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EDUCATION	2005, Rensselaer Polytechnic Institute, Troy, New York
EDUCATION	Ph.D., Decision Sciences and Engineering Systems
	2004, Rensselaer Polytechnic Institute, Troy, New York
	M.E., Engineering Management
	1000 Factor Madiana University TDNC Testers
	1998, Eastern Mediterranean University, TRNC, Turkey Msc., Mechanical Engineering
	Wisc., Mechanical Engineering
	1996, Jordan University of Science and Technology, Irbid, Jordan
	Bsc., Mechanical Engineering
EMPLOYMENT	Summer 2017 - Present, Jordan University of Science and Technology, Irbid,
	Jordan,
	Professor, Department of Industrial Engineering
	Fall 2019 – Fall2020, Iowa State University, IA, USA Visiting Scholar, Department of Industrial and Manufacturing Systems
	Engineering
	Englitering
	Fall 2016 – Fall 2019, Binghamton University, NY, USA
	Visiting Professor, Department of Systems Science and Industrial
	Engineering
	Fall 2011 - Summer 2017, Jordan University of Science and Technology, Irbid,
	Jordan, Associate Professor Deportment of Industrial Engineering
	Associate Professor, Department of Industrial Engineering
	Fall 2005 - Spring 2011, Jordan University of Science and Technology, Irbid,
	Jordan,
	Assistant Professor, Department of Industrial Engineering
	Spring 2005, General Electric – Power Systems, Schenectady, New York
	Co-op, Generator Technology
	2002 - 2005, Rensselaer Polytechnic Institute, Troy, New York,
	Teaching Assistant and Librarian
	1999 - 2001, Al-Balqa Applied University – Al-Hosn University College, Al-
	Hosn, Jordan,
	Full Time Lecturer, Department of Mechanical Engineering
	1006 1009 Fostern Mediterroneen University, TDMC Tyalsay
	1996 - 1998, Eastern Mediterranean University, TRNC, Turkey, Teaching and Research Assistant and Laboratories Coordinator
TEACHING	Graduate Course Taught
TEACHING	Graduate Course raught

- Reliability and Quality Control
- Operations Research and Management

Under Graduate Course Taught

- Engineering Economy
- Engineering Statistics
- Operations Research
- Work Measurement and Analysis
- Statistical Quality Control
- Production Planning and Inventory Control
- Facilities Planning
- Total Quality Management
- Ergonomics
- Engineering Mechanics
- Lean Production Systems
- Probability and Statistics

Teaching Capabilities

- Discrete Event Simulation
- Maintenance Management
- Project Management
- Safety Engineering

Academic Load

Course work: 2 to 3 courses per semester Academic Advising: 20 undergraduates per year Project Supervising: 6 to 10 students per year Thesis Co-advising: more than 20 students to date

PUBLICATIONS

Journal Publications

Al Theeb, N. A., **Al-Araidah, O.**, Al-Ali, M. M., & Khudair, A. I., 2023, Impact of human energy expenditure on order picking productivity: a Monte Carlo simulation study in a zone picking system. *Engineering Management in Production and Services*, 15(4), 12-24. doi: 10.2478/emj-2023-0025

A Al-Dwairi, **O Al-Araidah**, S Hamasha, 2023, An Integrated QFD and TRIZ Methodology for Innovative Product Design, *Designs*, 7(6), 132

Amer M. Momani, Tasneem Al-Shaikh, Ahmad Abdelhafiz Mumani & **Omar Al-Araidah**, 2022, An ergonomics-driven QFD model to improve medical laboratory staff and patient satisfaction, *Theoretical Issues in Ergonomics Science*, 23(4), 387-413

Aws Khasawneh, Hiba Malkawi, Shereen Ababneh, **Omar Al-Araidah**, Gul Kremer, 2021, Empirical Study on Mental Stress among Healthcare Staffs and the Influencing Workplace Stressors, *Engineering Management in Production and Services*, 13(2), 10.2478/emj-2021-0012

