# Mua'ad Majed Abu-Faraj

## **Professor of Computer Engineering**

DEPARTMENT OF COMPUTER INFORMATION SYSTEMS
SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS
THE UNIVERSITY OF JORDAN

#### PERSONAL DETAILS

DATE OF BIRTH: April 28, 1982

PLACE OF BIRTH: Dhahran - Saudi Arabia

NATIONALITY: Jordanian

MARITAL STATUS: Married, two children

#### CONTACT INFORMATION

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 8:
 https://scholar.google.com/citations?user=CxLts\_sAAAAJ&hl=en

https://www.scopus.com/authid/detail.uri?authorId=55546268000

P: https://www.webofscience.com/wos/author/record/ABF-8837-2021

https://orcid.org/0000-0003-2489-4857

#### **EDUCATION**

MAY 2012 | Ph.D. in Computer Science and Engineering

University of Connecticut, Storrs, Connecticut, U.S.A.

Thesis: "Architectural Considerations for a Shared Out-Of-Core Dynamically

Reconfigurable Fabrics"

MAY 2012 M.Sc. in Computer Science and Engineering

University of Connecticut, Storrs, Connecticut, U.S.A.

SEPTEMBER 2005 | M.Sc. in Computer and Network Engineering

Sheffield Hallam University, Sheffield, U.K.

Thesis: "An Analysis of the Effect of Contention-Window and Arbitration Inter-

Frame Space on the Performance of Wireless AD-Hoc Network"

SEPTEMBER 2004 | B.Eng. in Computer Engineering

Mu'tah University, Mu'tah, Jordan

AUGUST 2000 | General Secondary Education Certificate, Scientific Branch

Aqaba Secondary School, Aqaba, Jordan.

#### **ACADEMIC EXPERIENCE**

DECEMBER 2023 | Professor

DEPARTMENT OF COMPUTER INFORMATION SYSTEMS SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS

THE UNIVERSITY OF JORDAN

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DECEMBER 2023 | Associate Professor **DEPARTMENT OF COMPUTER INFORMATION SYSTEMS** DECEMBER 2018 SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN DECEMBER 2018 **Assistant Professor** FEBRUARY 2014 DEPARTMENT OF COMPUTER INFORMATION SYSTEMS SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN FEBRUARY 2014 | Lecturer DEPARTMENT OF COMPUTER INFORMATION SYSTEMS JANUARY 2013 SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN JANUARY 2013 Part-time Lecturer SEPTEMBER 2012 DEPARTMENT OF COMPUTER INFORMATION SYSTEMS SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN MAY 2012 **Teaching Assistant** AUGUST 2008 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING SCHOOL OF ENGINEERING University of Connecticut MAY 2008 **Teaching Assistant** AUGUST 2006 DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING SCHOOL OF ENGINEERING University of Sheffield

#### **ADMINISTRATIVE EXPERIENCE**

SEPTEMBER 2024 OCTOBER 2022	Assistant to the President The University of Jordan
SEPTEMBER 2023 SEPTEMBER 2019	Dean SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN
June 2022 June 2018	Member of Board of Trustees GERMAN JORDANIAN UNIVERSITY
OCTOBER 2021 SEPTEMBER 2019	Registrar General The University of Jordan
SEPTEMBER 2017 MARCH 2015	Director Information Technology Center The University of Jordan
August 2014 August 2013	Dean's Assistant School of Information Technology and Systems The University of Jordan
August 2014 August 2013	Director of Quality Assurance and Development Affairs THE UNIVERSITY OF JORDAN

# SERVICE AND COMMITTEE WORK

**External Committees** 

# JULY 2023 | Coordinator of the University Accreditation Committee to Al Hussein Bin Talal University

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	Accreditation and Quality Assurance Commission for Higher Education Institutions
JULY 2023	Coordinator of the University Accreditation Committee to Tafila Technical University
	Accreditation and Quality Assurance Commission for Higher Education Institutions
JUNE 2023	Coordinator of the University Accreditation Committee to Aqaba University of Technology ACCREDITATION AND QUALITY ASSURANCE COMMISSION FOR HIGHER EDUCATION INSTITUTIONS
OCTOBER 2021	Member of the Investment Fund Committee
OCTOBER 2020	GERMAN JORDANIAN UNIVERSITY
APRIL 2021	Member of the University Accreditation Committee to Aqaba University of Technology ACCREDITATION AND QUALITY ASSURANCE COMMISSION FOR HIGHER EDUCATION INSTITUTIONS

