

# Maram I. Shqair

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## WORK EXPERIENCE

2/2022– Present

### **Lecturer, Industrial Engineering Department, German Jordanian University, Amman Jordan**

Teaching Probability and Statistics course in addition to Engineering Economics course.

01/2020 – 10/2020

### **Research Assistant, Industrial Engineering Department, German Jordanian University, Amman Jordan**

Working on a funded project titled "Mathematical and simulation modeling for an effective health care supply chain: The case of Jordan".

#### Responsibilities:

- Participating in performing an extensive literature review.
- Designing and performing structured and semi-structured interviews with business experts at different levels.
- Formulating a hierarchical hybrid (system dynamics-discrete event) simulation model that addresses aggregate and detailed data levels simultaneously.
- Coding the hybrid simulation model on a multimethod simulation-modeling tool (AnyLogic).
- Participating in data collection and simulation model customization.
- Participating in results analysis including screening processes and sensitivity analysis.
- Participating in optimizing the pharmaceutical supply chain key performance indicators.
- Managing the transfer and application of the project findings to the considered case study.
- Managing project-related correspondence.
- Participating in preparing project reports and publications.

02/2011 – 09/2011

### **Sustainability Engineer, National Poultry Company, Amman Jordan**

#### Responsibilities:

- Monitoring and controlling chemical, physical, and biological treatment processes in the wastewater treatment plant.
- Establishing a wastewater treatment laboratory in which tests are performed to check the efficiency of treatment processes including BOD, COD, TSS, SVI, and many other tests.
- Monitoring and controlling boilers and cooling towers performance as well as chemical treatment processes in these units.
- Preparing detailed studies to substitute current energy sources with sustainable alternatives. This includes establishing a plant to produce biogas from the company's organic wastes and installing a photovoltaic system to supply the company with electricity.
- Monitoring water and energy consumption in all the company's facilities and introducing effective measures to decrease energy and water consumption.
- Monitoring and improving safety and firefighting systems.

11/2007 – 05/2010

**Teaching and Research Assistant, Chemical-  
Pharmaceutical Engineering Department, German  
Jordanian University, Amman Jordan**

Responsibilities:

- Working as a Lab Instructor and Technician for General Chemistry, Physical Chemistry, and Reaction and Heat Transfer Labs.
- Compiling and Editing Lab Manuals.
- Working on tenders' classification to re-supply Labs with chemicals, glassware, and instrumentations.
- Sharing in supervision at Organic, Analytical, and Aquatic Chemistry Labs.
- Giving tutorials sessions for the "Principles of Chemical Engineering" course, including problem-solving skills and professional computer software tutorials.
- Contributing to the "Oil Shale Extraction" research project, including sample analysis using surface area and pore size analyzer and ATR-IR.

**EDUCATION**

2011 - 2014

**M.Sc. Degree in Industrial Engineering, The University of  
Jordan, Amman Jordan**

*Excellent Academic Performance (GPA: 4/4), SRSF scholarship.*

Major Courses: Operations Research, Applied Engineering Statistics, Industrial Quality Control, Production Planning and Control, Human Factors, Systems Simulation, Project Management and Network Models, Engineering Economy.

Thesis Title: "Designing Manual Order-Picking Warehouses Using Agent-Based Simulation Approach"

2002 - 2007

**B.Sc. Degree in Chemical Engineering, The University of  
Jordan, Amman Jordan**

*Excellent Academic Performance (GPA: 3.78/4 Ranked as 1<sup>st</sup> of class), Merit scholarship.*

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**TRAINING  
COURSES**

- "Introduction to Digital Marketing" from October 19 to November 20, 2019. Ministry of Digital Economy and Entrepreneurship, Jordan.
- "Business Entrepreneurship" from October 19 to November 13, 2019. Ministry of Digital Economy and Entrepreneurship, Jordan.
- "ICTDAR-Talal Abu Ghazaleh for Small and Medium Enterprises" from October 19 to 22, 2019. Talal Abu-Ghazaleh Knowledge Society, Jordan.
- "Waste Water Treatment Analysis" from April 10 to 12, 2011. Water Authority, Ministry of Water and Irrigation, Jordan.
- "ICDL" from June 5 to 16, 2007. Internet & Computer Club, The University of Jordan.
- "English Conversation (Intermediate Level)" from June 4 to 16, 2007. The Languages Club, The University of Jordan.
- "MATLAB (Beginner)" from Sep 5 to 24, 2004. Internet & Computer Club, The University of Jordan.
- "C++ (Beginner)" from Feb 8 to 19, 2004. Internet & Computer Club, The University of Jordan.

## **PUBLICATIONS AND RESEARCH ACHIEVEMENTS**

- Shqair M., Altarazi S., and 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 Modeling Practice and Theory* 49: 122-135.  
 [\(DOI: 10.1016/j.simpat.2014.08.002\)](https://doi.org/10.1016/j.simpat.2014.08.002)
- Shqair M., and Altarazi S. (2014), Layout design of multiple blocks class-based storage strategy warehouses. In the Proceedings of the 2014 International Conference on Industrial Engineering and Operations Management 4, January 7-9, Bali, Indonesia.  
 [\(DOI: 10.13140/2.1.2779.1047\)](https://doi.org/10.13140/2.1.2779.1047)

### **Developing a platform for warehouse management**

The researcher developed a platform using Agent-Based Modeling (ABM). This platform is a user-friendly interface that can be used in warehouses to test new routing heuristics performance without the costly effort of actually applying them. The widely used heuristics are already programmed on this platform. However, it is flexible so that any other heuristic could be added. Another important feature of this platform is that it is capable to handle customized orders. The warehouse personnel can choose any number of specific locations by mouse clicks. Then the platform would generate an order picker to perform the order picking process with different heuristics and prompt the user with the optimum one with the total travel distance and %savings compared to other heuristics.

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## **COMPUTER SKILLS**

Microsoft Office Package: Microsoft Word, Excel, PowerPoint.  
Statistical Analysis and Optimization: Minitab, Design Expert, Lingo, Excel Solver, SPSS.  
Simulation: Promodel, NetLogo, AnyLogic.  
Data Mining: Weka.  
Programming Languages: basics of C++, AMPL, JAVA, and MATLAB.

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## **LANGUAGES**

Arabic: Native  
English: Excellent command of Reading, Writing, and Conversation (C1)  
IELTS (Academic) band score: 7.5  
German: Intermediate (B1)

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## **REFERENCES**

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Industrial Engineering Department  
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