

# Resume

## PERSONAL INFORMATION

### **Najat E. Almasarwah**

*Industrial Systems Engineering Department  
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## PERSONAL PROFILE

**Najat Almasarwah** holds a Ph.D. in Industrial and Systems Engineering from Ohio University, Athens, Ohio in 2020. She obtained a Master's degree in 2017 in Industrial and Systems Engineering from Ohio University and B.Sc degree in 2011 in Industrial Systems Engineering from Mu'tah University, Alkarak, Jordan. Almasarwah has awarded a scholarship from Mu'tah University to pursue her study as she earned her Master's and Ph.D. degrees.

During her graduate studies, Almasarwah was working with DHL Supply Chain to improve the pallet performance considering temperature, humidity, and storage time. She has also been working with a group of professors from the Industrial and Systems Engineering and Engineering Technology and Management departments at Ohio University to develop a new method to schedule the products on an assembly line, considering the issue of safety in a manufacturing environment. They used advanced technology to increase communication between worker(s) and robot(s). One of the great opportunities that she has received was working with the College of Business (Analytics and Information Systems Department) at Ohio University as a teaching assistant. Working with the College of Business allowed her to work with graduate and undergraduate students, and enriched her knowledge in Descriptive Analytics, Predictive Analytics, and Prescriptive Analytics.

## EDUCATION

### **Ph.D. in Industrial and Systems Engineering – December 2020**

- *Ohio University, Athens, Ohio, USA.  
Dissertation: Multi-Stage Cellular Manufacturing System Design under Certain and Uncertain Conditions*

### **Master of Engineering, Industrial Engineering - December 2017**

- *Ohio University, Athens, Ohio, USA.  
Thesis: Family Formation, Loading and Batch-Cyclic Flow shop Scheduling in Cellular Manufacturing Systems*

### **Bachelor of Science, Industrial Engineering - January 2011**

- *Mu'tah University, Alkarak, Jordan*

## EXPERIENCE & ACADEMIC ACTIVITIES

### Academic and Professional Positions

- **Assistant Professor**, Industrial Systems Engineering Department, Mu'tah University, Alkarak, Jordan  
*January 2021 – current*
- **Teaching Assistant**, Analytics and Information Systems Department, College of Business, Ohio University, Athens, Ohio  
*August 2019 – December 2020*
- **Teaching Assistant**, Industrial and Systems Engineering Department, Ohio University, Athens, Ohio, USA  
*Fall 2019*
- **Research Assistant**, Solutions Design Department, DHL Supply Chain Westerville, Ohio, USA  
*August 2018 – December 2020*
- **Lab Supervisor**, Industrial Engineering Department, Hashemite University, Zarqa, Jordan  
*August 2013 – July 2015*
- **Lab Supervisor**, Mechanical and Industrial Engineering, Applied Science Private University, Amman, Jordan  
*September 2011 – July 2013*

### Teaching Activities

#### *Relevant Coursework:*

- *Inventory and Manufacturing System Control I & II (KANBAN)*
- *Introduction to Design of Experiments*
- *Quantitative Logistics*
- *Genetic Algorithms in Manufacturing*
- *Advanced Systems Simulation*
- *Transportation Planning Fund*
- *Mass Transportation Systems*
- *Facility Planning and Design*
- *Optimization Engineering System*
- *Industrial Marketing and Industrial Finance*
- *Scheduling and Sequencing*
- *Manufacturing Systems*
- *Design & Control of Global Supply Chain*
- *Systems Reliability*
- *Stochastic Processes*
- *Operations Research*
- *Ergonomics*
- *Industry 4.0*
- *Industrial Automation*
- *Principles of Systems Engineering*

### Skills

- Proficient in MS Project, Microsoft Office, Minitab, AutoCAD, Pro/Model, Pro/Engineer Software, Arena, JAVA, Simio, and PTC Creo
- 3D Scanner for 3D Printer
- International Computer Driving License (Certificate – 2011)
- Communication Skills Worksite Dynamics (Certificate – 2010)
- Languages: Arabic (Native), English (Fluent)