# **University Committees**

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Now	Member of Online Learning Committee
OCTOBER 2025	THE UNIVERSITY OF JORDAN
LUNIE 2024	Mambar of the the University Creduction Committee
June 2024	Member of the University Graduation Committee
June 2023	THE UNIVERSITY OF JORDAN
MAY 2024	Coordinator of the Revision Committee of the University's Compulsory and Elective Course Requirements
	THE UNIVERSITY OF JORDAN
APRIL 2024	Member of the Student Election Committee
APRIL 2024	THE UNIVERSITY OF JORDAN
	THE OTHERSON OF JORDAN
DECEMBER 2023	Member of the Graduate Studies Committee
	THE UNIVERSITY OF JORDAN
DECEMBER 2023	Member of the English Language and Computer Skills Competencies Com-
DECEMBER 2023	mittee
	THE UNIVERSITY OF JORDAN
SEPTEMBER 2024	Member of the University of Jordan Local Accreditation Committee
OCTOBER 2023	THE UNIVERSITY OF JORDAN
OCTOBER 2023	Member of the Higher committee for National and International Accredi-
OCTOBER 2023	tation
JANAURY 2023	THE UNIVERSITY OF JORDAN
OCTOBER 2023	Coordinator of Students Academic Affairs Committee
<del>-</del>	
OCTOBER 2022	THE UNIVERSITY OF JORDAN
SEPTEMBER 2022	Member of Students Academic Affairs Committee
SEPTEMBER 2019	THE UNIVERSITY OF JORDAN
JULY 2022	Member of Recruitment Committee The University of Jordan
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January 2022	Member of Programs Establishment Committee in the University of Jordan
	THE UNIVERSITY OF JORDAN
SEPTEMBER 2021	Member of Online/Blended Learning Committee

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APRIL 2021	THE UNIVERSITY OF JORDAN
SEPTEMBER 2020 SEPTEMBER 2019	J
SEPTEMBER 2020 SEPTEMBER 2019	
JANUARY 2020	Member of the University of Jordan at Aqaba Strategic Planning Committee THE UNIVERSITY OF JORDAN
DECEMBER 2019, OCTOBER 2016, NOVEMBER 2013	Coordinator of Employee Discipline Committee The University of Jordan
June 2019, February 2018, April 2013	
SEPTEMBER 2018	Member of Scientific Research Committee The University of Jordan
AUGUST 2017 SEPTEMBER 2016	,
OCTOBER 2014, FEBRUARY 2014	
SEPTEMBER 2014	Member of the University's Website Administration Committee THE UNIVERSITY OF JORDAN
School Commi	ttees
School Commit	Coordinator of the Qualification Placement Committee for the Cybersecu-
Now	Coordinator of the Qualification Placement Committee for the Cybersecurity and Smart Networks Program SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS Cybersecurity and Smart Networks Program Coordinator
Now October 2024	Coordinator of the Qualification Placement Committee for the Cybersecurity and Smart Networks Program SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS
Now October 2024 Now	Coordinator of the Qualification Placement Committee for the Cybersecurity and Smart Networks Program School of Information Technology and Systems Cybersecurity and Smart Networks Program Coordinator School of Information Technology and Systems The University of Jordan
Now OCTOBER 2024 NOW OCTOBER 2024 Now	Coordinator of the Qualification Placement Committee for the Cybersecurity and Smart Networks Program School of Information Technology and Systems Cybersecurity and Smart Networks Program Coordinator School of Information Technology and Systems The University of Jordan  Academic Advisor for the Cybersecurity and Smart Networks Program School of Information Technology and Systems The University of Jordan
Now OCTOBER 2024 NOW OCTOBER 2024  NOW OCTOBER 2024	Coordinator of the Qualification Placement Committee for the Cybersecurity and Smart Networks Program School of Information Technology and Systems Cybersecurity and Smart Networks Program Coordinator School of Information Technology and Systems The University of Jordan  Academic Advisor for the Cybersecurity and Smart Networks Program School of Information Technology and Systems The University of Jordan  Member of the School Quality Committee School of Information Technology and Systems The University of Jordan
Now OCTOBER 2024 NOW OCTOBER 2024  NOW OCTOBER 2024  NOW OCTOBER 2024	Coordinator of the Qualification Placement Committee for the Cybersecurity and Smart Networks Program School of Information Technology and Systems Cybersecurity and Smart Networks Program Coordinator School of Information Technology and Systems The University of Jordan  Academic Advisor for the Cybersecurity and Smart Networks Program School of Information Technology and Systems The University of Jordan  Member of the School Quality Committee School of Information Technology and Systems The University of Jordan  Member of Social Affairs Committee School of Information Technology and Systems The University of Jordan
NOW  OCTOBER 2024  NOW OCTOBER 2024  NOW OCTOBER 2024  NOW OCTOBER 2024  NOW SEPTEMBER 2018	Coordinator of the Qualification Placement Committee for the Cybersecurity and Smart Networks Program SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS Cybersecurity and Smart Networks Program Coordinator SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN  Academic Advisor for the Cybersecurity and Smart Networks Program SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN  Member of the School Quality Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN  Member of Social Affairs Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN  Coordinator of Academic Plans and Curriculum Equivalency Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS

	THE UNIVERSITY OF JORDAN	
SEPTEMBER 2024 OCTOBER 2023	Coordinator of the Scentific Research Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN	
August 2020 June 2020	Coordinator of Distance Learning Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN	
SEPTEMBER 2020 SEPTEMBER 2019	Coordinator of the Postgraduate Committee School of Information Technology and Systems The University of Jordan	
SEPTEMBER 2019 APRIL 2019	Member of the Postgraduate Committee School of Information Technology and Systems The University of Jordan	
SEPTEMBER 2019 SEPTEMBER 2017	Coordinator of Academic Plans and Curriculum Equivalency Committee School of Information Technology and Systems The University of Jordan	
SEPTEMBER 2019 SEPTEMBER 2017	Coordinator of Local Society and Graduates Communication Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN	
SEPTEMBER 2017	Member of the Committee to Establish Software Engineering Department School of Information Technology and Systems The University of Jordan	
March 2017	Coordinator of Students Election Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN	
NOVEMBER 2016	Coordinator of ABET Committee School of Information Technology and Systems The University of Jordan	
SEPTEMBER 2017 AUGUST 2013	Member of School Council School of Information Technology and Systems The University of Jordan	
March 2014	Member of Students Election Committee School of Information Technology and Systems The University of Jordan	
DECEMBER 2013	Coordinator of Academic Plans Committee SCHOOL OF INFORMATION TECHNOLOGY AND SYSTEMS THE UNIVERSITY OF JORDAN	
AUGUST 2013 FEBRUARY 2013	Member of Students Discipline Committee School of Information Technology and Systems The University of Jordan	
Research Experience		

## R

AUGUST 2008	Research Assistant DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING SCHOOL OF ENGINEERING UNIVERSITY OF CONNECTICUT
January 2010	Research Assistant

Mua'ad M. Abu-Faraj Page 5 of 13 AUGUST 2008 | DAPCO INDUSTRIES. INC.,

MAY 2008 SEPTEMBER 2006

MAY 2008 | Research Assistant

DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING SCHOOL OF ENGINEERING UNIVERSITY OF SHEFFIELD

#### **PUBLICATIONS**

#### **Theses**

- 1. **M. Abu-Faraj**. Architectural Considerations for a Shared Out-Of-Core Dynamically Reconfigurable Fabric. Ph.D. thesis, University of Connecticut, 2012.
- 2. **M. Abu-Faraj**. An Analysis of the Effect of Contention-Window and Arbitration Inter-Frame Space on the Performance of Wireless AD-Hoc Network. M.Sc. thesis, Sheffield Hallam University, 2005.