Maysa Alshraideh, Shereen Ababneh, Elif Elcin Gunay, **Omar Al-Araidah**, 2021, A fuzzy-TOPSIS model for maintenance outsourcing considering the

quality of submitted tender documents, *Eksploatacja i Niezawodnosc – Maintenance and Reliability*, 23 (3), 443-453

Srujana Kandukuri, Elif Elçin Günay, **Omar Al-Araidah**, Gül E. Okudan Kremer, 2021, Inventive solutions for remanufacturing using additive manufacturing: ETRIZ, *Journal of Cleaner Production*, 305, 10.1016/j.jclepro.2021.126992

S. Ababneh, **O. Al-Araidah**, M. Almomani, 2020, An analytic hierarchy process model for selecting adsorbent for heavy metal ion removal from wastewater, *Water SA*, 46(3), pp. 493-499

Al-Araidah, Omar, Okudan-Kremer, Gul, Gunay, Elcin, Chu, Chih-Yuan, 2020, A Monte Carlo simulation to estimate fatigue allowance for female order pickers in high traffic manual picking systems. *International Journal of Production Research*. 1-12. 10.1080/00207543.2020.1770357.

Omar Al-Araidah, Mohammed T. Hayajneh, Rawan A. Al-Rwabdah, 2020, Desalination Membrane Selection using Group Fuzzy Analytical Hierarchy Process, *Desalination and Water Treatment*, 174, 79-89

Nader A. Al Theeb, **Omar Al-Araidah**, Manar Aljarrah, 2019, Optimization of the Heterogeneous Vehicle Routing Problem with Cross Docking Logistic System, *Logistics Research*, 12(1)

Omar Al-Araidah, Nader A. Al Theeb, Mariam Bader and Nabeel Mandahawi, 2018, A Study of Deficiencies in Teamwork Skills among Jordan Caregivers, *International Journal of Health Care Quality Assurance*, 31(4)

Omar Al-Araidah, Doraid Dalalah, Ma'en Al-Abdel Azeez and Mohammad T. Khasawneh, 2017, "A Heuristic for Clustering and Picking Small Items Considering Safe Reach of the Order Picker", *European Journal of Industrial Engineering*, 11(2)

Omar Al-Araidah, Tarek Al-Hawari and Ma'en Al-Abdel Azeez, 2017, A Simulation Model for Performance Improvement of Triage-Based Emergency Care, *International Journal of Advanced Research in Engineering*, 3(1)

Khaleel Abushgair and **Omar Al-Araidah**, 2016, "Anodizing of Aluminum for Solar Cell Application", *NanoWorld Journal*, 2(1)

Tarek Al-Hawari, Marwan Ali, **Omar Al-Araidah**, Ahmad Mumani, 2015, "Development of a genetic algorithm for multi-objective assembly line balancing using multiple assignment approach", *International Journal of Advanced Manufacturing Technology*, 77(5-8)

T. Qasim, M. Al-Faouri, **O. Al-Araidah**, 2015, "The Impact of Preheating and Postcooling on Critical-to-Quality Characteristics in Hot-Dip Galvanizing", *Materials and Manufacturing Processes*, 30(6)

Amer Momani, Tarek Al-Hawari, Hesham Al-Shebami, **Omar Al-Araidah**, 2014, "Classifying and Ranking Healthcare Quality Attributes Using Integrated Kano- Fuzzy Analytical Hierarchy Process Model", *Engineering Management Research*, 3(1)

Batayneh, W., **Al-Araidah, O.**, Malkawi, S., 2013, "Biomimetic Design of a Single DOF Stephenson III Leg Mechanism", *Mechanical Engineering Research*, 3(2)

Salaheddin Malkawi, **Omar Al-Araidah**, 2013, "Students' Assessment of Interactive Distance Experimentation in Nuclear Reactor Physics Laboratory Education", *European Journal of Engineering Education*, 38(5)