## RESEARCH AND PUBLICATIONS

### Research Interest

*Manufacturing system design and control,  
Scheduling,  
Manpower allocation,  
Pallet loading problem,  
Sustainability,  
Genetic algorithms  
Industry 4.0, and  
Complex systems*

### Journal Articles

- Ardjmand, E., Young II, W. A., & Almasarwah, N. E. (2021). *Detecting Community Structures Within Complex Networks Using a Discrete Unconscious Search Algorithm*. *International Journal of Operations Research and Information Systems (IJORIS)*, 12(2), 15-32.
- Süer, G., Almasarwah, N., Alhawari, O., & Davis, C. (2020). *Multi-objective scheduling in labor-intensive manufacturing systems*. *Journal of Manufacturing Systems*, 57, 469-483.
- Almasarwah, N., & Süer, G. A. (2020). *Consideration of processing time dissimilarity in batch-cyclic scheduling of flowshop cells*. *International Journal of Production Research*, 1-20.
- Almasarwah, N., & Süer, G. (2019). *Flexible flowshop design in cellular manufacturing systems*. *Procedia Manufacturing*, 39, 991-1001.
- Singh, M., Almasarwah, N., & Süer, G. (2019). *A Two-Phase Algorithm to Solve a 3-Dimensional Pallet Loading Problem*. *Procedia Manufacturing*, 39, 1474-1481.
- Almasarwah, N., Chen, Y., Suer, G., & Yuan, T. (2019). *Minimizing the number of tardy jobs on identical parallel machines subject to periodic maintenance*. *Procedia Manufacturing*, 38, 1409-1416.
- Almasarwah, N., Suer, G. (2018). *Product Scheduling in a Flowshop Cell*. *Procedia Manufacturing*; 17: 206-213.

### Conference Articles

- Almasarwah, N., & Süer, G. (2017). *Loading and Batch-Cyclic Flowshop Scheduling in Cellular Manufacturing Systems*. In *47th International Conference on Computers & Industrial Engineering (CIE 47)*, Lisbon (Vol. 8).
- Süer, G., Al-Masarwah, N., Alhawari, O., & Davis, C. *Minimizing Average Flow Time subject to Minimum Number of Cells and no Tardy Jobs*. Fuzhou, China: ACMSA.

### Book Chapter

- Suer, G., Singh, M., Arikan, F., Al Masarwah, N. (2017). *Multi-Objective Fuzzy Cell Scheduling*. *Cellular Manufacturing Systems: Recent Developments, Analysis and Case Studies*.

### In-Progress Research

- *Cellular Manufacturing Design 1996-2019: a literature review*
- *Application of Machine Learning Methods for Pallet Loading Problem*

- *Uniform-Case Pallet Optimization Problem*
- *An Accurate and Robust Genetic Algorithm to Minimize the Total Tardiness in Parallel Machine Scheduling Problems*
- *Type II Robotic Assembly Line Balancing Problem with Robot and Workers allocation*
- *The role of Diet and lifestyle habits on spread and vulnerability of COVID-19 across Jordan governates*

## PERSONAL DEVELOPMENT

### Professional Affiliation

- **Member**, Jordan Engineers Associations, JEA
- **Member**, Institute of Industrial and Systems Engineers, IISE
- **Member**, American Society for Quality, ASQ
- **Member**, Alpha Pi Mu - Industrial Engineering Honor Society

## REFERENCES

1. Professor Gursel Suer, Russ College of Engineering and Technology, Ohio University, Athens, Ohio, USA. E-mail: [suer@ohio.edu](mailto:suer@ohio.edu)
2. Professor Tao Yuan, Russ College of Engineering and Technology, Ohio University, Athens, Ohio, USA. E-mail: [yuan@ohio.edu](mailto:yuan@ohio.edu)
3. Associate Professor William A. Young II, Department of Analytics and Information Systems, College of Business, Ohio University, Athens, USA. Email: [youngw1@ohio.edu](mailto:youngw1@ohio.edu)