

Omar M. Al-Jarrah
Professor of Computer Engineering
Jordan University of Science and Technology



CONTACT INFORMATION

Address : Department of Computer Engineering
Faculty of Computer and Information Technology
Jordan University of Science and Technology
P.O. Box 3030 Irbid 22110, Jordan

Tel. : 00-962-2-7201000 **Ext.** 28888

Fax : 00-962-2-7095123

Email : aljarrah@just.edu.jo

QUALIFICATIONS

- ☐ 1994-1996 Ph.D. Electrical/Computer Engineering
The Ohio State University, Ohio, USA
- ☐ 1993-1994 M.SC. Electrical/Computer Engineering
The Ohio State University, Ohio, USA
- ☐ 1986-1991 B.SC. Electrical/Computer Engineering
Jordan University of Science and Technology, Jordan
Ranked first on the 1991 class

RESEARCH INTERESTS

Robotics, Intelligent Systems, Data Mining, Wireless Networks, Cloud Computing, and Embedded Systems.

STATEMENT OF TEACHING AND RESEARCH

I enjoy transferring knowledge, know how, and skills to my students. In addition, I like to motivate their independent and critical thinking and improve their problem solving and soft skills. I utilize technology to promote their active participation in the learning process. I have developed a teaching philosophy that focuses on achieving the intended learning outcomes. I like to adapt to different students levels and learning capabilities by posing questions and building scenarios and activities. Over the years, I found that hands-on through project- and problem-based teaching offer students the best way to learn and strengthen their confidence in their capabilities. In the senior-level and graduate courses, I emphasize on the importance of team work and soft skills through group projects, term papers, software documentation, technical and progress reports, and presentations. I have been conducting research in artificial intelligence and computer networks. I am a strong advocate of multi-disciplinary research. In the area of computer network, I have seen wireless and sensor networks wide spreading and expanding while creating new challenges from the point of view of performance and most importantly lifetime and availability. In artificial intelligence, I have been involved in many fields including robotics,

machine learning, knowledge-based systems, and in integrating research from these areas into working systems. In robotics, I have introduced human-manipulator coordination and several navigation algorithms for mobile robots. In addition, I have been interested in developing novel machine-learning algorithms in areas including robotics, networks, and the sciences, particularly biology. Most recently, I have developed intelligent approaches for quantification of liver fibroses and protein contact-map prediction. In addition, I have introduced several knowledge-based systems in different areas such as in the waste management and landfill site selection. Currently, I am developing smarter approaches for managing storage and security in cloud computing.

STATEMENT OF LEADERSHIP

I have learned to articulate goals together with my team and work with them to attain the goals. I keep all members engaged, build a spirit of ownership, and focus on the goals. I inspire my team to be passionate with good team spirit. I like to delegate tasks and stay on top of all the details. I treat all my team members with respect and kindness and strive to be positive and encouraging. However, I tend to be critical when and where needed. I derive change to deliver positive results and manage risks using plan, do, check, and act cycle. I follow up on the performance of my team members, encourage continuous professional development, and improve their networking skills. I foster loyalty among the team and toward the institution. I create an enabling environment to facilitate the work and I encourage lifelong learning and building capacities.

I use fairness and openness as guiding principles in managing people. I am a strong advocate of innovation, creativity, thinking out of the box, and entrepreneurship. I am a strong believer in technology as an enabler that exists to make our lives better. I like to challenge my employees, motivate, and encourage them to propose new ideas and solutions that advance that stature of the university. I like to treat units as cost centers, focus on projects, explore every opportunity for external funding, and invest in people and technology.

ACADEMIC POSTS

- ❑ 10/2007 – Present Jordan Univ. of Science & Technology Jordan
Professor, Computer Engineering
- ❑ 9/2001 – 10/2007 Jordan Univ. of Science & Technology Jordan
Associate Professor, Computer Engineering
- ❑ 9/1996 – 9/2001 Jordan Univ. of Science & Technology Jordan
Assistant Professor, Computer Engineering
- ❑ 3/1994- 8/1996 The Ohio State University Columbus, Ohio, USA
Research Associate
- ❑ 2/1991 – 12/1992 Jordan Univ. of Science & Technology Jordan
Teaching and Research Associate

ADMINISTRATIVE POSTS.

- 8/2016 –12/2017 Jordan Univ. of Science & Technology Jordan
President
- 7/2014 – 8/2016 Amman Arab University Amman, Jordan
President
- 6/2010 –5/2013 Jordan Univ. of Science & Technology Jordan
Vice President
- 3/2005 – 6/2010 Jordan Univ. of Science & Technology Jordan
Director of Computer & Information Center (CIC)
- 9/2004 – 6/2010 Jordan Univ. of Science & Technology Jordan
Assistant President for ICT
- 9/2003 – 9/2004 New York Institute of Technology (NYIT) – Jordan
Coordinator – Computer Engineering and QA
- 7/2000 – 9/2004 Jordan Univ. of Science & Technology Jordan
Dean – Faculty of Computer and Information Technology
- 9/1998 – 9/2000 Jordan Univ. of Science & Technology Jordan
Chairman – Department of Computer Engineering

PROFESSIONAL EXPERIENCE

- 2/2012 – 5/2017 Ministry of Higher Ed. & Sci. Research Amman, Jordan
Consultant for EMIS
- 5/2014 – 12/2017 UNESCO Amman office, Jordan
Senior ICT Management Information System Advisor
- 1/2016 – Ministry of Education Amman, Jordan
Advisor for ICT
- 5/2014 – King Abdullah II Design and Development Bureau (KADDB)
Member of the Board of Directors
- 10/2012 – 10-2013 Ministry of Education Amman, Jordan
Advisor for ICT
- 3/2006 – 6/2007 Ministry of Higher Ed. & Sci. Research Amman, Jordan
Advisor for ICT
- 11/2004 –12/2006 King Abdullah University Hospital Irbid, Jordan
General Director Advisor for ICT