#### Papers in Refereed Journals

- 3. **M. Abu-Faraj**, A. Al-Hyari, Z. Alqadi, B. Ali, and A. Alhaj, "Encrypting Speech Signals by Utilizing Multiple Chaotic Keys with Segmentation," *International Journal of Data and Network Science*, vol., no., pp. -, 2024, doi:10.22937/IJCSNS.2021.21.12.8. (Web of Science Indexed, Scopus Indexed) (Accepted, to be published)
- 4. A. Al-Hyari, **M. Abu-Faraj**, C. Obimbo, and M. Alazab, "Chaotic Hénon-Logistic Map Hybridization: A Powerful Approach to Safeguard Digital Images," *Journal of Cybersecurity and Privacy*, vol. , Iss. , pp. -, 2024, doi:10.3390/sym0664. (Scopus Indexed) (Accepted, to be published)
- 5. A. Al-Hyari, C. Obimbo, **M. Abu-Faraj**, and I. Al-taharwa, "Generating Powerful Encryption Keys for Image Cryptography with Chaotic Maps by Incorporating Collatz Conjecture," *IEEE Access*, vol. 12, pp. 4825-4844, 2024, doi: 10.1109/ACCESS.2024.3349470. (Web of Science Indexed, Scopus Indexed)
- 6. B. Al-Ahmad, N. Al-Madi, A. Alzaqebah, R. Alkhawaldeh, K. Aldebei, F. Kabir, I. Al-taharwa, M. Abu-Faraj, and I. Aljarrah, "Meta-Heuristic Guided Feature Optimization for Enhanced Authorship Attribution in Java Source Code," *IEEE Access*, vol. 11, pp. 141657 141673, 2023, doi:10.1109/ACCESS.2023.3341395. (Web of Science Indexed, Scopus Indexed)
- 7. A. Alhaj, **M. Abu-Faraj**, and B. Ali, "A Predictive Technique using Random Forest Classifier for Phishing Malicious Attack," *Applied Mathematics & Information Sciences*, vol. 17, No. 6, pp. 1177-1187, 2023, doi:10.18576/amis/170622. (Scopus Indexed)
- 8. **M. Abu-Faraj**, A. Al-Hyari, C. Obimbo, K. Aldebei, I. Al-taharwa Z. Alqadi, and O. Almanaseer, "Protecting Digital Image Protection Using Keys enhanced by 2D Chaotic Logistic Maps," *Cryptography*, vol. 7, Iss. 2, pp. 20-42, 2023, doi:10.3390/cryptography7020020. (Web of Science Indexed, Scopus Indexed)
- 9. **M. Abu-Faraj**, A. Al-Hyari, B. Al-Ahmad, Z. Alqadi, B. Ali, and K. Aldebe, "Improving the Efficiency of Median Filters Using Two Rounds of Generated Windows Processing," *Applied Mathematics & Information Sciences (AMIS)*, vol. 17, no. 1, pp. 187-200, 2023, doi:10.18576/amis/170119. (Scopus Indexed)
- 10. A. Alhaj, N. Zanoon, A. Alrabea, H. Alnatsheh, O. Jawabreh, M. Abu-Faraj, and B. Ali, "Smart Cities Traffic Management and Safety Improvement by using VANETs and IoT," *Journal of Statistics Applications & Probability*, vol. 14, no. 2, pp. 405-414, 2023, doi:10.18576/jsap/120207. (Scopus Indexed)
- 11. **M. Abu-Faraj**, A. Al-Hyari, I. Al-taharwa, Z. Alqadi, and B. Ali, "Increasing the Security of Transmitted Text Messages Using Chaotic Key and Image Key Cryptography," *International Journal of Data and Network Science*, vol. 7, no. 2, pp. 809-820, 2023, doi:10.5267/j.ijdns.2023.1.008. (Scopus Indexed)
- 12. **M. Abu-Faraj**, A. Al-Hyari, I. Al-taharwa, B. Al-Ahmad, and Z. Alqadi, "CASDC: A Cryptographically Secure Data System Based on Two Private Key Images," *IEEE Access*, vol. 10, pp. 126304 126314, 2022, doi:10.1109/ACCESS.2022.3226319. (Web of Science Indexed, Scopus Indexed)
- 13. **M. Abu-Faraj**, A. Al-Hyari, B. Al-Ahmad, Z. Alqadi, B. Ali, and A. Alhaj, "Building a Secure Image Cryptography System using Parallel Processing and Complicated Dynamic Length Private

