

# Omar Al-Araidah, Ph.D.

Department of Industrial Engineering  
Jordan University of Science and Technology  
IRBID, 22110  
Jordan

Phone 962-2-7201000 Ext. 22353  
Fax 962-2-7201074  
E-mail [alarao@just.edu.jo](mailto:alarao@just.edu.jo)  
Mobile: 962-777-531759

<b>EDUCATION</b>	<p>2005, Rensselaer Polytechnic Institute, Troy, New York <b>Ph.D., Decision Sciences and Engineering Systems</b></p> <p>2004, Rensselaer Polytechnic Institute, Troy, New York <b>M.E., Engineering Management</b></p> <p>1998, Eastern Mediterranean University, TRNC, Turkey <b>Msc., Mechanical Engineering</b></p> <p>1996, Jordan University of Science and Technology, Irbid, Jordan <b>Bsc., Mechanical Engineering</b></p>
<b>EMPLOYMENT</b>	<p>Fall 2016 – Fall 2019, Binghamton University, NY, USA <b>Visiting Professor, Department of Systems Science and Industrial Engineering</b></p> <p>Summer 2017 - Present, Jordan University of Science and Technology, Irbid, Jordan, <b>Professor, Department of Industrial Engineering</b></p> <p>Fall 2011 - Summer 2017, Jordan University of Science and Technology, Irbid, Jordan, <b>Associate Professor, Department of Industrial Engineering</b></p> <p>Fall 2005 - Spring 2011, Jordan University of Science and Technology, Irbid, Jordan, <b>Assistant Professor, Department of Industrial Engineering</b></p> <p>Spring 2005, General Electric – Power Systems, Schenectady, New York <b>Co-op, Generator Technology</b></p> <p>2002 - 2005, Rensselaer Polytechnic Institute, Troy, New York, <b>Teaching Assistant and Librarian</b></p> <p>1999 - 2001, Al-Balqa Applied University – Al-Hosn University College, Al-Hosn, Jordan, <b>Full Time Lecturer, Department of Mechanical Engineering</b></p> <p>1996 - 1998, Eastern Mediterranean University, TRNC, Turkey, <b>Teaching and Research Assistant and Laboratories Coordinator</b></p>
<b>TEACHING</b>	<p><b><u>Graduate Course Taught</u></b></p> <ul style="list-style-type: none"><li>• Reliability and Quality Control</li><li>• Operations Research and Management</li></ul> <p><b><u>Under Graduate Course Taught</u></b></p>

	<ul style="list-style-type: none"> <li>• Engineering Economy</li> <li>• Operations Research</li> <li>• Work Measurement and Analysis</li> <li>• Statistical Quality Control</li> <li>• Production Planning and Inventory Control</li> <li>• Facilities Planning</li> <li>• Total Quality Management</li> <li>• Ergonomics</li> <li>• Engineering Mechanics</li> <li>• Lean Production Systems</li> <li>• Probability and Statistics</li> </ul> <p><b><u>Teaching Capabilities</u></b></p> <ul style="list-style-type: none"> <li>• Discrete Event Simulation</li> <li>• Maintenance Management</li> <li>• Project Management</li> <li>• Safety Engineering</li> </ul> <p><b><u>Academic Load</u></b>  <b>Course work:</b> 3 courses per semester  <b>Academic Advising:</b> 20 undergraduates per year  <b>Project Supervising:</b> 6 to 10 students per year  <b>Thesis Co-advising:</b> more than 20 students to date</p>
<b>PUBLICATIONS</b>	<p><b><u>Journal Publications</u></b></p> <p><b>Omar Al-Araidah</b>, Nader A. Al Theeb, Mariam Bader and Nabeel Mandahawi, 2017, “A Study of Deficiencies in Teamwork Skills among Jordan Caregivers”, <i>International Journal of Health Care Quality Assurance</i>, In press</p> <p><b>Omar Al-Araidah</b>, 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”, <i>European Journal of Industrial Engineering</i>, 11(2)</p> <p><b>Omar Al-Araidah</b>, Tarek Al-Hawari and Ma'en Al-Abdel Azeez, 2017, A Simulation Model for Performance Improvement of Triage-Based Emergency Care, <i>International Journal of Advanced Research in Engineering</i>, 3(1)</p> <p>Khaleel Abushgair and <b>Omar Al-Araidah</b>, 2016, “Anodizing of Aluminum for Solar Cell Application”, <i>NanoWorld Journal</i>, 2(1)</p> <p>Tarek Al-Hawari, Marwan Ali, <b>Omar Al-Araidah</b>, Ahmad Mumani, 2015, “Development of a genetic algorithm for multi-objective assembly line balancing using multiple assignment approach”, <i>International Journal of Advanced Manufacturing Technology</i>, 77(5-8)</p> <p>T. Qasim, M. Al-Faouri, <b>O. Al-Araidah</b>, 2015, “The Impact of Preheating and Postcooling on Critical-to-Quality Characteristics in Hot-Dip Galvanizing”, <i>Materials and Manufacturing Processes</i>, 30(6)</p> <p>Amer Momani, Tarek Al-Hawari, Hesham Al-Shebami, <b>Omar Al-</b></p>