Tarek Al-Hawari, **Omar Al-Araidah**, Malak Mithkal, Alaa Khanfar, Ahmad Mumani, 2013, "Improving the Efficiency of an Emergency Department by Managing Bottleneck Capacities", *International Journal of Modelling in Operations Management*, 3(2)

Batayneh, W., **Al-Araidah, O.**, Bataineh, K., Al-Ghasem, A., 2013, "Fuzzy-Based Adaptive Cruise Controller with Collision Avoidance and Warning System", *Mechanical Engineering Research*, 3(1)

Samir Khrais, **Omar Al-Araidah**, Assaf Aweisi, Enas Al-Ayyoub, Fadia Abu Al-Edam, 2013, "Safety practices in Jordanian manufacturing enterprises within industrial estates", *International Journal of Injury Control and Safety Promotion*, 20(3)

Feras Darwish, Lubna Al-Nasser, **Omar Al-Araidah**, 2012, "Tensile Stress Concentration in Plates with Double Countersunk Rivet Holes", *International Journal of Design Engineering*, 5(2)

- **Al-Araidah, O.**, Boran, A., Wahsheh, A., 2012, "Reducing Delay in Healthcare Delivery at Outpatients Clinics using Discrete Event Simulation", *International Journal of Simulation Modelling*, 11(4)
- **Al-Araidah**, **O.**, Abu Shgair, K., Batayneh, W., Diabat, A., 2012, "Efficient Approximation of Melting Temperature in Simulated Annealing Algorithms Applied to Chebyshev Travelling Salesman Problem", *International Journal of Business Performance and Supply Chain Modelling*, 4(2)
- **O. Al-Araidah,** A. Momani, N. AlBashabsheh, N. Mandahawi, R. H. Fouad, 2012, "Costing of the Production and Delivery of Ready-Mix-Concrete", *Jordan Journal of Mechanical and Industrial Engineering*, 6(2)

Imad Alsyouf, **Omar Al-Araidah**, Mikael Tates, Renato Ciganovic, 2012, "A Multi-Criteria Decision-Making framework for Assessing the Quality and Cost of Facility Layout Alternatives: A Case Study", *Journal of Engineering Manufacture*, 226

Suleiman E. Al-Lubani, Abdullah F. Al-Dwairi, **Omar M. Al-Araidah**, 2012, "A 2-DOF Model and Dynamic Analysis of Textile Filament Winding

Machines with Sprung Feeler Rollers", Journal of Materials Science and Engineering A, 2

Samir Khrais, Tarek Al-Hawari, **Omar Al-Araidah**, 2011, "Fuzzy Logic Application for Selecting Layered Manufacturing Techniques", *Expert systems with applications*, 38(8)

Tarek Al-Hawari, Samir Khrais, **Omar Al-Araidah**, Abdullah Al-Dwairi, 2011, "2D laser scanner selection using fuzzy logic", *Expert systems with applications*, 38(5)

Nabeel Mandahawi, **Omar Al-Araidah**, Ahmad Boran, Mohammad Khasawneh, 2011, "Application of Lean Six Sigma Tools to Minimize Length of Stay for Ophthalmology Day Case Surgery", *International Journal of Six Sigma and Competitive Advantage*, 6(3)

Al-Hawari, T., Aqlan, F., **Al-Araidah, O.**, 2011, "Performance Analysis of an Automated Production System with Queue Length Dependent Service Rates", *International Journal of Simulation Modelling*, 9(4)

Ali Diabat, **Omar Al-Araidah**, Imad Alsyouf, Camilla Duh, Carsten Daub, 2011, "A Heuristic Approach to Scheduling Jobs in Machining Centers Equipped with Automated Pallet Changers", *International Journal of Advanced Operations Management*, 3(3/4)