TEACHING EXPERIENCE

- Graduate Courses:
 - Parallel Processing
 - Artificial Intelligence
 - Advanced Computer Networks
 - Computer Networks
 - Data Center Security

- ❑ Undergraduate Courses:
 - ❑ Computer Skills
 - ❑ Programming in C++
 - ❑ Computer Architecture and Organization
 - ❑ Digital Logic Design Lab
 - ❑ Microprocessor Systems Design
 - ❑ Microprocessor Systems Design Lab
 - ❑ Microprocessor Interfacing Lab.
 - ❑ Computer Networks
 - ❑ Sys. Software Design, Development, & Documentation
 - ❑ Data Communication
 - ❑ Internetworking
 - ❑ Operating Systems
 - ❑ Introduction to Neural and Fuzzy Computing

SENIOR PROJECTS SUPERVISED

1. Design and Implementation of a 3-Link Robot Manipulator
2. Design and Implementation of a TTL IC Tester
3. Global Positioning System
4. Electronic Testing System
5. Simulation of a Sample Computer
6. Design of a Position Control System for a 2-Link Robot Manipulator Using Neural Networks.
7. Design of a Position Control System for a 2-Link Robot Manipulator Using Fuzzy logic.
8. Arabic Numerals Recognition Using Neural Networks
9. Design and Implementation of a Printer Server.
10. Web-based 68000 Emulator and Assembler.
11. JUST LAN Analysis and Proposal for a New Design.
12. Design of a Floating-Point Unit Using VHDL.
13. On-Line Quizzing.
14. On-Line Bookstore.
15. Teaching Physics Using Interactive Multimedia Approach.
16. Interactive Web Site for the Faculty of Computer and Information Technology.
17. Electronic Advisor.
18. Library Information System
19. E-Campus: Faculty and Staff Information System.
20. E-Campus: JUST's Campus Virtual Tour.
21. Home Security System.
22. Smart Card Authentication.
23. Controlling House Appliance Using Bluetooth.
24. Arabic OCR Recognition.
25. Image Indexing.

26. Ad Hoc Networks.
27. Student Information System.
28. Mobile Robot Soccer Game.
29. Managing presentation Using Bluetooth.
30. Developing Faculty E-services.
31. Bluetooth Scatternet
32. VoIP System for Corporate Network
33. Human-Computer Interaction using Real-Time Gaze Tracking System
34. E-voting System for Jordan's Elections
35. Course Electronic Portfolio
36. Multi-threaded Chess Engine
37. Smart Bedroom
38. Smart House
39. Analysis & classification of crowd-sourced news reports: A case study of the Syrian Crisis

MASTER THESIS SUPERVISED

1. Tayseer Al-Khdour, "Co-Scheduling Hardware and Software Pipelines," January 1998.
2. Hassan Tawalbeh, "A New Fault-Tolerant Protocol for Direct Multiprocessor Networks," January 1998.
3. Omar Bani-Melhem, "Building Fuzzy Maps for Mobile Robot Navigation Based on Ultrasonic Range Data," August 1998.
4. Yahya Tashtoush, "Mobile Robot Navigation Using Neuro-Fuzzy Systems," November 1998.
5. Amjad Muhsen, "Reducing Control Latency in Shared Memory Multiprocessor Systems Using Fuzzy Logic," August 1999.
6. Alaa Halawani, "Recognition of Gestures in Arabic Sign Language Using Neuro-Fuzzy Systems," January 2000.
7. Adel Al-Khateeb, "Cryptographic Key-Based Algorithms Over Internet Communication Channels Using Secured Sockets Interface - An Implementation Approach," June 2000.
8. Toqa Manasrah, "An Intelligent Quantification of Liver Fibrosis using Neural Networks," June 2005.
9. Belal Sababha, "Power aware Reliable Multicasting Algorithm for Mobile Ad Hoc Networks," January 2006.
10. Musab Al-Hadrus, "Load Balanced Ad Hoc Routing Protocol," January 2006.
11. Waseem Sa'deh, "Enhanced AODV Routing Protocol for the Mobile Ad Hoc Networks," March 2006.
12. Aziz Qaroush, "Real-Time Power-Aware Routing Protocol for Wireless Sensor Network," May 2006.
13. Ramzy Saifan, "A Novel Algorithm for the Denial of Service in Sensor Networks," December 2006.
14. Omar Meqdadi, "Power Aware AODV Routing Protocol for Bluetooth Scatternet Networks," January 2007.
15. Mohammed Al-Hammouri, "Recognition of Dynamic Gestures in Arabic Sign Language Using HMM," January 2007.
16. Nibal Nayef, "An Automated Vision Based Arabic Sign Language Recognition System at Word/phrase Level," January 2007.

17. Ahmad Arafat, "Network Intrusion Detection System Using Attack Behavior Classification," January 2007.
18. Fady Ghanim, "Extending the Lifetime of Wireless Sensor Networks Using Autonomous Mobile Nodes," 2008.
19. Anas AbuDoleh, "Protein Contact Map Prediction," 2009.
20. Gharam Skafi "Epileptic Seizure Detection using Model Ensemble," 2009.
21. Enass Obeidat "Prediction of Carbonation Depth in Concrete Using Artificial Neural Networks," 2011.
22. Ismail Khater "Hierarchical E-mail Spam Filtering," 2011.
23. Abdullah Alamareen "Image Mosaicing Using Binary Edge Detection Algorithm in a Cloud-Computing Environment," 2015.
24. Salem Esoh "Enhanced Cross Layer Based Intrusion Detection System for Securing Wireless Adhoc Networks from Black Hole Attack," 2015.
25. Moath Al-Ayoub "Hierarchal Detection of Insider Attacks in Cloud Computing," 2015.
26. Zohour Al-Zoubi "Energy-Aware Virtual Machine Placement Algorithm in Distributed Cloud Data Center", 2015.
27. Abdulmughni Hamzah "Energy-Aware Virtual Machine Placement Algorithm in Distributed Cloud Data Center", 2016.