- Key," *Applied Mathematics & Information Sciences (AMIS)*, vol. 16, no. 6, pp. 1017-1026, 2022, doi:10.18576/amis/160619. (Scopus Indexed)
- 14. **M. Abu-Faraj**, Z. Alqadi, B. Al-Ahmad, K. Aldebei, and B. Ali, "A Novel Approach to Extract Color Image Features using Image Thinning," *Applied Mathematics & Information Sciences (AMIS)*, vol.16, no. 5, pp. 665-672, 2022, doi:10.18576/amis/160501. (Scopus Indexed)
- 15. **M. Abu-Faraj**, Z. Alqadi, and M. Zubi, "Creating Color Image Features Based on Morphology Image Processing," *Traitement du Signal*, vol. 39, no. 3, pp. 797-803, 2022, doi:10.18280/ts.390304. (Web of Science Indexed, Scopus Indexed)
- 16. **M. Abu-Faraj**, A. Al-Hyari, K. Aldebei, B. Al-Ahmad, and Z. Alqadi, "Rotation Left Digits to Enhance the Security Level of Message Blocks Cryptography," *IEEE Access*, vol. 10, pp. 69388-69397, 2022, doi:10.1109/ACCESS.2022.3187317. (Web of Science Indexed, Scopus Indexed)
- 17. **M. Abu-Faraj**, A. Al-Hyari, and Z. Alqadi, "Experimental Analysis of Methods Used to Solve Linear Regression Models," *CMC-Computers, Materials & Continua*, vol. 72, no. 3, pp. 5699-5712, 2022, doi:10.32604/cmc.2022.027364. (Web of Science Indexed, Scopus Indexed)
- 18. **M. Abu-Faraj**, and Z. Alqadi, "Image Encryption using Variable Length Blocks and Variable Length Private Key," *International Journal of Computer Science and Mobile Computing (IJCSMC)*, vol. 11, lss. 3, pp. 138-151, 2022, doi:10.47760/ijcsmc.2022.v11i03.016.
- 19. **M. Abu-Faraj**, A. Al-Hyari, and Z. Alqadi, "A Dual Approach for Audio Cryptography," *Journal of Southwest Jiaotong University*, vol. 57, no. 1, pp. 24-33, 2022, doi:10.35741/issn.0258-2724.57.1.3. (Scopus Indexed)
- 20. **M. Abu-Faraj**, A. Al-Hyari, and Z. Alqadi, "Complex Matrix Private Key to Enhance the Security Level of Image Cryptography," *Symmetry*, vol. 14, Iss. 4, pp. 664-678, 2022, doi:10.3390/sym0664. (Web of Science Indexed, Scopus Indexed)
- 21. **M. Abu-Faraj**, K. Aldebei, and Z. Alqadi, "Simple, Efficient, Highly Secure, and Multiple Purposed Method on Data Cryptography," *Traitement du Signal*, vol. 39, no. 1, pp. 173-178, 2022, doi:10.18280/ts.390117. (Web of Science Indexed, Scopus Indexed)
- 22. **M. Abu-Faraj**, Khaled Aldebe, and Z. Alqadi, "Deep Machine Learning to Enhance ANN Performance: Fingerprint Classifier Case Study," *Journal of Southwest Jiaotong University*, vol. 56, no. 6, pp. 685-694, 2021, doi:10.35741/issn.0258-2724.56.6.61. (Scopus Indexed)
- 23. **M. Abu-Faraj**, Z. Alqadi, and K. Aldebei, "Comparative Analysis of Fingerprint Features Extraction Methods," *Journal of Hunan University Natural Sciences*, vol. 48, iss. 12, pp. 177-182, 2021. (Scopus Indexed)
- 24. **M. Abu-Faraj**, and Z. Alqadi, "Rounds Reduction and Blocks Controlling to Enhance the Performance of Standard Method of Data Cryptography," *International Journal of Computer Science and Network Security (IJCSNS)*, vol. 21, no. 12, pp. 648-656, 2021, doi: 10.22937/IJC-SNS.2021.21.12.89. (Web of Science Indexed)
- 25. **M. Abu-Faraj**, and Z. Alqadi, "Improving the Efficiency and Scalability of Standard Methods for Data Cryptography," *International Journal of Computer Science and Network Security (IJC-SNS*), vol. 21, no.12, pp. 451-458, 2021, doi:10.22937/IJCSNS.2021.21.12.61. (Web of Science Indexed)
- 26. M. Abu-Faraj, and Z. Alqadi, "Using Highly Secure Data Encryption Method for Text File Cryptography," *International Journal of Computer Science and Network Security (IJCSNS)*, vol. 21, no.12, pp. 53-60, 2021, doi:10.22937/IJCSNS.2021.21.12.8. (Web of Science Indexed)
- 27. **M. Abu-Faraj**, and M. Zubi, "Analysis and Implementation of Kidney Stones Detection by Applying Segmentation Techniques on Computerized Tomography Scans," *Italian Journal of Pure and Applied Mathematics*, iss. 43, pp. 590-602, 2020. (Scopus Indexed)
- 28. **M. Abu-Faraj**, "A Survey on Software Quality Assurance," *Journal of Engineering and Applied Sciences*, vol. 14, iss. 15, pp. 5111-5122, 2019, doi:10.36478/jeasci.2019.5111.51220. (Scopus Indexed)
- 29. **M. Abu-Faraj**, K. Al-Sarayreh, and K. Meridji, "A Model Combining Apriori and Posteriori Contexts to Estimate the Costs of a Software Project," *Journal of Engineering and Applied Sciences*, vol. 14, lss. 11, pp. 3643-3650, 2019, doi:10.36478/jeasci.2019.3643.3650. (Scopus Indexed)
- 30. N. Ghatasheh, I. Al-taharwa, B. Al-Ahmad, and M. Abu-Faraj, "Dead Sea Starvation: Towards Enhanced Monitoring of Water Resources by Modeling Meteorological Variables and Remote Sensing," *Journal of Software Engineering and Applications*, vol. 9, no. 12, pp. 588-600, 2016, doi:10.4236/jsea.2016.912040.

