

Prof. Safwan Abdallah Altarazi

Industrial Engineering Department

German-Jordanian University

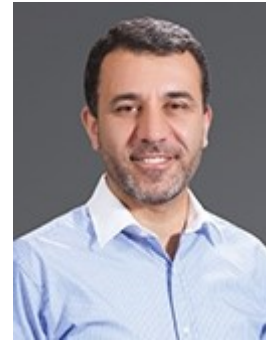
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Profile

A dynamic experienced professor, researcher, and trainer with a strong record of achievements in the fields of quality engineering, modeling and simulation, and supply chain management. Rigid problem solving capability across different fields in very systematic manner. Have more than twelve years of experience in academia-industry bridging projects. Have raised several research funds during the last ten years from different supporting funds. Have participated in two EU-Tempus projects for developing master programs in various engineering fields. Have lead the development of the engineering management master program at the German Jordanian University (GJU). Is serving/have served in various administrative positions including dean of school of applied technical sciences (SATS)-GJU, vice-dean of SATS, head of industrial engineering department-GJU, head of maintenance engineering and management department-GJU, 6-years elected member of mechanical engineering assembly board-Jordanian Engineers Association, chair of scientific committee-Seventh Jordanian International Mechanical Engineering Conference (JIMEC2010), chair of the first International Conference on Industrial, Systems and Manufacturing Engineering (ISME'14), and chair of the second International Conference on Industrial, Systems and Manufacturing Engineering (ISME'19). Published more than 40 publications in international journals and conferences and served as a referee for several national and international conferences, journals, publishers, and funds.

Education

A. Academia

- **Ph.D. Industrial Engineering, 2005**

Major: Manufacturing Systems. Minor: Engineering Systems, Wichita State University, Wichita, KS, USA

- **M. S. Industrial Engineering, 2000**

Major: Design and Manufacturing, University of Jordan, Amman, Jordan

- **B. S. Mechanical Engineering, 1997**

Minor: Thermal Power, Jordan University of Science and Technology, Irbid, Jordan

B. Professional

- **Certified Quality Engineer (CQE), 2004**

Certification conducted by American Society for Quality, USA

- **Consultant Industrial Engineer, 2017**

A rank provided by Jordanian Engineers Association, Jordan

Experience

A. Academic

- Professor, September 2019-Present. Industrial Engineering Department (IED), German-Jordanian University (GJU), Jordan.

- Associate Professor, March 2014-August 2019. IED, GJU, Jordan.

- Visiting Professor, Summer Semester 2017. Faculty of Business and Engineering, University of Applied Sciences Würzburg-Schweinfurt, Germany.

- Associate Professor, October 2014-September 2015. Sabbatical leave at Mechanical and Industrial Engineering Department, Applied Science University, Jordan.

- Visiting Professor, Winter Semester 2010. Mechanical Engineering Department, Linnaeus University, Sweden.

- Assistant Professor, September 2007-February 2014. IED, GJU, Jordan.

- Assistant Professor, October 2005-August 2007. Mechanical Engineering Department, Philadelphia University (PU), Jordan.

- Graduate Teaching and Research Assistant, August 2001-May 2005. Industrial and Manufacturing Engineering Department, Wichita State University, USA.

- Graduate Teaching Assistant, September 1997-January 2000. Industrial Engineering Department, University of Jordan, Jordan.

B. Teaching

Knowledge field	Courses taught
Statistics and Quality	Statistical Quality Control, Applied Engineering Statistics, Reliability Engineering, Six Sigma, Quality Engineering and Management (Master level)
Operation Management	Operations management, Supply Chain Management, Project Management, Facilities planning, Introduction to Logistics Management
Operations Research	Operations Research I, Operations Research II
Materials and Manufacturing	Materials science, Manufacturing processes, Engineering Workshop
Others	Engineering Measurements, Engineering Economics, Engineering Drawing

C. Research

- Chair of the Second International Conference on Industrial, Systems and Manufacturing Engineering (ISME'19), November/2019.
- Advising more than 35 B.S. graduation projects both in PU and GJU, 2005-2020.
- Chair of the First International Conference on Industrial, Systems and Manufacturing Engineering (ISME'14), November/2014.
- Head of Scientific Committee, Seventh Jordanian International Mechanical Engineering Conference (JIMEC2010), September/2010.
- Participating in master examination committees in Jordan University of Science and Technology-Jordan, Jordan University, and Hashemite University-Jordan.
- Participating in PhD examination committee in University of Technology-Sydney, Australia.
- Refereeing various national and international journals, conferences, and research funds.