CURRICULUM AND COURSE DEVELOPMENTS

1. Curriculum Development for the Computer Engineering Department
2. Curriculum Development for the Computer Science Department
3. Curriculum Development for the Computer Information Systems Department
4. Curriculum Development for the Mechatronics Program
5. Designed the Data Communication Course.
6. Redesigned the Computer Networks Course.
7. Designed the Internetworking Course.
8. Designed the System Software Design, Development, and Documentation Course.
9. Designed the Artificial Intelligence Course.
10. Redesigned Laboratory Microprocessor Systems and its Interfacing Lab.

ACADEMIC SERVICES

A. Computer Engineering Department

1. Curriculum committee chair.
2. Research committee chair.
3. Promotion/appointment committee.
4. Graduate studies committee.
5. Tender committee chair.
6. Social committee chair.
7. Laboratories committee chair.
8. Computer Engineering student advisor.
9. Computer Engineering Department scientific day chair, JUST 2000.

B. Faculties of Engineering and Computer & Information Technology

1. Faculty of Engineering Council 1998-1999.
2. Faculty of Computer and Information Technology establishment committee chair.
3. Faculty Council chair, 2000-2004.

4. Graduate Studies Committee chair, 2000-2004.
5. Promotion/appointment committee.
6. Student affairs committee chair.
7. Accreditation and quality assurance committee chair.
8. Senior projects committee.
9. ABET committee chair.

C. Jordan University of Science and Technology

1. English placement on-line exam coordinator.
2. Computer Skills on-line exam coordinator.
3. JUST-UNESCO liaison officer for information technology.
4. Al-Hussein Fund for Excellence liaison officer.
5. Member of the Deans' Council.
6. Member of the University Council.
7. E-University committee coordinator.
8. Head of the Science and Technology Consultative Center Board.
9. Coordinator of the executive committee for the electronic registration system.
10. Head of the Computer and Information Center Board.
11. Coordinator of the executive committee for the Computerization of the Central Supplies Unit.
12. Coordinator of the executive committee for the development of JUST's Website.
13. Member in the University ICT steering committee.
14. Member of the board for the Academic Development Center.
15. Head of the eLearning committee.
16. Coordinator of the MIS committee.
17. Member of the administrative development committee.
18. Head of the central tendering committee.
19. Head of the graduation ceremony committee.
20. Head of the year book committee.
21. Head of the smarter campus committee at JUST.
22. Head of the Nanotechnology Center Board.
23. Head of several committees to establish university regulations.

D. National Services

1. Member of the accreditation committees for several Computer Engineering Programs in Private Universities.
2. IT programs accreditation-guidelines committee coordinator.
3. Member of the preparation committee for the "World Summit on Information Society".
4. Member of the UNIFEM/Cisco Gender Initiative "Achieving E-quality in the ICT Sector".
5. JUST coordinator for the Information Technology Association of Jordan (INTAJ) "Private Sector ICT Professional Training" Program.
6. Member in the Reach 4.0 HRD committee.
7. Member of a Higher Education Council committee for evaluating Computer Science Accreditation Report.
8. Member of the Committee for evaluating Information Technology curricula in Irbid National University.

9. Coordinator of the Higher Education Council committee for Quality Assurance in Higher Education.
10. Member of an accreditation committee for general accreditation of Al-Zaytoonah University.
11. Head of the national e-learning committee
12. Member of the data centers committee
13. Member of the IT committee for the Higher Education Development Project.
14. Member of the IT advisory committee for the Jordanian Universities Network.
15. Member of the several IT technical committees for the Jordanian Universities Network including e-learning and portal, Internet services, and Delft Project.
16. Member of the ICT Strategy in Higher Education committee.
17. Member of the committee for preparing a reference paper on e-learning for the Ministry of Higher Education and Scientific Research.
18. Member of the quality assurance experts responsible for preparing the quality assurance system for the Jordanian higher education sector.
19. Member of the Task Forces of the National Forum on Higher Education Reform
20. Faculty of Information Technology Committee, Al Al-Bayt University.
21. Member of the national strategy for R&D in ICT committee.
22. Head of the national eMIS committee/ Ministry of Higher Education and Scientific Research
23. Member of the committee for revising computing programs in Jordan and their accreditation criteria.
24. Member of the Board of Trustees for German Jordanian University.
25. Head of the ICT and eLearning strategy committee – Ministry of Higher Education and Scientific Research.
26. Member of the AL Urdonia Lil Ebda Board of Directors.
27. Member of the supercomputer committee.
28. Head of the nanotechnology committee.
29. Member of the Education council.
30. Head of the Barcode committee/ Ministry of Higher Education and Scientific Research.
31. Member of the Royal Court Scholarship committee/ Ministry of Higher Education and Scientific Research.
32. Head of the eMIS steering committee, Ministry of Education.
33. Head of the ICT in education strategy review committee, Ministry of Education.
34. Head of the IT national competency exam committee.
35. Member of the committee for preparing the initial project for the Jordan-Saudi Technical University.
36. Head of the ICT in Education track in the National Human Resource Committee.

EXTRACURRICULAR ACTIVITIES

- Cisco Networking Academy Program – Main contact and Regional instructor 1999-2008. I had been the main contact for CISCO training program in Jordan CCNA and CCNP. This program is intended to provide the workforce with professionals in computer networks who can design, implement, and analyze networking needs.
- Microsoft Academy Manager 2002-2008.
- International Computer Driving License (ICDL) Test Center Manager 2001-2008.