Omar Al-Araidah, Wafa Batayneh, Tariq Darabseh, Suleiman M. BaniHani, 2011, "Conceptual Design of a Single DOF Human-Like Eight-Bar Leg Mechanism", *Jordan Journal of Mechanical and Industrial Engineering*, 5(4)

Wafa Batayneh, **Omar Al-Araidah**, Khaled Bataineh, 2011, "Fuzzy Logic Approach to Provide Safe and Comfortable Indoor Environment", *International Journal of Engineering, Science and Technology*, 2(7)

Faisal Aqlan, **Omar Al-Araidah**, Tarek Al-Hawari, 2010, "Quality Assurance and Accreditation of Engineering Education in Jordan", *European Journal of Engineering Education*, 35(3)

Al-Araidah O., Jaradat M., Batayneh W., 2010, "Using a Fuzzy Poka-Yoke Based Controller to Restrain Emissions in Naturally Ventilated Environments", *Expert systems with applications*, 37

Omar Al-Araidah, Amer Momani, Mohammad Khasawneh, Mohammed Momani, 2010, "Lead-Time Reduction Utilizing Lean Tools Applied to Healthcare: The Inpatient Pharmacy at a Local Hospital", *Journal for healthcare quality*, 32(1)

Dalalah D., **Al-Araidah O.**, 2010, "Dynamic Decentralized Balancing of CONWIP Production Systems", *International Journal of Production Research*, 48(13)

Al-Araidah O., Krishnamurthy A., Malmborg C. J., 2007, "A comparative study of simulated annealing based approaches for the layout problem with materials handling costs", *International Journal of Production Research*, 45(4)

Al-Araidah O., Krishnamurthy A., Malmborg C. J., 2006, "A Two-Stage Simulated Annealing Procedure for Block Layout Problems", *International Journal of Production Research*, 44(20)

Conference Publications

Chu, Chih-Yuan, Gunay, Elcin, **Al-Araidah, Omar**, Kremer, Gül, 2020, Evaluating Supply Chain Resource Limits from News Articles and Earnings Call Transcripts: An Application of Integrated Factor Analysis and Analytical Network Process. International Design Engineering Technical Conferences and Computers and Information in Engineering Conference IDETC/CIE2020. 10.1115/DETC2020-22699.

Rojas, Edward; Exner, Eric; Paudyal, Kundan; **Al-Araidah, Omar**; and Kremer, Gul Okudan, "A TRIZ-based Tool for Remanufacturing Using Additive Manufacturing: RE-AM-TRIZ" (2020). ASEE North Midwest Section Annual Conference 2020 Poster Presentations. 4. https://openprairie.sdstate.edu/asee_nmws_2020_posters/4

Omar Al-Araidah, Gül E. Kremer, and Chih-Yuan Chu, 2020, Using Monte Carlo Simulation to the Estimate Rate of Human Energy Expenditure in Pharmacies with High Patient Flows, Proceedings of the 2020 IISE Annual Conference, New Orleans, Louisiana

Omar Al-Araidah, Tarek Al-Hawari, Ma'en Al-Abdel Azeez, 2017, "A Simulation Model for Performance Improvement of Triage-Based Emergency Care", Proceedings of the 6th International Research Conference on Science, Management and Engineering (IRCSME 2017), Dubai, UAE

Khaleel Abushgair and **Omar Al-Araidah**, 2016, "Anodizing of Aluminum for Solar Cell Application", Proceedings of the First NanoWorld Conference in Boston (NWC-2016), Part III: Featured Presentations, Boston, USA

S. R. Malkawi, **O. AL-Araidah**, 2013, "Evaluation of Nuclear Reactor Physics Laboratory Education Through Remote Utilization of Research Reactors", European Research Reactor Conference, Saint Petersburg, Russia

Omar Al-Araidah, Nizar Zidan, Anas AlAbdallat, Tarek Al-Hawari, 2010, "An Application of AHP for Selecting the Best Layout Design". International Science and Technology Conference, Famagusta, Turkish Republic of Northern Cyprus