**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 Alsayouf, 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., Malmberg 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., Malmberg C. J., 2006, "A Two-Stage Simulated Annealing Procedure For Block Layout Problems", *International Journal of Production Research*, 44(20)

**Conference Publications (Refereed)**

**Omar Al-Araidah**, Ali Alraimouni, Khaleel Abushgair, 2017, "A Modified Band Heuristic for Clustering Items in Shelves for Safe Picking", Proceedings of the 5th Annual Conference on Engineering and Information Technology (2017 ACEAIT), Nagoya, Japan

**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

Sa'd Hamasha, Abdallah Al-Dwairi, **Omar Al-Araidah**, Haneen Ali and Mohammad Hamasha, 2016, "A Modified Quality Function Deployment for Innovative Product Design", Proceedings of the IIE Annual Conference & Expo 2016, California, USA

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)". 2<sup>nd</sup> 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". 1<sup>st</sup> 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

	<p>Suleiman E. Al-Lubani, Abdullah F. Al-Dwairi, <b>Omar M. Al-Araidah</b>, "Vibration Analysis of Textile Winder Machines with Sprung Roller Followers", Advanced Problems of Mechanics, APM'2009, St.-Petersburg, RUSSIA</p> <p>Wafa M. Batayneh, <b>Omar Al-Araidah</b>, Christopher A. Mattson, Amir Ismail-Yahaya, 2008, Design and Implementation of Human-Like Biped Walking Mechanism, The 3<sup>rd</sup> International Conference On Mechatronics (ICOM08), Kuala Lumpur, MALAYSIA</p> <p>Mikael Tates, Renato Ciganovic, Imad Alsyouf, <b>Omar Al-Araidah</b>, 2007, "A Model for Assessing Cost Effectiveness of Facility Layouts-A Case Study". Proceedings of The 2<sup>nd</sup> International Conference on Operations and Supply Chain Management, Bangkok, THAILAND</p> <p>Camilla Duh, Carsten Daub, Imad Alsyouf, <b>Omar Al-Araidah</b>, 2007, "A Scheduling Heuristic for Enhancing Effectiveness of Machining-Centers with a Multiple APC: A Case Study". Proceedings of The 2<sup>nd</sup> International Conference on Operations and Supply Chain Management, Bangkok, THAILAND</p> <p><b>Book Chapter</b>  <b>Al-Araidah O.</b>, Krishnamurthy A., Malmberg 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</p> <p><b>Thesis/Dissertation</b>  <b>Al-Araidah O.</b>, 2005, <i>Simultaneous facility layout and materials handling system design</i>, PhD Dissertation, Department of Decision Sciences and Engineering Systems, Rensselaer Polytechnic Institute, Troy, New York</p> <p><b>Omar Al-Araidah</b>, 1998, <i>Analysis and Design of Two-Degree of Freedom Pantograph Type Leg Mechanism</i>, Masters Thesis, Department of Mechanical Engineering, Eastern Mediterranean University, TRNC, Turkey</p>
<b>PATENT</b>	<p>Batayneh W., Jaradat M., <b>Al-Araidah O.</b>, 2016, <i>Safety System For Detection And Elimination Of Toxic Gases</i>, US Patent 20130281004, Filed on April 19, 2012, and issued on October 24, 2013</p>
<b>FUNDED PROJECTS</b>	<p>Statistical Investigation of the Influence of Pre-heating and Post-cooling Temperatures on Critical-to-Quality Characteristics of Hot-Dip Galvanizing</p> <p>Measuring the Performance of Vehicles' Maintenance using Balanced Scorecard Approach</p> <p>Real Time Decision-Making Platform for Automated Storage and Retrieval Systems (AS/RS) using a Two-Phase Simulated Annealing Procedure for Traveling Salesman Problem</p>
<b>UNIVERSITY</b>	