- Participated in a PMB Project Management workshop.
- Participated in EMC Cloud Infrastructure and Services Course.
- Participated in several ICT workshops in object oriented design, software development, and Oracle database development.

COMMUNITY ACTIVITIES

- Conducted several ICT workshops.
- Conducted training courses on networking.
- Conducted training courses on Java.
- Fixed the plasma display problem in the CASA-101 flight simulator (Royal Jordanian Air Force) (a 5000 JD grant).
- Developed a portal for the national Faculty for Factory (FFF) program.
- Conducted a workshop on “Developing a University Strategy”, Dubai 2015.

STUDENT ACTIVITIES

- Special students advisor
- Informatics student Club advisor 2006-2010.

PROFESSIONAL ACADEMIC ACTIVITIES

- Associate Editor of the International Journal of Modeling and Simulation
- Member in the editorial board for the International Arab Journal of Information Technology
- Member in the editorial board for Journal of Recent Patents on Electrical Engineering
- Referee for:
 - IEEE Transaction on Robotics and Automation
 - International Journal of Simulation and Modeling
 - Journal of Computer and Electrical Engineering
 - Artificial Intelligence in Medicine
 - Journal of Image and Video Processing
 - Mu'ta University Journal
 - Yarmouk University Journal
 - Jordan University Journal
 - Irbid National University Journal
- Referee for several regional and international conferences
- Vice Conference chair for the Arab International conference on Information Technology. 2001.
- Member in the Steering Committee of the Arab International conference on Information Technology. 2001-2004.
- Member in the Program Committee of the 2004 International Business Information Management Conference
- Scientific Committee Member in the 3rd International Conference for Sciences of Electronic, Technologies of Information and Telecommunications (SETIT), 2005.

- ❑ Publicity Chair for the Fourth ACS/IEEE International Conference on Computer Systems and Applications (AICCSA) 2006
- ❑ Co-Chair for the 5th International Symposium on Mechatronics and its Applications (ISMA08), 2008.
- ❑ Head of the Steering Committee and co-chair of the program committee of the International Conference on Information and Communications Systems. 2009.
- ❑ Publications Chair for the 1st International Nuclear & Renewable Energy Conference, 2010.
- ❑ Conference chair of the International Conference on Information and Communications Systems, 2011-2014.
- ❑ MENA-ET Education Technology Conference and Fair MENA-ET Media Spokesman, 2014.

PROFESSIONAL AND SCIENTIFIC MEETINGS

1. Presented the paper entitled "Trajectory Planning for Two Manipulators to Deform a Flexible Beam," in the IROS'94, 1994.
2. Presented the paper entitled "Trajectory Planning for Two Manipulators to Deform a Flexible beam with experiment," in the ICRA, 1995.
3. Presented the paper entitled "Trajectory Planning for Two Manipulators to Deform a Flexible Beam Using Compliant Motion Control," in the ICRA, 1995.
4. Presented the paper entitled "Arm-Manipulator Coordination for Load Sharing Using Compliant Motion Control," in the ICRA, 1996.
5. Presented the paper entitled "Intelligent Compliant Motion Control," in the ICRA, 1996.
6. Presented the paper entitled "Arm-Manipulator Coordination for Load Sharing Using Intelligent Compliant motion Control," in the ICRA, 1997.
7. Presented the paper entitled "Arm-Manipulator Coordination for Load Sharing Using Reflexive Motion Control," in the ICRA, 1997.
8. Presented the paper entitled "Position Control of a Robot Manipulator Using Continuous Gain Scheduling," in the ICRA, 1999.
9. Cisco Networking Academy training at the University of Central England, 1999.
10. Cisco Networking Academy training at the Madison Area Technical College, 2000.
11. Participated in the Cisco Networking Academies conference, Copenhagen, 2001.
12. Chairing the Arab International Conference on Information Technology, JUST 2001.
13. Presented the paper entitled "Intelligent Automotive Volume Control" in the 2001 Arab International Conference on Information Technology, 2001.
14. Participated in the USEE Faculty Training IT Primer Workshop on Basic Web Technology Skills For Courseware Development, Lebanon, 2001.
15. Participated in Al Hussein Fund workshop on the British quality assurance system in 2001.
16. Participated in the Jordan UK Get Connected IT Initiative, Amman, 2001.
17. Participated UNISCO workshop on using technology in teaching, Lebanon, 2001.
18. Participated in the International E-Learning Symposium, Dubai, 2002.
19. Presented the paper entitled "A New Algorithm for Arabic Optical Character Recognition" in the 5th WSEAS International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases, 2006.