Omar Al-Araidah, Faisal Aqlan, Tarek Al-Hawari, 2010, "Quality Assurance and Accreditation of Engineering Programs at Jordan University of Science and Technology (JUST)". 2nd International Conference on Higher Education & Quality Assurance, Muscat, Sultanate of Oman

Salaheddin Malkawi, Ayman Hawari, Ahmad Obeidat, **Omar Al-Araidah**, 2010, "Exploring the Utilization of Nuclear Research Reactors in Distance Education Across International Borders". 1st International Nuclear and Renewable Energy Conference (INREC10), Amman, Jordan

Ali Diabat, Tarik Aouam, **Omar Al-Araidah**, 2009, "The Uncapacitated Fixed-charge Facility Location Problem with a Multi-Echelon Inventory System". Computers and Industrial Engineering, CIE 39, FRANCE

Suleiman E. Al-Lubani, Abdullah F. Al-Dwairi, **Omar M. Al-Araidah**, "Vibration Analysis of Textile Winder Machines with Sprung Roller Followers", Advanced Problems of Mechanics, APM'2009, St.-Petersburg, RUSSIA

Wafa M. Batayneh, **Omar Al-Araidah**, Christopher A. Mattson, Amir Ismail-Yahaya, 2008, Design and Implementation of Human-Like Biped Walking Mechanism, The 3rd International Conference on Mechatronics (ICOM08), Kuala Lumpur, MALAYSIA

Mikael Tates, Renato Ciganovic, Imad Alsyouf, **Omar Al-Araidah**, 2007, "A Model for Assessing Cost Effectiveness of Facility Layouts- A Case Study". Proceedings of the 2nd International Conference on Operations and Supply Chain Management, Bangkok, THAILAND

Camilla Duh, Carsten Daub, Imad Alsyouf, **Omar Al-Araidah**, 2007, "A Scheduling Heuristic for Enhancing Effectiveness of Machining-Centers with a Multiple APC: A Case Study". Proceedings of the 2nd International Conference on Operations and Supply Chain Management, Bangkok, THAILAND

Book Chapter

Al-Araidah O., Krishnamurthy A., Malmborg C.J., "Simultaneous Facility Layout and Materials-Handling Systems Design", Facility Logistics: Approaches and Solutions to Next Generation Challenges, Lahmar M., 2007, Auerbach Publications, New York, pp 61-95

Thesis/Dissertation

Al-Araidah O., 2005, Simultaneous facility layout and materials handling system design, PhD Dissertation, Department of Decision Sciences and Engineering Systems, Rensselaer Polytechnic Institute, Troy, New York

Omar Al-Araidah, 1998, Analysis and Design of Two-Degree of Freedom Pantograph Type Leg Mechanism, Masters Thesis, Department of Mechanical Engineering, Eastern Mediterranean University, TRNC, Turkey Batayneh W., Jaradat M., Al-Araidah O., 2017, Safety System for Detection and Elimination of Toxic Gases, US Patent 9581575

PATENT

FUNDED PROJECTS

Statistical Investigation of the Influence of Pre-heating and Post-Cooling Temperatures on Critical-to-Quality Characteristics of Hot-Dip Galvanizing

Measuring the Performance	of	Vehicles'	Maintenance	using	Balanced
Scorecard Approach					

Real Time Decision-Making Platform for Automated Storage and Retrieval Systems (AS/RS) using a Two-Phase Simulated Annealing Procedure for Traveling Salesman Problem

UNIVERSITY AND PUBLIC SERVICE

M.S. Thesis Co-Advisor:

Hebah Malkawi, "Work-related Mental Stress and Stressors among Healthcare Givers in Jordan", June, 2019

Shereen Ababneh, "An Analytic Hierarchy Process Model for Selecting Adsorbent for Heavy Metal Ions Removal from Wastewater", December, 2018