D. Administrative

- Dean, School of Applied Technical Sciences (SATS), GJU, September 2019-present.
- Acting Dean, SATS, GJU, March 2018-September 2019.
- Vice Dean, SATS, GJU, March 2016-February 2018.
- Head of IED, GJU, Sep. 2015-Aug. 2016, 2010-Aug. 2012.
- Head of Maintenance Engineering and Management Department, GJU, Sep. 2009-Sep. 2011.
- Department officer for quality assurance implementation, mechanical engineering department, PU, 2006-2007.

E. Union, non-academic, and voluntary

- Member of board of trustees, Industrial R&D Fund (IRDF), the Higher Council for Science & Technology, Jordan, March 2018-September 2019.
- Member of the higher technical committee, Professional Engineering and Surveying Licensure-Jordanian Engineers Association (JEA), 2018-2020.
- Elected member of mechanical engineering assembly-JEA, 2012-2015 and 2015-2018
- Member of management board, JEA training center, June 2015-April 2018.
- Advisor and co-founder, Industrial Engineering Students' club, GJU, 2011-2014.
- Member of "degree's accreditation" committee, mechanical engineering assembly-Jordanian Engineers Association, 2009-2011.

Sample of Projects

A. Research

- (Principal researcher) Mathematical and simulation modeling for an effective healthcare supply chain: the case of Jordan analysis, 2018-2020. (Funded by \$8900 from GJU Research Deanship)
- Solar ejector cooling system for residential and small-scale commercial buildings in Jordan: Experiments, modeling and cost-benefit analysis, 2013-2016. (Funded by \$150300 from the Scientific Research Support Fund (SRSF)-Jordanian Ministry of High Education and Scientific Research)
- (Principal researcher) Reducing the Manufacturing Cost of PVC Products Using Appropriate Fillers, Plasticizers, and Recycled PVC Pellets, 2010-2013. (Funded

by \$70800 from SRSF-Jordanian Ministry of High Education and Scientific Research).

- Supply Chain Management in Jordan: Gap Analysis and Improvements Opportunities, 2010-2012.
- (Principal researcher) Warehouse Design and Control via Simulation (Multi phases project), 2010-2012. (Partially funded by \$4400 for students' graduation project by King Abdullah II Fund for Development (KAFD))
- (Principal researcher) Reducing the Manufacturing Cost of PE Sacks Using Appropriate Fillers, Copolymers, and Recycled PE Pellets, 2008-2010. (Funded by \$35000 from the GJU Research Deanship and the Jordanian High Council of Science and Technology-SRTDI)

B. Educational

- (Principal researcher) Developing a practice-integrated dual study track in the industrial engineering department at the German Jordanian University with implementation of eLearning education, strategic industrial relationship, and innovative evaluation, 2019-2021. (Funded by 42000 Euro from German Agency for International Cooperation (GIZ))
- Middle Eastern Partnership in Sustainable Engineering, 2011-2014. (TEMPUS project funded by 630000 Euro for a group of universities from the Middle East and EU countries)
- An Industry Oriented MSc. Program in Telecommunications Engineering-Towards an EU Approach, 2010-2013. (TEMPUS project funded by 1100000 Euro for a group of universities from Jordan and EU countries)

C. Industrial/Consultation

- Supply Chain Management Agility and KPIs at Al-Hikma Pharmaceutical Company/Jordan, 2011. (Funded by the Faculty for Factory (FFF) program)
- Studying and Improving the Strategic and Operational Warehousing Decisions at FINE, 2009. (Funded by the FFF national program)
- Planning the Foundation for a New Quality Assurance Lab for the PVC Products at the Gulf Technical Industrial Establishment, 2007. (Funded by FFF)
- Analyzing the Economic Feasibility of a New PE Recycle Unit at the Gulf Technical Industrial Establishment, 2007. (Funded by FFF)
- Designing a New Organizational Quality Management Program at Al-Majd Plastic Industry Co. Ltd., 2006. (Funded by FFF)
- Developing the 'As-is' and the 'To-be' Value-Maps for Shockerphant Manufacturing Company (SMC), 2001, Wichita, USA.