20. Presented the paper entitled "Implementing Quality Management System Internal Self-Assessment in Education" in the sixth Jordanian Quality Conference, 2007.
21. Participated in the British Council curriculum development workshop, Amman, 2002.
22. Participated in the Arab International Conference on Information Technology, Egypt, 2003.
23. Participated in the Microsoft Research .NET Regional Crash Course, Dubai, 2003.
24. Participated in the Microsoft Research Academic Days in Dubai, 2004.
25. Participated in the E-University Seminar, Amman 2005.
26. Participated in the Microsoft Higher Education Summit, UK, 2005.
27. Participated in several projects meetings and workshops in Italy, France, and Greece in 2002, 2003, 2004, and 2005.
28. Participated in the Microsoft TecEd Conference, Spain, 2007.
29. Participated in the British Council workshop on developing and implementing quality assurance in 2008.
30. Participated in the learning assessment and outcomes workshop, Lebanon, 2008.
31. Participated in the first workshop on Free & Open Source Software in the Arab Region, 2009.
32. Participated in the follow-up on World Summit for Information Society, Syria, 2009.
33. Participated in the Microsoft TecEd Conference, Spain, 2009.
34. Participated in the HP ESSN converged infrastructure, Dubai, 2009.
35. Participated in the International Conference on Information and Communication Systems, Amman, 2009.
36. Participated in the IBM nanotech workshop, Amman, 2010.
37. Participated in the CIO Conference, Dubai, 2010.
38. Participated in the cisco networker, Bahrain, 2010
39. Participated in the Academic Days Conference, UK, 2010.
40. Participated in IBM Technology Briefing, France, 2010.
41. Keynote speaker, "Cloud Computing: opportunities and Challenges," the fourth IEEE International Symposium on Innovation in Information & Communication Technology (ISIICT 2011), Amman Jordan, 2011.
42. Participated in the 2011 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT). Amman Jordan, 2011.
43. Presented the paper entitled "Role of Information Technology in Improving Engineering Education" in the Second conference of officials of engineering education in the Arab World, 2012.
44. Presented a talk entitled "Bridging the gap between the Academia and Industry" in the IT Specialization Future workshop, Applied Science University, Amman Jordan, 2012.
45. Speaker, "Cloud Computing: Opportunities and Challenges," IEEE Jordan section seminar, Irbid Jordan, 2012.
46. Speaker, "Healthcare ICT, Opportunities and Challenges," Conference of Arab Expatriate Scientists "When Arab Minds Integrate" Cairo, 19-20 December 2012.
47. Participated in the first meeting for Arab experts in curricula development and employing ICT in education, Tunisia, 2013.
48. Participated in ICT for education panel and prescheduled meetings in the Arab Education Summit, Amman, Jordan, 2013.

49. Speaker in the ICT in Education Standards, Requirements and Showcases, Amman, Jordan, 2013.
50. Participated in the World Innovation Summit for Education WISE, Doha, Qatar, 2013.
51. Participated in the kick-off meeting of the XNEM project, Gurghada, Egypt, 2014.
52. Speaker, "Education Management Information Systems," Jordanian Universities Registrars' Workshop, Mutah Jordan, 2014.
53. Speaker, "Data Quality, Trust, and Usage," ERSP Data Use Dialogue, Dead Sea Jordan, 2014.
54. Speaker in the MENA-ET Education Technology Conference and Fair, Amman, Jordan, 2014.
55. Speaker in the Workshop to discuss the findings of the third Arab Knowledge Report, Amman, Jordan, 2015.
56. Speaker in the DUNIA Beam closing conference, Jordan needs, Bruit, Lebanon, 2016.
57. Speaker in the Workshop to discuss the findings of the National Human Resource Committee, ICT in Education, Amman, Jordan, 2016.
58. Speaker in the 2016 e-AGE conference, NRENs in the Arab Countries, Beirut 2016.
59. Speaker in the ASREN workshop "Enabling Innovation by Developing e-Infrastructures in Jordan", Jordan 2017.
60. Speaker in 10th QS WorldClass seminar "Industry, Business and Higher Education Management and Governance", Taiwan 2017.
61. Speaker in the second UNESCO International Day for the Universal Access to Information, Irbid 2017.
62. Speaker in the Eurasia Foundation-University Partnerships Workshop "Creating Pathways to U.S.-Jordanian University Partnerships", Amman, 2017.

MEMBERSHIP OF SCIENTIFIC AND PROFESSIONAL SOCIETIES:

- Jordan Society of Engineering

RESEARCH GRANTS

- Co-Investigator, Excellence of Nanoscience Education for MENA Region (XNEM), EU, €165,000.
- Co-Investigator, Center of Excellence for Innovation in Robotics and Intelligent Automation, Royal Court JD 3,500,000.
- Primary Investigator, Innovative conservation approaches for monitoring and protecting ancient and historic metals collections from the Mediterranean basin (PROMET), EU, €49,000.
- Primary Investigator, Mediterranean Network for Unified Distance Learning (Med Net'U), EU, €150,000.
- Primary Investigator, Open Distance Inter-University Synergies between Europe, Africa, and Middle East (ODISEAME), EU, €100,000.
- Primary Investigator, Mediterranean Virtual University (MVU), EU, €221,018.
- Primary Investigator, Tailored strategies for the conservation and restoration of archaeological value Cu-based artefacts from Mediterranean Countries (EFESTUS), EU, €51,000.

- ❑ Primary Investigator, Center for Higher performance Computing, HEDP (World Bank), \$225,000.
- ❑ Primary Investigator, Monitor JUST: a people tracking service for applications running in JUST CloudBurst, IBM, \$7000.
- ❑ Co-Investigator, An E-Voting System for Jordan's Elections, KADB, \$7500.
- ❑ Co-Investigator, An Integrated Home/Vehicle E-security System, KADB, \$9200.
- ❑ Primary Investigator, Human Computer Interaction using Real-Time Eye-Tracking, KADB, \$6350.
- ❑ Co-Investigator, Development of an Autonomous Airborne Robotic Monitoring System, KADB, \$10000.
- ❑ Software Testing and Software Comparative Analysis Services, UNESCO, \$10000.

AWARDS RECEIVED

- ❑ Five times recipient of the university award of honor at Jordan University of Science and Technology
- ❑ Nine times on The College of Engineering Honor List at Jordan University of Science and Technology
- ❑ The Prince Al-Hassan's award for the Top Rank student on the batch for the commencements on 1991
- ❑ Scholarship to pursue graduate (M.Sc. and Ph.D.) studies at the Ohio State University.
- ❑ Finalist for the Best Student Paper in the IEEE International Conference on Robotics and Automation ICRA 1996.
- ❑ Finalist for the Best Student Paper in the IEEE International Conference on Robotics and Automation ICRA 1997.
- ❑ Al-Hussein Prize for Excellence for achieving excellence in the computer science and ranking number one in Jordan by the British QAA, 2004.
- ❑ Arab Pioneers and innovators award for contribution in Informatics, 2008.
- ❑ Winner of the third National Technology Parade prize in the industrial category: "ReBraille: Affordable Computer Displays for the Blind" 2010.
- ❑ Best Cisco Regional Academy Instructor 2010-2011.
- ❑ Award of Excellence for the 2015 superior editorship in the International Journal of Modeling and Simulation, ACTA Press.

