

Ahmad A. Bany Abdelnabi

PERSONAL AND CONTACT INFORMATION

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EDUCATION

- **Ph.D. Student, Modeling and Simulation Engr.**, 2023 - Now
University of Central Florida, Orlando, FL, United States
- **Ph.D., Engineering Management and Systems Engineering**, 2022*
Old Dominion University, Norfolk, VA, United States
*I studied one year at ODU and then transferred to University of Central Florida.
- **M.Sc., Industrial Engineering**, 2018-2021
Jordan University of Science and Technology; Irbid, Jordan
- **B.Sc., Industrial Engineering**, 2013-2018
Yarmouk University; Irbid, Jordan

SUMMER SCHOOLS AND RESEARCH INTERNSHIPS

- **Summer Institute of Computational Social Science (SICSS)**, 2023
Florida Atlantic University, Jupiter, Florida
- **Short Academic Program, Artificial Intelligence and Machine Learning**, 2022
Lady Margaret Hall, University of Oxford. Oxford, United Kingdom
- **Research Internship, Advanced Materials and Processes**, March – Sep. 2020.
Friedrich-Alexander-Universität, Erlangen, Germany

MAIN RESEARCH EXPERIENCES AND AREAS

- **Applying Agent-Based Simulation in Transportation & Logistics**. January 2023 – Now
- **Digital Twins and Data-Driven Real-Time Analytics** January 2023 – Now
- **Reinforcement Learning and Sequential Decision-Making** January 2023 – Now
- **Electric Vehicle Routing Problem**. January 2022 – Now.
- **Object Detection using Deep Learning**. January 2022 – Now.
- **Cyber Security in Shipbuilding Industry: Data Science + Risk Analytics Approach**.
- **Optimizing Water Disinfection Parameters**. March 2020 – Sep. 2020
- **Supply Chain Networks Improvement by Simulation and SCOR Model**. 2016 – 2017.

WORK AND TRAINING EXPERIENCE

- **Graduate Research Assistant**. January 2023 – Now
University of Central Florida, Orlando, FL, United States

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- **Graduate Research Assistant.** January 2022 – December 2022.
Old Dominion University, Norfolk, VA, United States.
 - **Teaching Assistant.** September 2018 – February 2021
Jordan University of Science and Technology, Irbid, Jordan
 - **Safety, Operation and Maintenance Engineer Trainee,** June 2017 – July 2017
Galaxy Park; Irbid, Jordan
 - **Inventory Management Trainee,** Aug. 2017 – Sep. 2017
Marseille Company; Irbid, Jordan
 - **Students Representative,** Feb. 2016 – Feb. 2017
Industrial Engineering Department/Yarmouk University; Irbid, Jordan
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TEACHING EXPERIENCE

- **Teaching Assistant,** Sep. 2018 – Feb. 2021
Jordan University of Science and Technology; Irbid, Jordan
Courses: Supply Chain Management, Simulation, and Mechanics of Machines.
Labs: Engineering Measurements, Engineering Materials, and Manufacturing Processes.
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M.Sc. and B.Sc. THESES

- M.Sc. Thesis, The Optimal Setup and Parameters for Electrochemical Production of Reactive Oxidizing Species using Boron-Doped Diamond Electrodes. Advisors: Dr. Nader Al Theeb, Dr. Mohammed Almomani, Prof. Stefan M. Rosiwal and Dr. Hanadi Ghanem.
 - B.Sc. Graduation Project, Improving the performance of the Supply chain networks using a Modified SCOR Model, Advisor: Dr. Mahmoud Z. Mistarihi.
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JOURNAL ARTICALS

- Mohammed A. Almomani, Amer M. Momani, **Ahmad A. Bany Abdelnabi**, Ruba Zqabieh, Mohammad S. Al-Batah, (2022). Predicting the corrosion rate of tempered medium carbon steel Using artificial neural network. *Protection of Metals and Physical Chemistry of Surfaces*.
 - **Bany Abdelnabi, A. A.**, Al Theeb, N., Almomani, M. A., Ghanem, H., & Rosiwal, S. M. (2022). Effect of Electrode Parameters in the Electro-production of Reactive Oxidizing Species via Boron-doped Diamond under Batch Mode. *Water Environment Research*, e10830.
 - I am currently working on two journal articles in applying modeling and simulation techniques in transportation and logistics.
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CONFERENCE PROCEEDINGS

- Soykan, B., **Bany Abdelnabi, A.**, & Rabadi, G., “Adaptive Scheduling In Dynamic Environments: A Data-Driven Approach With Digital Twins And Deep Reinforcement

Learning”. In *2023 IEEE 3rd International Conference on Digital Twins and Parallel Intelligence (DTPI)*, (2023), (pp. 1-6). IEEE.