Sample of Training Courses (Courses I Gave)

- Total Quality Management, LEADS Academy, 2013, 2014, & 2015.
- Statistical Quality Control, LEADS Academy, 2013, 2014, & 2015.
- Introduction to Six Sigma, JEA, 2016 & 2019.
- Logistics, Supply Chain & Transport Management Program - European Arab Institute for Management and Technology, a professional diploma accredited by Cambridge International Colleague, 2010, 2011, 2012, 2013 & 2014.
- Applied Statistical Analysis and Quality Control Applications - Al-Hikma Pharmaceutical Company, 2011.

- Quality Management and Standardization, Petroleum Training Center, Khartoum-Sudan, 2011.
- Operations Management and Enhancement, Petroleum Training Center, Khartoum-Sudan, 2010.
- Building and Implementing a Balanced Scorecard: A Novel Performance Measurement Methodology - Arab Institute for Professional Training, 2009.

Publications

A. Referred Journals' Papers

- Hijazi, A., Al-Dahidi, S., & **Altarazi, S.** (2020). A novel Assisted Artificial Neural Network Modeling Approach for Improved Accuracy Using Small Datasets: Application in Residual Strength Evaluation of Panels with Multiple Site Damage Cracks. *Applied Sciences*, 10(22), 8255.
- Alshare, A., Tashtoush, B., **Altarazi, S.**, & El-khalil, H. 2020, "Energy and Economic Analysis of a 5 MW Photovoltaic System in Northern Jordan", Case Studies in Thermal Engineering, 21, 100722.
- Hijazi, A., Al-Dahidi, S., & **Altarazi, S.** (2020). Residual strength prediction of aluminum panels with multiple site damage using artificial neural networks. *Materials*, 13(22), 5216.
- Hijazi, L., Kaiser, E., & **Altarazi, S.** (2020). Pulsed green laser welding of copper materials: A statistical-based methodology for parameters setting. *Procedia Manufacturing*, 51, 890-896.
- Abu-Khalaf, J., Al-Ghussain, L., Nadi, A., Saraireh, R., Rabayah, A., **Altarazi, S.**, & Al-Halhouli, A. A., 2019, "Optimization of Geometry Parameters of Inkjet-Printed Silver Nanoparticle Traces on PDMS Substrates Using Response Surface Methodology", *Materials*, 12, 3329.
- AlKhatib, M., **Altarazi, S.**, 2019, "A customized root cause analysis approach for cost overruns and schedule slippage in paper-machine-building projects", *Management and Production Engineering Review*, 10, 83-92.
- **Altarazi, S.**, Allaf, R., & Alhindawi, F. 2019, "Machine Learning Models for Predicting and Classifying the Tensile Strength of Polymeric Films Fabricated via Different Production Processes", *Materials*, 12, 1475.
- Al-Odeh, M., & **Altarazi, S.** 2019, "Supply Chain Management Information Systems Survey for Jordanian Companies", *International Journal of Mathematical, Engineering and Management Sciences*, 4 (3), 567-578.
- Salhie, L., **Altarazi, S.**, & Abushaikha, I. 2019, "Quantifying and ranking the "7-Deadly" Wastes in a warehouse environment", *The TQM Journal*, 31 (5), 94-115.
- **Altarazi S.**, 2018, "Enhancing conformance of injection blow molding by integrating machine learning modeling and Taguchi parameter design", *Advances and Applications in Statistics*, 53 (5), 519-535.
- **Altarazi S.**, Ammouri M., 2018, "Concurrent manual-order-picking warehouse design: a simulation-based design of experiments approach", *International Journal of Production Research*, 56 (23), 7103-7121.
- **Altarazi S.**, Ammouri M., Hijazi A., 2018, "Artificial neural network modeling to evaluate polyvinylchloride composites' properties", *Computational Materials Science*, 153, 1-9.