PUBLICATIONS

- ❑ Book Chapters
 1. O. Al-Jarrah, Y. Zheng, and K. Yi, "Advanced Studies of Flexible Robotic Manipulators : Modeling, Design, Control, and Applications," World Scientific Pub Co Inc Published, 2003.
- ❑ Conference Papers
 2. O. Al-Jarrah and Y. Zheng, "Trajectory Planning for Two Manipulators to Deform a Flexible Beam," IROS'94.
 3. O. Al-Jarrah, Y. Zheng, and K. Yi, "Trajectory Planning for Two Manipulators to Deform a Flexible beam with experiment," ICRA, 1995.
 4. O. Al-Jarrah, Y. Zheng, and K. Yi, " Trajectory Planning for Two Manipulators to Deform a Flexible Beam Using Compliant Motion Control," ICRA, 1995.

5. O. Al-Jarrah and Y. Zheng, "Arm-Manipulator Coordination for Load Sharing Using Compliant Motion Control," ICRA, 1996.
6. O. Al-Jarrah and Y. Zheng, "Intelligent Compliant Motion Control," ICRA, 1996.
7. O. Al-Jarrah and Y. Zheng, "Arm-Manipulator Coordination for Load Sharing Using Intelligent Compliant motion Control," ICRA, 1997.
8. O. Al-Jarrah and Y. Zheng, "Arm-Manipulator Coordination for Load Sharing Using Reflexive Motion Control," ICRA, 1997.
9. M. Jarrah and O. Al-Jarrah, "Position Control of a Robot Manipulator Using Continuous Gain Scheduling," ICRA, 1999.
10. A. Shaout and O. Jarrah, "Fuzzy test System", IEEE proceedings of the 43rd Midwest Symposium on Circuits and Systems, August/2000.
11. A. Rjoub, M. AL-Rousan, O. Al-Jarrah, and O. Koufopavlou, "Multi-Level Low Swing Values for Power Design Applications," IEEE International Symposium on Circuits and Systems (ISCAS), Cydney, Australia, May 2001.
12. O. Al-Jarrah and Y. Tashtoush, "Mobile Robot Navigation Using Fuzzy Logic," 2001 Arab International Conference on Information Technology (ACIT 2001), JUST, Irbid, Jordan.
13. O. Al-Jarrah and A. Shaout, "Intelligent Automotive Volume Control" 2001 Arab International Conference on Information Technology, (ACIT 2001), JUST, Irbid, Jordan.
14. O. Al-Jarrah, S. Al-Kiswany, B. Al-Graibeh, M. Fraiwan, and H. Khasawneh, "A New Algorithm for Arabic Optical Character Recognition" The 5th WSEAS International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases, Madrid, Spain, 2006.
15. M. Molhim, O. AL-Jarrah, and Khalid M. AL-Zoubi, "Simultaneous Fuzzy Based Localization And Map Building For Mobile Robots," Proceeding of the Third AUS International Symposium on Mechatronics (AUS-ISM06), Sharjah, U.A.E. April 18-20, 2006.
16. Al-Jarrah and H. Tawalbeh, "A New Adaptive Fault-Tolerant Protocol for Direct Multiprocessor Networks," WSEAS Transactions on Computers, 2006.
17. M. Khasawneh, A. Malkawi, A. Lansari, M. Malkawi, and O. Al-Jarrah, "Optimizing Engineering Education in Arab Universities – Towards Industry-Oriented Outcomes," 4th International Forum on Engineering Education (IFEE), Sharjah, UAE, 2006.
18. O. Al-Jarrah, A. Shatnawi, and A. Halawani, "Recognition Of Gestures In Arabic Sign Language Using Neural Networks," IASTED International Conference on Artificial Intelligence and Soft Computing (ASC), Palma de Mallorca, Spain, 2006
19. O. Al-Jarrah and W. Sa'deh, "Enhanced AODV Routing Protocol for Mobile Ad Hoc Networks", 16th International Conference on Computer Theory and Applications (ICCTA), Alexandria, Egypt, 2006.
20. O. Al-Jarrah and M. Al-Hadrus, "Load Balanced Ad Hoc Routing Protocol," Mobile Computing and Wireless Communications International Conference, Amman, Jordan, 2006.
21. M. AL-Rousan, O. Al-Jarrah, and N. Nayef, "Neural Networks Based Recognition System for Isolated Arabic Sign Language," The International Conference on Information Technology (ICIT'2007), Amman, Jordan, 2007.