- 31. H. Faris, N. Ghatasheh, A. Rodan, and **M. Abu-Faraj**, "Predicting Surface Ozone Concentrations Using Support Vector Regression," *Life Science Journal*, vol. 11, no. 6, pp.126-131, 2014, doi:10.7537/marslsj110614.18. (Web of Science Indexed)
- 32. S. Alian, N. Ghatasheh, and M. Abu-Faraj, "Multi-Agent Swarm Spreading Approach in Unknown Environments," *International Journal of Computer Science Issues (IJCSI)*, vol. 11, iss. 6, no. 2, pp. 160-168, 2014.
- 33. **M. Abu-Faraj**, N. Ghatasheh, H. Faris, and O. Harfoushi, "Evaluation of Spatial Image Processing Approaches for Calculating Water Surface Area: Case of the Dead Sea," *Life Science Journal*, vol.11, no. 4, pp. 114-121, 2014, doi:10.7537/marslsj110414.15. (Web of Science Indexed)
- 34. O. Harfoushi, B. Alfawwaz, N. Ghatasheh, R. Obiedat, M. Abu-Faraj, and H. Faris, "Data Security Issues and Challenges in Cloud Computing: A Conceptual Analysis and Review," *Communications and Network*, vol. 6, no. 1, pp. 15-21, 2014, doi:10.4236/cn.2014.61003 . (Scopus Indexed)
- 35. N. Ghatasheh, M. Abu-Faraj, and H. Faris, "Dead Sea Water Level and Surface Area Monitoring Using Spatial Data Extraction from Remote Sensing Images," *International Review on Computers and Software (IRECOS)*, vol. 8, no. 12, pp. 2892-2897, 2013.
- 36. N. Ghatasheh, A. Najdawi, M. Abu-Faraj, and H. Faris, "Corporate e-Learning Environment using Concept Maps: A Case Study," *International Review on Computers and Software (IRECOS)*, vol. 8, no. 11, pp. 2655 -2662, 2013.
- 37. **M. Abu-Faraj**, "Design Considerations of a Large Granule Dynamic Reconfigurable Fabric," *International Journal of Computer and Communications*, vol. 7, iss. 3, pp. 116-123, 2013. (Scopus Indexed)
- 38. M. Abu-Faraj, "Performance Metrics of a Reconfigurable Fabric, Iss *International Journal of Computer Science Issues (IJCSI)*, vol. 10, iss. 6, no. 2, pp. 222-226, 2013. (Scopus Indexed)
- 39. **M. Abu-Faraj** and N. Ghatasheh, "Using Image Processing Functions to Determine the Edges of the Dead Sea and Calculate the Declining Rate," *International Journal of Computer Science Issues (IJCSI)*, vol.10, iss. 6, no. 2, pp. 97-101, 2013. (Scopus Indexed)

#### **Book Chapters**

- 40. **M. Abu-Faraj**, A. Al-Hyari, and Z. Alqadi, "Secure and efficient color image cryptography using two secret keys," in Innovations in Smart Cities Applications, Vol. 7, M. Ben Ahmed, A. A. Boudhir, R. El Meouche, and I. R. Karas, Eds. Cham: Springer Nature Switzerland, 2024, pp. 549–560, doi:10.1007/9783-031538247\_49.
- 41. **M. Abu-Faraj**, R. Masa'deh, and M. Alshurideh, "E-Government Implementation: A Case Study of Jordanian e-Government Program," in The Effect of Information Technology on Business and Marketing Intelligence Systems, Edition, Vol. 1056, M. Alshurideh, Al B.H. Kurdi, R. Masa'deh, H.M. Alzoubi, S. Salloum, Ed. Switzerland: Springer Cham, 2023, pp. 1355–1368, doi:10.1007/978-3-031-12382-5\_74.

#### **Refereed Conference Proceedings**

- 42. M. Abu-Faraj, A. Al-Hyari, and Z. Alqadi, "A Robust Speech Encryption Method Using Segmentation and Chaotic Keys for Enhanced Audio Security," in proc. IEEE Conference on Computer Communications (INFOCOM 2025), London, United Kingdom, 2025, pp.,
- 43. A. Al-Hyari, and **M. Abu-Faraj**, "Hyperparameters Optimization of Convolutional Neural Networks using Evolutionary Algorithms," in proc. 2022 International Conference on Emerging Trends in Computing and Engineering Applications (ETCEA2022), Karak, Jordan, 2022, pp. 1-6, doi:10.1109/ETCEA57049.2022.10009778.
- 44. **M. Abu-Faraj**, and I. Greenshields, "Partition Models for a Shared Dynamically Reconfigurable Fabric," *in proc. ISCA 27th International Conference on Computers and Their Applications (CATA-2012)*, Las Vegas, Nevada, U.S.A., 2012, pp. 202-207.
- 45. **M. Abu-Faraj**, "A Multi-Core Processors Sharing A Predictive Dynamically Reconfigurable Fabric," *in proc. ISCA 26th International Conference on Computers and Their Applications (CATA-2011)*, New Orleans, Louisiana, U.S.A., 2011, pp. 117-126.
- 46. **M. Abu-Faraj**, and I. Greenshields, "Architectural Considerations for an Out-Of-Core Dynamically Reconfigurable Fabric," *in proc. ISCA 1st International Conference on Advanced Computing and Communications (ACC-2010)*, Orlando, Florida, U.S.A., 2010, pp. 52-57.

47. **M. Abu-Faraj**, and I. Greenshields, "A Predictive Dynamically Reconfigurable Architecture," in proc. of 19th Annual Symposium: Micro and Nano Technologies for Electronics and Photonics, Storrs, Connecticut, U.S.A., 2010, pp. 226-235.

#### PUBLICATIONS REVIEWS

Served as Editorial Board Member for the School of Higher Education Conference at the University of Jordan

Served as Editorial Board Member for Computer Science and Technology: Current Trends.

Served as Editorial Board Member for Engineering Current Trends.