- **Altarazi S.**, Othman O., Rahwanji S., Jeitan A., 2017, "An inventory management model for a two-echelon multi-product healthcare supply chain", *International Journal of Advanced Biotechnology and Research*, 8, 356-363.
- Fox S., El-Thalji I., **Altarazi S.**, 2017, "Good intentions with limited outcomes: Three limitations of trying to reduce mass migration with industrial thinking", *Technology in Society*, 50, 31-32.
- Ayman N., **Altarazi S.**, 2017, "Integration of value stream map and strategic layout planning into DMAIC approach to improve carpeting process", *Journal of Industrial Engineering and Management*, 10(1), 73-89.
- **Altarazi S.A.**, Allaf R.M., 2017, "Designing and analyzing a mixture experiment to optimize the mixing proportions of polyvinyl chloride composites", *Journal of Applied Statistics*, 44(8), 1441-1465.
- Gharaibeh K., Kaylani H., ..., **Altarazi S.A.**, ..., 2015, "A Masters Programme in Telecommunications Management Demand-Based Curriculum Design", *European Journal of Engineering Education*, 40(3), 267-284.
- Shqair M.I., **Altarazi S.A.**, Al-Shihabi, S., 2014, "A statistical study employing agent-based modeling to estimate the effects of different warehouse parameters on the distance traveled in warehouses", *Simulation Modelling Practice and Theory*, 49, 122-135.
- **Altarazi S.A.**, 2013, "A New Prioritizing-Stacking Heuristic Algorithm for the Inner-City Truck Loading Problem", *International Journal of Business & Management*, 8(13), 137-143.
- Ziout A., Azab A., **Altarazi S.A.**, ElMaraghy W.H, 2013, "Multi-Criteria Decision Support for Sustainability Assessment of Manufacturing System Reuse", *CIRP Journal of Manufacturing Science and Technology*, 6, 59-69.
- **Altarazi S.A.**, 2011, "An Optimization Tool for Operational Tolerances Allocation, Work in Process Inventory Minimization, and Machines Assignment in a Discrete Part Manufacturing Environment", *International Journal of Advanced Manufacturing Technology*, 55, 1069-1078.
- Mandahawi N., Alshihabi S., and **Altarazi S.A.**, 2011, "A Max-Min Ant System to Minimize Total Tardiness on a Single Machine with Sequence Dependent Setup Times Implementing a Limited Budget Local Search", *International Journal of Research and Reviews in Applied Sciences*, 6(1), 30-40.
- **Altarazi S.A.**, Garaibeh K., and Mandehawi N., 2010, "In-Production Product Value: A New Method for Part Type Prioritization", *Jordanian Journal of Mechanical and Industrial Engineering*, 4 (2), 190-195.

B. Refereed Conferences' Papers

- Shammas T., Haddadin Y., and **Altarazi S.**, 2019, "IoT-WSN system for improving manual order-picking operation", *Proceedings of the 2nd International Conference on Industrial, Systems, and Manufacturing Engineering*, Amman, Jordan.
- Abdulghani I., Bermamet H. and **Altarazi S.**, 2019, "Pharmaceutical Supply Chain Cost Optimization Model Considering Multiple Echelons and Multiple Drugs", *The Sixth International Conference on Industrial Engineering and Applications (ICIEA2019)*, Tokyo, Japan.
- Alhindawi F. and **Altarazi S.**, 2018, "Predicting the Tensile Strength of Extrusion-Blown High Density Polyethylene Film Using Machine Learning Algorithms", *IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, Bangkok, Thailand.