Ali Alraimoni, "A Modified Band Heuristic for Clustering Items in Shelves for Safe Picking", April 2016

Rawan Al-Rawabdeh, "The Use of Fuzzy Analytical Hierarchy Process in the Selection of Desalination Membranes", January 2016

Mariam Bader, "The Use of Total Quality Management Principles to Improve Teamwork in Healthcare", August 2015

Adam Zaidan, "Outsourcing Maintenance Activities Using Multiple Criteria Decision Making", April 2012

Marwan Ali, "Assembly line balancing using a hybrid genetic algorithm", December 2011

Lubna Alnasser, "A General Equation for Stress Concentration Factor in Plates with Double Countersunk Holes", December 2011

Abeer Wahsheh, "Application of Lean Tools to Reduce Length of Stay at Outpatients Clinics". August 2011

Dana AlShammari, "Managing the closed-loop supply chain of recycled metals in Jordan". August 2011

Maysa Alfaouri, "Statistical Investigation of the Influence of Pre-heating and Post-Cooling Temperatures on Critical-to-Quality Characteristics of Hot-Dip Galvanizing", August 2011

Ahmad Obeidat, "Exploring the Utilization of Nuclear Research Reactors in Distance Education across International Borders". August, 2010

Faisal Aqlan, "Performance Analysis and Evaluation of an Automatic Production System Working Under the Kanban Discipline". May 2010

Haneen Ali, "Applying Quality Function Deployment Strategy to the Design of Apartment Building in Jordan". May 2010

Saed Hamash, "An Integrated TRIZ and Quality Function Deployment Methodology for Innovative Product Design". May 2010

Abdurahman Ibrahim, "The Effect of Probability Distributions on Work Performance Measures in Serial Production Lines". January 2010

Nibal Al-Bashabsheh, "Activity--Based-Costing and Management of Ready-Mix-Concrete Production and Transportation", August 2009

Weam Obaidat, "ISO implementation in Jordanian industry: A Survey of Benefits and Barriers", January 2009

Mazen Obaidat, "Measuring the Performance of a Vehicle Maintenance Department Using Balance Score Card", November 2008

Anas Manna, "Simulation-based Optimization of Supply Chain Performance Using Simulated Annealing", August 2008

Shatha Bataineh, "Utilizing Card Flow Control Techniques in Dynamically Sizing the Number of Pallets in a Flexible Machining Center with a Multiple Pallet Automatic Pallet Changer (APC), December, 2007

Ma'en M. Al-Abdel Azeez, "Design and Analysis of a Person-On-Board Inthe-Aisle Order Picking System with Ergonomic Considerations", August 2007

Other Services:

- PhD. And MSc. Thesis Committee Member
- ABET accreditation committee member, Industrial Engineering Department, JUST

Short Courses and Professional Training

- **Operations Research**, Mechanical Engineering Department, Vaxjo University, Sweden, September 2006
- **Maintenance Management**, Jordan, January and March 2009, UAE, July 2006, September 2011 and June 2012
- **Quality Tools**, Arab Knowledge and Management Society (AKMS), Jordan, July 2008, February 2009, July 2009 and October 2009
- **5S**: A Safer and Easier Job, Maani Prefab, Jordan, June 2007
- **5S**: Cleaner and Safer Work Environment, 2nd Arab Conference of Cleaner Production, Jordan, August 2007

Industry Services:

- Facility Layout and Motion and Time Study at National Paints, Jordan, July - September 2006
- Planning and applying 5S at Maani Prefab, Jordan, July September 2007
- Production Planning and Improvement Utilizing Industrial Tools, Remalux, Jordan, July - September 2009

SCIENTIFIC
AND
PROFESSIONAL
SOCIETY
MEMBERSHIPS

• Member, Jordan Engineers Association (JEA)

REFERENCES

Charles J. Malmborg, Professor

Decision Sciences and Engineering Systems

Rensselaer Polytechnic Institute

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