22. O. Al-Jarrah and M. Yaseen, "A competitive edge in the use of ICT in Higher Education in Jordan," Higher Education Development Forum, Jordan, 2007.
23. O. Al-Jarrah, "Implementing Quality Management System Internal Self-Assessment in Education", The sixth Jordanian Quality Conference, 2007.
24. M. Khasawneh, M. Malkawi, O. Al-Jarrah, L. Barakat, T. Hayajneh, M. Ebaid "A Biometric-Secure e-Voting System for Election Processes", Proceeding of the 5th International Symposium on Mechatronics and its Applications (ISMA08), Amman, Jordan, May 27-29, 2008.
25. M. AL-Rousan, A. Al-Ali, Talaa, O. Al-Jarrah, G. Hashim "TCRP: a tree-clustering protocol for tracking mobile targets in wireless sensor network", Proceeding of the 5th International Symposium on Mechatronics and its Applications (ISMA08), Amman, Jordan, May 27-29, 2008.
26. O. Al-Jarrah and R. Saifan, "A Novel Key Management Algorithm in Sensor Networks," The 6th International Conference on Advances in Mobile Computing and Multimedia (MoMM2008), Austria, November 2008.
27. M. Malkawi, M. Khasawneh, O. Al-Jarrah, and L. Barakat, "Modeling and Simulation of a Robust e-Voting System", Proceeding of the 11th International Business Information Management Conference (11th IBIMA), Cairo, Egypt, January 4 – 6, 2009.
28. M. Bani Yassein and A. Al-Dubai and M. Ould Khaoua and O. Al-Jarrah, "New Adaptive Counter Based Broadcast Using Neighborhood Information in MANETS," Proceeding of the 23rd IEEE International Parallel & Distributed Processing Symposium, Rome, Italy, May 25-29, 2009.
29. O. Al-Jarrah, A. Salhieh, and A. Garoush, "Real-Time Power-Aware Routing Protocol for Wireless Sensor Network," Proceeding of the fourth International Conference on Information Systems, Technology and Management (ICISTM-10), Bangkok, Thailand, March 11-13, 2010.
30. B. Al-Duwairi, I. Khater, and O. Al-Jarrah, "Texture Analysis-Based Image Spam Filtering," Proceeding of the 6th International Conference on Internet Technology and Secured Transactions (ICITST 2011), Abu Dhabi, United Arab Emirates (UAE), December 11-14, 2011.
31. O. Al-Jarrah, I. Khater, and, B. Al-Duwairi "Identifying Potentially Useful Email Header Features for Email Spam Filtering," Proceeding of the 6th The Sixth International Conference on Digital Society (ICDS 2012) Valencia, Spain, January 30 – February 4, 2012.
32. O. Al-Jarrah "Role of Information Technology in Improving Engineering Education," The Second conference of officials of engineering education in the Arab World, Beirut, Lebanon, 2012.
33. M. Fraiwan, A. Alsaleem, H. Abandeh and O. Al-Jarrah "Obstacle Avoidance and Navigation in Robotic Systems: A Land and Aerial Robots Study," Proceeding of the 5th International Conference on Information and Communication Systems (ICICS 2014) Irbid, Jordan, 2014.
34. O. Al-Jarrah and A. Arafat "Network Intrusion Detection System Using Attack Behavior Classification," Proceeding of the 5th International Conference on Information and Communication Systems (ICICS 2014) Irbid, Jordan, 2014.

□ Journal Papers

35. O. Al-Jarrah, Y. Zheng, and K. Yi, "Trajectory Planning for Two Manipulators to Deform a Flexible Beam," *Intelligent Automation and Soft Computing*, 1996.
36. O. Al-Jarrah and Y. Zheng, "Intelligent Compliant Motion Control," *IEEE Transaction on System, Man and Cybernetics Part B: Cybernetics*, Vol. 28, No. 1, 1998.
37. O. Al-Jarrah, A. Muhsen, and M. AL-Rousan, "Reducing Control Latency in Distributed Shared Memory Multiprocessor Systems Using Neural Network Prediction," *International Journal of Computers and Their Applications*, Vol. 7, No. 1, 2000.
38. O. Al-Jarrah and T. Al-khdour, "Slackness Based Co-Scheduling Hardware and Software Pipelines with Multiple Latency Sequences," *International Journal of Computer and Applications*, Vol. 22, No. 3, 2000.
39. M. AL-Rousan, M. Mowafi , and O. Al-Jarrah, "Improving K-Processor Reliability of Large-Scale Hierarchical Systems Using Double Counter-Rotating Rings," *International Journal of Computers and Their Applications*, Vol. 7, No. 2, 2000.
40. O. Al-Jarrah and M. AL-Rousan, "Fault Detection and Accommodation in Dynamic Systems Using Adaptive Neuro-Fuzzy Systems," *IEE Transactions on Control Theory and Applications*, Vol. 148, No. 4, 2001.
41. O. Al-Jarrah and A. Halawani, "Recognition of Gestures in Arabic Sign Language Using Neuro-Fuzzy Systems," *Artificial Intelligence journal*, Vol. 133, 2001.
42. M. AL-Rousan, O. Al-Jarrah, and M. Mowafi, "K-processor Reliability of Large-Scale SCI Hierarchical Interconnections" *International Journal of Reliability, Quality, and Safety Engineering*, 2001.
43. O. Al-Jarrah and O. Bani-Melhem, "Building Maps for Mobile Robot Navigation Using Fuzzy Classification of Ultrasonic Range Data," *Journal of Intelligent & Fuzzy Systems*, Vol. 11, No. 3-4, 2001, pp. 171-184.
44. A. Shaout, O. Al-Jarrah, M. Al-Rousan, and C. Hun, "Fuzzy test system for low level, high precision signal systems" *Journal of Computer Science and Information Management*, Vol. 4, No. 1, 2001, pp. 9 -20.
45. A. Rjoub, M. Alrousan, O. Jarrah, and O. Koufopavlo "An Efficient Low-Swing Multithreshold-Voltage Low-Power Design Technique," *JCSC*, Vol. 18, No.1, 2004, pp. 9 - 16.
46. O. Al-Jarrah and A. Muhsen "Reducing Control Latency in Distributed Shared Memory Multiprocessor Systems Using Neuro-Fuzzy Prediction," *International Journal of Modeling and Simulation*, Vol. 25, No. 1, 2005, pp. 12-23.
47. F. Omari and O. Al-Jarrah, "Handwritten Indian Numerals Recognition System Using Probabilistic Neural Networks," *Advanced Engineering Informatics*, 2004.
48. O. Al-Jarrah and H. Abu Qdais, "Municipal Solid Waste Landfill Sitting Using Intelligent System," *Journal of Waste Management*, Vol. 26, 2006, pp. 299-306.
49. I. Matalka, O. Al-Jarrah, and T. Manasrah, "Quantitative Assessment of Liver Fibrosis: A Novel Automated Image Analysis Method" *Journal of Liver International*, Vol. 26, No. 9, 2006, pp. 1054–1064.
50. O. Al-Jarrah, S. Al-Kiswany, B. Al-Graibeh, M. Fraiwan, and H. Khasawneh, "A New Algorithm for Arabic Optical Character Recognition" *WSEAS Transactions on Information Science and Applications*, 2006.
51. O. Al-Jarrah and H. Tawalbeh, "A Fully Adaptive Three Phase Fault-Tolerant Protocol for Direct Multiprocessor Networks," *WSEAS Transactions on Computers*, 2006.