- Abidi, M., Lattouf, A., and **Altarazi, S.**, 2018, "A System Dynamics Simulation Modeling for Managing the Inventory in Multi-Echelon Multi-Product Pharmaceutical Supply Chain", In Proceedings of the Annual Simulation Symposium (p. 3). Society for Computer Simulation International.
- Othman O, Rahwanji S, Jeitan A, and **Altarazi, S.**, 2017, "A Conceptual Model of Healthcare Supply Chain Network", The 3rd International Joint Conference ICIEOM-ADINGOR-IISE-AIM-ASEM (IJC2017) PROCEEDINGS-"New Global Perspectives on Industrial Engineering and Management".
- **Altarazi S.A.**, Hijazi L., Kaiser E., 2016, "Process Parameters Optimization for Multiple Inputs-Multiple-Outputs Pulsed Green Laser Welding via Response Surface Methodology", IEEE International Conference on Industrial Engineering and Engineering Management (IEEM), Bali, Indonesia.
- **Altarazi S.A.**, Sudani G., Rajab Z., Karadsheh Z., Bursheh A., 2016, "A Taguchi-Continues Simulation Approach to the Injection Molding Blowing Process Quality Improvement", Proceedings of the 2016 International Conference on Industrial Engineering and Operations Management, Kuala Lumpur, Malaysia.
- **Altarazi S.A.**, Yasin O., 2015, " Integration of Process Planning and Scheduling with Sequence Dependent Setup Time: A Case Study from Electrical Wires and Power Cable Industry", In Modelling, Computation and Optimization in Information Systems and Management Sciences, pp. 283-294. Springer International Publishing, 2015.
- Ammouri M., **Altarazi S.A.**, 2014, "Prediction of Polyvinylchloride Composites' Properties Using Artificial Neural Network", Proceedings of the 1st International Conference on Industrial, Systems, and Manufacturing Engineering, Amman, Jordan.
- Shqair M.I., **Altarazi S.A.**, 2014, "Layout design of multiple blocks class-based storage strategy warehouses", Proceedings of the 2014 International Conference on Industrial Engineering and Operations Management, Bali, Indonesia.
- **Altarazi S.A.**, Hemeimat R., Wakileh M., Qsous R., Khreisat A., 2013, "Optimizing Materials Cost and Mechanical Properties of PVC Electrical Cable's Insulation by Using Mixture Experimental Design Approach", International Conference on Mechanical, Materials and Mechatronics Engineering, Madrid, Spain.
- **Altarazi S.**, Ammouri M., and Alzubi E. 2012. "Concurrent Manual-Order Picking Warehouses Design via Simulation." proceedings of the IIE Annual Conference. Orlando: USA.
- Kaylani H., **Altarazi S.A.**, 2011, "Simulation Based Genetic Algorithm Approach for Integrating Process Planning and Scheduling Functions", proceedings of the IASTED annual conference.
- Ziuot A., ElMaraghy W.H., **Altarazi S.A.**, 2011, "A Model for Sustainability Assessment of Manufacturing System Reuse: Case Study in A Developing Country", Proceedings of the 44th CIRP Conference on Manufacturing Systems.
- **Altarazi S.A.**, Ammouri M., 2010, "A Simulation-Based Decision Making Tool for Key Warehouse Resources Selections", World Congress on Engineering, London, UK.
- **Altarazi S.A.**, Abdallah A., 2009, "An Integrated Model of Allocating Operational Tolerances and Minimizing Lateness in a Discrete Part Job Shop Environment", IERC annual meeting, Miami, USA.
- Imrhan S., Mandahawi N., **Altarazi S.A.**, 2009, "An Anthropometric Survey of Jordanian Adults", XXIst Annual International Occupational Ergonomics and Safety Conference, Dallas, USA.

- **Altarazi S.A.**, Mandehawi N., 2008, “A Simulated Annealing Algorithm for Spatial Straightness Error Evaluation”, IERC annual meeting, Vancouver, Canada.
- Mandehawi N., **Altarazi S.A.**, Obeidat, M., Imrhan, S., 2008, “Body Anthropometry on a Sample of Jordanian Males”, IERC annual meeting, Vancouver, Canada.
- **Altarazi S.A.**, Cheraghi S.H., 2005, “Fuzzy Process Capability Evaluation (FPCE)”, IERC annual meeting, Atlanta, USA.
- **Altarazi S.A.**, Cheraghi S.H., 2005, “An Operational Tolerance Allocation Method with Probabilistic Process Capability”, IERC annual meeting, Atlanta, USA.
- **Altarazi S.A.**, Cheraghi S.H., 2005, “Expert’s-based operational tolerances allocation approaches”, First Annual symposium, Wichita State University, Wichita, USA.

Professional Societies

- Jordanian Engineers Association (JEA).
- Institute of Operations Research and Management Science (INFORMS).
- American Society for Quality (ASQ).
- Institute of Industrial Engineering (IIE).
- Alpha Phi Mu (Honor Society).
- Society of Industrial Engineering and Operations Management (IEOM)