Served as a Reviewer for the following International Journals:

- IEEE Access
- IEEE Micro
- IEEE Transactions on Computers
- PLOS ONE
- · Traitement du Signal
- · Journal of Supercomputing
- International Journal of Computers and Their Applications (IJCA)
- International Journal of Computer Science Issues (IJCSI)
- International Journal of Computer and Communication
- International Review on Computers and Software (IRECOS)
- Journal of Computer Science
- The International Arab Journal of Information Technology (IAJIT)

Served as Program Committee Member/Reviewer for the following International Conferences:

- The International Conference on Emerging Trends in Computing and Engineering Applications (ETCEA2022), Mutah, Jordan, November 22-23, 2022.
- ISCA 29th International Conference on Computer Applications in Industry and Engineering (CAINE 2016), Denver, USA, U.S.A., September 26-29, 2016.
- ISCA 28th International Conference on Computer Applications in Industry and Engineering (CAINE 2015), San Diego, California, U.S.A., October 12-14, 2015.
- ISCA 27th International Conference on Computer Applications in Industry and Engineering (CAINE-2014), New Orleans, U.S.A., October 13-15, 2014.
- ISCA 3rd International Conference on Advanced Computing and Communications (ACC-2013), Los Angeles, U.S.A., September 25-27, 2013.
- ISCA 26th International Conference on Computer Applications in Industry and Engineering (CAINE-2013), Los Angeles, U.S.A., September 25-27, 2013.
- The 24th IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP-2013), Washington D.C., U.S.A., June 6-8, 2013.
- ISCA 1st International Conference on Advanced Computing and Communications (ACC-2010), Orlando, U.S.A., September 15-17, 2010.

#### **ACHIEVEMENTS**

• Secured Funding for Establishing a University Computer Laboratory.

Successfully obtained \$20,000 from a Gadora Tobacoo PSC to establish modern computer research laboratories at the University of Jordan at Aqaba.

#### **EXTERNAL EXAMINERSHIPS**

• External M.Sc. Dissertation Examiner, Mutah University.

Thesis title: Studying Community Detection Problem using Data Mining Techniques.

Student: Yousif Masood. Date of defense: June 2022.

• External M.Sc. Dissertation Examiner, Mutah University.

Thesis title: The Effect of Feature Selection on Diabetes Prediction using Data Mining. Student: Dhuhai AL-Mashhadany. Date of defense: June 2022.

#### **GRANTS**

2010 | Real-Time Ultrasonic Testing of Rail Tracks

2008 | Grant PI: Prof. Reda Ammar, and Prof. Ian Greenshields

Dapco Industries, Inc. Period of Grant: Two Years

Role on Project: Research Assistant

#### **COURSES TAUGHT**

University of Sheffield

**DIGITAL LOGIC** 

Introduction to Digital Signal Processing System Architecture Design (Master Level)

ADVANCED COMPUTER ARCHITECTURES (MASTER LEVEL)

University of Connecticut

DIGITAL LOGIC DESIGN

Introduction to Computer Architecture

COMPUTER ORGANIZATION AND ARCHITECTURE (MASTER LEVEL)

PROGRAMMING LANGUAGE TRANSLATION (MASTER LEVEL)

The University of Jordan

REMEDIAL COMPUTER SKILLS

Computer Skills for Humanities Schools

COMPUTER SKILLS FOR SCIENTIFIC SCHOOLS (C++)

THE CAMPUS LIFE AND ETHICS

**BASICS OF COMPUTING** 

**DIGITAL SKILLS** 

**ADVANCED PROGRAMMING** 

**DIGITAL LOGIC** 

**FUNDAMENTALS OF INFORMATION TECHNOLOGY** 

Management Information Systems

**ELECTRONIC BUSINESS (E-BUSINESS)** 

ELECTRONIC GOVERNMENT (E-GOVERNMENT)

Information Resources Management

COMPUTER ETHICS

SOCIAL MEDIA

Applications of Information Systems

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

MULTIMEDIA

**OPERATING SYSTEMS** 

**COMPUTER NETWORKS** 

SOFTWARE ENGINEERING

**COMPUTER ORGANIZATION** 

**SPECIAL TOPICS** 

**OPERATING SYSTEMS (MASTER LEVEL)** 

**TRAINING** 

**SUPERVISED 18 GRADUATION PROJECTS** 

#### **VOLUNTEER TRAINING COURSES**

• Wriring Research Papers Using La. Accreditation and Quality Assurance Center, The University of Jordan.

• Business Intelligence.

Injaz Program.

• Genome Database: Use and its Applications in Medical Diagnosis and Biological Research.

Princess Haya Biotechnology Centre, Jordan University of Science and Technology.

• Network and Computer Security.

Petra Development and Tourism Region Authority.

- Hardware and System Technology.
   Petra Development and Tourism Region Authority.
- Professional Awareness Campaign. Injaz Program.