<p><b>AND PUBLIC SERVICE</b></p>	<p><b><u>M.S. Thesis Co-Advisor:</u></b></p> <p>Ali Alraimoni, "A Modified Band Heuristic for Clustering Items in Shelves for Safe Picking", April 2016</p> <p>Rawan Al-Rawabdeh, "The Use of Fuzzy Analytical Hierarchy Process in the Selection of Desalination Membranes", January 2016</p> <p>Mariam Bader, "The Use of Total Quality Management Principles to Improve Teamwork in Healthcare", August 2015</p> <p>Adam Zaidan, "Outsourcing Maintenance Activities Using Multiple Criteria Decision Making", April 2012</p> <p>Marwan Ali, "Assembly line balancing using a hybrid genetic algorithm", December 2011</p> <p>Lubna Alnasser, "A General Equation For Stress Concentration Factor In Plates With Double Countersunk Holes", December 2011</p> <p>Abeer Wahsheh, "Application of Lean Tools to Reduce Length of Stay at Outpatients Clinics". August 2011</p> <p>Dana AlShammari, "Managing the closed-loop supply chain of recycled metals in Jordan". August 2011</p> <p>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</p> <p>Ahmad Obeidat, "Exploring the Utilization of Nuclear Research Reactors in Distance Education across International Borders". August, 2010</p> <p>Faisal Aqlan, "Performance Analysis and Evaluation of an Automatic Production System Working Under the Kanban Discipline". May 2010</p> <p>Haneen Ali, "Applying Quality Function Deployment Strategy to the Design of Apartment Building in Jordan". May 2010</p> <p>Saed Hamash, "An Integrated TRIZ and Quality Function Deployment Methodology for Innovative Product Design". May 2010</p> <p>Abdurahman Ibrahim, "The Effect of Probability Distributions on Work Performance Measures in Serial Production Lines". January 2010</p> <p>Nibal Al-Bashabsheh, "Activity--Based-Costing and Management of Ready-Mix-Concrete Production and Transportation", August 2009</p> <p>Weam Obaidat, "ISO implementation in Jordanian industry: A Survey of Benefits and Barriers", January 2009</p> <p>Mazen Obaidat, "Measuring The Performance of A Vehicle</p>
----------------------------------	--

	<p>Maintenance Department Using Balance Score Card”, November 2008</p> <p>Anas Manna, “Simulation-based Optimization of Supply Chain Performance Using Simulated Annealing”, August 2008</p> <p>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</p> <p>Ma'en M. Al-Abdel Azeez, “Design and Analysis of a Person-on-Board In-the-Aisle Order Picking System with Ergonomic Considerations”, August 2007</p> <p><b><u>Other Services:</u></b></p> <ul style="list-style-type: none"> <li>• PhD. And MSc. Thesis Committee Member</li> <li>• ABET accreditation committee member, Industrial Engineering Department, JUST</li> </ul> <p><b><u>Short Courses and Professional Training</u></b></p> <ul style="list-style-type: none"> <li>• <b>Operations Research</b>, Mechanical Engineering Department, Vaxjo University, Sweden, September 2006</li> <li>• <b>Maintenance Management</b>, Jordan, January and March 2009, UAE, July 2006, September 2011 and June 2012</li> <li>• <b>Quality Tools</b>, Arab Knowledge and Management Society (AKMS), Jordan, July 2008, February 2009, July 2009 and October 2009</li> <li>• <b>5S: A Safer and Easier Job</b>, Maani Prefab, Jordan, June 2007</li> <li>• <b>5S: Cleaner and Safer Work Environment</b>, 2<sup>nd</sup> Arab Conference of Cleaner Production, Jordan, August 2007</li> </ul> <p><b><u>Industry Services:</u></b></p> <ul style="list-style-type: none"> <li>• Facility Layout and Motion and Time Study at National Paints, Jordan, July - September 2006</li> <li>• Planning and applying 5S at Maani Prefab, Jordan, July - September 2007</li> <li>• Production Planning and Improvement Utilizing Industrial Tools, Remalux, Jordan, July - September 2009</li> </ul>
<p><b>SCIENTIFIC AND PROFESSIONAL SOCIETY MEMBERSHIPS</b></p>	<ul style="list-style-type: none"> <li>• Member, Jordan Engineers Association (JEA)</li> </ul>
<p><b>REFERENCES</b></p>	<p><b>Charles J. Malmberg</b>, Professor  Decision Sciences and Engineering Systems  Rensselaer Polytechnic Institute  110 8th Street  Troy, New York 12180  Phone:(518) 276-2935  Email: malmbc@rpi.edu</p>



**Sunderesh S. Heragu**, Professor  
Industrial Engineering & Management  
Oklahoma State University  
322 Engineering North  
Stillwater, Oklahoma 74078-5016 USA  
Phone: (405) 744-6055  
E-mail: [sunderesh.heragu@okstate.edu](mailto:sunderesh.heragu@okstate.edu)

**Mohammad Khasawneh**, Professor  
Department of Systems Science & Industrial Engineering  
State University of New York at Binghamton  
Binghamton, NY 13902  
Phone: (607) 777-4408  
Email: [mkhasawn@binghamton.edu](mailto:mkhasawn@binghamton.edu)

**Abdallah F. Al-Dwairi**, Associate Professor  
Industrial Engineering Department  
Jordan University of Science and Technology  
Irbid, 22110  
Jordan  
Phone: (962) 27201000 Ext. 22538  
Email: [dwairy@just.edu.jo](mailto:dwairy@just.edu.jo)