springer, Cham. https://doi.org/10.1007/978-3-032-08452-1_16. pp 199-208.
- **Soha Kanaan, Ahmad Altamimi, Hazem Qattous, Haitham Rbeihat (2025).** Enhanced non-invasive machine learning approach for early colorectal cancer detection: Predictive modeling and validation in a Jordanian cohort. *Computers in Biology and Medicine* (191), doi: <https://doi.org/10.1016/j.compbimed.2025.110184>
- **Sowan, B., Qattous, H., Fasha, M., Altarawneh, A. (2025).** Enhanced healthcare through metaverse integration: explainable AI and blockchain for trust, security, and immersive experiences. *1st International Conference on Computational Intelligence Approaches and Applications (ICCIAA)*, Amman, Jordan, 2025, pp. 1-7, IEEE, doi: 10.1109/ICCIAA65327.2025.11013241.
- **Altamimi, A. , Qattous, H., Barakat, D., Hazaimah, L. (2024).** Factors Influencing Adoption of Blockchain Technology in Jordan: The Perspective of Health Care Professionals. *Interdisciplinary Journal of Information, Knowledge, and Management*, vol. 19.
- **Abed Al-Ghafer, I., AlAfeshat, N., Alshomali, L., Alanee, S., Qattous, H., Azzeh, M., Alkhateeb, A. (2024).** NMF-guided feature selection and genetic algorithm-driven

framework for tumor mutational burden classification in bladder cancer using multi-omics data. *Network Modeling Analysis in Health Informatics and Bioinformatics*, (13) 1, pp. 1-12

- **Qattous, H., Azzeh, M., Ibrahim, R., Abed Al-Ghafer, I., Al Sorkhy, M., Alkhateeb, A. (2024).** PaCMAP-embedded Convolutional Neural Network for Multi-Omics Data Integration. *Heliyon*, 10 (1).
- **Bilal Sowan, Mohammed Eshtay, Keshav Dahal, Hazem Qattous and Li Zhang (2023).** Hybrid PSO feature selection-based association classification approach for breast cancer detection. *Neural Computing and Applications*, vol. 35, doi: <https://doi.org/10.1007/s00521-022-07950-7>.
- **BaniMustafa, A., Qattous, H., Ghabeish, I., Karajeh, M. (2023).** A Machine Learning Hybrid Approach for Diagnosing Plants Bacterial and Fungal Diseases. *International Journal of Advanced Computer Science and Applications* 14 (1).
- **Qattous, H., Alghanim, F., Omar, F., Al-Oudat, M., Shkoukanic, M. and Sowan, B. (2022).** Examination of students' acceptance and intention to use a New LMS during COVID-19 pandemic. *International Journal of Data and Network Science* 6 (4).
- **Abu Al-Haija, Q., Odeh, A. and Qattous, H. (2022).** PDF Malware Detection Based on Optimizable Decision Trees. *Electronics*, 11 (19).
- **Alghanim, F., Azzeh, M., El-Hassan, A. and Qattous, H. (2022).** Software Defect Density Prediction Using Deep Learning. *IEEE Access*, vol. 10, pp 114629 - 114641.
- **ElKarami, B., Alkhateeb, A., Qattous, H., Alshomali, L., and Shahrrava, B. (2022).** Multi-omics Data Integration Model Based on UMAP Embedding and Convolutional Neural Network. *Cancer Informatics*, vol. 21, pp 1-7.
- **AL-Oudat, M., Azzeh, M., Qattous, H., Altamimi, A., Alomari, S. (2022).** Image Segmentation based Deep Learning for Biliary Tree Diagnosis. *Webology* 19 (1), pp 1834-1849
- **Al-Oudat, M., Alomari, S., Qattous, H., Azzeh, M., AL-Munaizel, T. (2021).** An Interactive Automation for Human Biliary Tree Diagnosis Using Computer Vision. *International Journal of Computers Communications & Control (IJCCC)*, 16 (5), pp 472–488.
- **Al-Oudat, M., Azzeh, M., Qattous, H., Migdady, M., AL-Munaizel, T. (2021).** Automatic Intrahepatic Biliary Segmentation Based Image Processing. *Advances in Mechanics*, 9 (3).
- **Shkoukani, M., Altamimi, A., Qattous, H. (2019).** An Experimental Study to Evaluate the Integration of Various Security Approaches to Secure Transferable Data. *International Journal of Simulation Systems, Science & Technology (IJSSST)* 20 (1), pp 1-10.
- **AI-Sakran, A, Qattous, H., Hijjawi, M. (2018).** Performance Evaluation of NoSQL Databases in the Field of IOT. *8th International Conference on Computer Science and Information Technology (CSIT2018)*, Amman, Jordan. IEEE Xplore, pp 32 – 37.
- **Qattous, H. (2017).** Hiding Encrypted Data into Audio File. *International Journal Of Computer Science And Network Security (IJCSNS)*, 17 (6) : 162-170.

- **AlSheikSalem, O. and Qattous, H.** (2017). An Expert System for Design Patterns Recognition. *International Journal of Computer Science and Network Security (IJCSNS)*, 17 (1) : 261 – 269.
- **Sowan, B. and Qattous, H.** (2017). A Data Mining of Supervised learning Approach based on K-means Clustering. *International Journal of Computer Science and Network Security (IJCSNS)* 17(1) : 18 – 24.
- **Qattous, H.** (2016). TeachMe, a Programming by Example Customizable Gesture Recognition System. *International Journal of Computer Science and Network Security (IJCSNS)*, 16 (12) : 58 – 65.
- **Qattous, H., Sowan, B. and AlSheikSalem, O.** (2016). TeachMe, a Gesture Recognition System with Customization Feature. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 7 (11) : 46-50.
- **Ogbah, H., Alashqar, A. and Qattous, H.** (2016). Predicting Heart Disease by Means of Associative Classification. *International Journal of Computer Science and Network Security (IJCSNS)*, 16 (9) : 24-32.
- **Hijjawi, M., Qattous, H. and AlSheikSalem, O.** (2015). Mobile ArabChat: An Arabic Mobile-Based Conversational Agent. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 6 (10) : 111-119.
- **Qattous, H. Gray, P. Welland, R.** (2013). DECS, a meta-CASE tool with visually-oriented constraint definition features. *Proceedings of 2013 5th International Conference on Computer Science and Information Technology (CSIT2013) Amman, Jordan*. IEEE explore, pp. 256-259.
- **Qattous, H. Gray, P. Welland, R.** (2010). An Empirical Study of Specification by Example in a Software Engineering Tool. *Proceedings of the 2010 ACM-IEEE International Symposium on Empirical Software Engineering and Measurement*. Bolzano-Bozen, Italy, pp. 1-10
- **Qattous, H.** (2009). Constraint Specification by Example in a Meta-CASE Tool. *Foundations of Software Engineering Proceedings of the doctoral symposium for ESEC/FSE*. Amsterdam, the Netherlands, pp. 13-16.