52. G.M. Ingo, T. de Caro, C. Riccucci, E. Angelini, S. Grassini, S. Balbi, P. Bernardini, D. Salvi, L. Bousselmi, A. Çilingiroglu, M. Gener, V.K. Gouda, O. Al Jarrah, S. Khosroff, Z. Mahdjoub, Z. Al Saad, W. El-Saddik, P. Vassiliou, "Large scale investigation of chemical composition, structure and corrosion mechanism of bronze archeological artefacts from Mediterranean basin," *Applied Physics*, June 2006, Volume 83, Issue 4, pp 513-520
53. O. Al-Jarrah and Y. Tashtoush, "Mobile Robot Navigation Using Fuzzy Logic" *Journal of Intelligent Automation and Soft Computing*, 2007.
54. O. Al-Jarrah and F. Omari, "Improving Gesture Recognition in the Arabic Sign Language Using Textures Analysis" *Journal of Applied Artificial Intelligence*, 2007.
55. O. Al-Jarrah and A. Shaout, "Fuzzy Automotive Volume Control" *Journal of Intelligent and Fuzzy Systems*, 2007.
56. E. Abuelrub, K. Alkhaldeh, O. Al-Jarrah, and M. Bataineh, "A Framework for Quality Assurance of Academic Programs in Institutions of Higher Education in the Arab World," *Journal of the Association of Arab Universities*, 2007.
57. O. Al-Jarrah and B. Sababha, "PARMA: A Power Aware Reliable Multicasting Algorithm," *International Journal of Computers and Applications*, 2008.
58. O. Al-Jarrah, O. Migdadi, "Enhanced AODV Routing Protocol for Bluetooth Scatternet," *The Journal of Computers and Electrical Engineering*, 2009.
59. M. Malkawi, M. Khasawneh, O. Al-Jarrah, and L. Barakat, "Modeling and Simulation of a Robust e-Voting System", *Communications of the IBIMA*, Vol.8, No. 26, pp. 198-206. 2009.
60. M. Al-Rousan, O. Al-Jarrah, and M. Al-Hammouri, "Recognition of Dynamic Gestures in Arabic Sign Language using Two Stages Hierarchical Scheme," *The International Journal of Intelligent and Knowledge Based Engineering Systems*, 2010.
61. O. Al-Jarrah and R. Saifan, "A Novel Algorithm for Defending Path Denial of Service Attacks in Sensor Networks," *The International Journal of Distributed Sensor Networks*, 2010.
62. A. Abu-Doleha, O. Al-Jarrah, and A. Alkhateeb, "Protein contact map prediction using multi-stage hybrid intelligence inference systems," *Journal of Biomedical Informatics*, 2012.
63. B. Al-Duwairi, I. Khater, and O. Al-Jarrah, "Texture Analysis-Based Image Spam Filtering," *International Journal for Information Security Research (IJISR)*, Vol. 2, Issue 3/4, 2012.
64. O. Al-Jarrah and A. Arafat "Network Intrusion Detection System Using Neural Network Classification of Attack Behavior," *Journal of Advances in Information Technology*, Vol. 6, No. 1, 2015
65. A Zaafouri, M Sayadi, F Fnaiech, O al Jarrah, W Wei "A new method for expiration code detection and recognition using gabor features based collaborative representation," *Advanced Engineering Informatics* 29 (4), 1072-1082, 2015.
66. I. Khater, O. Al-Jarrah, and B. Al-Duwairi, "Hierarchical Email Spam Filtering," *International Journal of Computer and Information Technology (IJCIT)*, Volume 5, Issue 3, May 2016.
67. A. Alamareen, O. Al-Jarrah, I. Al-Jarrah, "Image Mosaicing Using Binary Edge Detection Algorithm in a Cloud-Computing Environment" *The International Journal of Information Technology and Web Engineering*, Volume 11, Issue 3, July 2016.

68. O. Al-Jarrah, M. Al-Ayoub, Y. Jararweh, "Hierarchical Detection of Insider Attacks in Cloud Computing Systems," *Int. J. of Information and Computer Security*, Volume 9, No. 1/2, 2017.
69. M. Fraiwan, A. Alsaleem, H. Abandeh, O. Aljarrah, "A System for Application Development using Aerial Robots" *The International Journal of Embedded Systems*, June 2017.
70. M. Shurman, O. Al-Jarrah, S. Esoh, S. Alnabels "An Enhanced Cross-Layer Approach Based on Fuzzy-Logic for Securing Wireless Ad-Hoc Networks from Black Hole Attacks" *International Journal on Communications Antenna and Propagation*, April 2018.

PATENTS

71. M. Al-Fandi, M. Al-Rousan, M. Jaradat, I. Aljarrah, O. Al-Jarrah "System and Method for Providing Real-Time Visual Feedback to Control Multiple Autonomous Nano-Robots" US patent No. 10037865, July 2018.

REFERENCES

- ❑ H.E. Dr. Mohammad Thnaibat – Chairman of the Board of Trustees, Jordan University of Science and Technology.
- ❑ H.E. Dr. Wajih Owias – Member of the Senate , President of Jordan University of Science and Technology /JUST 2003 – 2011.
- ❑ Dr. Omar Aljazy – Chairman of the Board of Trustees, Amman Arab University.