#### TECHNICAL WORKSHOPS

JUNE 2023	Disability as Diversity: The inclusion of Students with Disabilities in Higher Education. Int@ E UG, Leipzig, Germany.
January 2022	Quality Management Systems (ISO 9001). The University of Jordan, Aqaba, Jordan.
OCTOBER 2021	Blended Learning: Forms and Applications. The University of Jordan, Aqaba, Jordan.
January 2021	Preparing the executive plan at the University of Jordan. The University of Jordan, Aqaba, Jordan.
DECEMBER 2020	Preparing the strategic plan at the University of Jordan. The University of Jordan, Aqaba, Jordan.
DECEMBER 2020	National Accreditation Standard. The University of Jordan, Aqaba, Jordan.
MARCH 2018	Moodle Training Course. The University of Jordan, Aqaba, Jordan.
OCTOBER 2016	36th GITEX Technology Week. Dubai, U.A.E.

#### PROFESSIONAL AFFILIATIONS

- Member of IEEE (Institute of Electrical and Electronics Engineers).
- Member of IEEE Computer Society.
- Member of A.C.M. (Association of Computing Machinery).
- Member of ACM SIGARCH (A.C.M. Special Interest Group on Computer Architecture).
- Member of ISCA (International Society for Computers and their Applications).
- Member of J.E.A. (Jordan Engineers Association).
- Member of the Internet Society.
- Member of JOSA (Jordan Open Source Association).
- Member of J.C.S. (Jordan Computer Society).
- Member of IAENG (International Association of Engineers).

#### **PROFESSIONAL COURSES**

- Digital Transformation & Big Data
- Management of Development Projects and Programs.
- Managing E-Learning Courses on Moodle Platform.
- · Blended Learning: Forms and Applications.
- Plagiarism Detection Workshop.
- Security and Confidentiality of the Data and Information.
- Staff Development Workshops (The University of Jordan).
  - Modern Trends in University Teaching.

- Exams Preparation and learner's Assessment.
- Academic Ethics.
- Laws, Bylaws, and Regulations of the University of Jordan.
- Designing Study Plans.
- Effective University Teaching Skills.
- Certified Information Systems Security Professional (CISSP)
- Cisco Certified Network Associate (CCNA).
- Microsoft Certified Systems Engineer (MCSE).
- A+ Certification.

#### **AWARDS AND GRANTS**

### 2025 | Erasmus+ International Credit Mobility (ICM) for Teaching Staff

Department of Computer Science and Engineering UNIVERSITY OF BOLOGNA, ITALY

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#### 2024 | Erasmus+ International Credit Mobility (ICM) for Teaching Staff

Faculty of Communication Science

University of Teramo, Italy

#### 2024 MENA Scholarship Program (M.S.P.) funded by the Netherlands Government

Digital Transformation and Big Data Analysis Maastricht School of Management (MSM)

MAASTRICHT UNIVERSITY, NETHERLANDS

#### 2023 MENA Scholarship Program (M.S.P.) funded by the Netherlands Government

Management of Development Projects and Programs M.D.F. for Training and Consultancy for Development EDE, NETHERLANDS

#### 2023 | Erasmus+ International Credit Mobility (ICM) for Teaching Staff

Department of Mathematics and Computer Science Faculty of Mathematics and Computer Science PHLIPPS-UNIVERSITY OF MARBURG, GERMANY

#### 2021 | Erasmus+ International Credit Mobility (ICM) for Teaching Staff

Department of Computer Engineering

School of Engineering

ONDOKUZ MAYIS UNIVERSITY, TURKEY

#### 2019 | Erasmus+ International Credit Mobility (ICM) for Teaching Staff

Department of Computer Engineering

School of Engineering

ATATURK UNIVERSITY, TURKEY

#### 2012 | Predoctoral Scholarship (Full tuition waiver)

2008 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SCHOOL OF ENGINEERING

University of Connecticut, U.S.A.

#### 2010 Best Research Poster Award (CMOS, 2010)

19th Annual Symposium: Micro & Nano Technologies for Electronics & Photonics

University of Connecticut, U.S.A.

#### 2010 | Dapco Research Scholarship

2008 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SCHOOL OF ENGINEERING

University of Connecticut, U.S.A.

## 2005 Excellent Graduate Student Scholarship (Half tuition waiver)

2004 | SHEFFIELD HALLAM UNIVERSITY, U.K.

#### **COMPUTER PROFICIENCY**

Operating Systems: Mac OS, LINUX, and Windows Learning Management Systems: Blackboard, and Moodle

Languages and Interfaces: C, C++, Python, Julia, LaTeX, MPI, VHDL, and Verilog

Simulation Tools: Matlab, SPIM, I.S.E., ModelSim, Simulink, LogicWorks, and Logisim

Embedded Processors: Intel, Microchip, and Infineon.

#### LANGUAGES

ARABIC: | Mothertongue

ENGLISH: (Fluent in speaking, reading, and writing)

#### REFERENCE

References are available upon request.



Last updated: November 14, 2024

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