- **A. Bany Abdelnabi**, “An Analytical Hierarchical Process Model to Select Programming Language for Novice Programmers for Data Analytics Applications,” in *2019 International Arab Conference on Information Technology (ACIT)*, 2019, pp. 128–132.
- M. Almomani and **A. Bany Abdelnabi**, “Utilizing Analytical Hierarchical Process to Select The Best Polymeric Material for Food Packaging Applications,” in *International Conference on Nanoscience, Nanotechnology & Advanced Materials*, 2019, p. 5.
- M. Mistarihi, **A. Bany Abdelnabi**, Y. Mayyas, A. Azaiezh, and T. Obeidat, “A Statistical Information Theory Approach for Evaluation Human Factor Behaviors in A Warehouse.” In *International Conference on Mechanical and Aerospace Engineering*, 2020, pp. 16-20.
- **A. Bany Abdelnabi**; A. Abdelmagid; G. Rabadi; A. Sousa-Poza; and A. Pinto, "Risk-and-Resiliency-Intelligent Supply Chain (RRiSC)" (2022). *Modeling, Simulation and Visualization Student Capstone Conference*.

PROPOSAL WRITING FOR FUNDING

I participated in writing several research grant proposals, and we got two of them accepted.

- Cyber Security in Shipbuilding Industry: Data Science + Risk Analytics Approach. From Old Dominion University Research Foundation. (AY 2022-2023)
- Large Language Models (LLM) for Creating guidelines (structure) for standardized feedback on History and Physical Exam (H&P), \$10,000, Clerkship Educational Grant (AY 2023-2024) in collaboration with UCF College of Medicine (internal funding).

KEY SKILLS

Computer: Programming languages (Python, R, and C++); Operations Research and Optimization (CPLEX, LINGO, QM); Modeling and Simulation (AnyLogic, NetLogo, ARENA, SIMIO); Statistics and Data Analysis (R, Python, SAS, and Minitab); CAD & CAE Software (AutoCAD 3D).

Languages: Arabic (Mother Language), English (Upper Intermediate).

CERTIFICATIONS AND TRAINING

- ISO 9001:2015 Implementation Certificate
- Certified Quality Mgmt. System Internal Auditor
- Good Manufacturing Practices Certificate

AWARDS & HONORS

- Graduate Assistantship in the School of Modeling, Simulation, and Training at University of Central Florida, Orlando, FL, United States. January 2023 – Now

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- Graduate Assistantship in the Engineering Management and Systems Engineering Department at Old Dominion University, Norfolk, VA. January 2022 – December 2022.
 - Erasmus+ Scholarship for one semester with total fund of 6,310 Euros.
 - Master's degree Scholarship, Jordan University of Science and Technology, Sep. 2018 – Feb. 2021.
 - Won in a competition of presenting the master's degree thesis in 5 minutes at Jordan university of science and technology (ranked second).
 - Received an award from the chairman of the industrial engineering department, Yarmouk university for being one of the top students in all industrial engineering departments in Jordan in the national proficiency exam.
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PROFESSIONAL MEMBERSHIPS

- The Institute of Electrical and Electronics Engineers (IEEE)
 - Jordan Engineering Association (JEA)
 - Students Union at Yarmouk University
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GRADUATE-LEVEL COURSES I TOOK

- Simulation Techniques (Ph.D., Fall 2023)
- Understanding Humans for Modeling and Simulation (Ph.D., Spring 2023)
- Advanced Agent-Based Modeling (Ph.D., Spring 2023)
- Intelligent Systems; Robots, Agents, and Humans (Ph.D., Spring 2023)
- Optimization Methods (Ph.D., Spring 2022)
- Engineering Research Methodology (Ph.D., Spring 2022)
- Multivariate Statistics for Engineering (Ph.D., Fall 2022)
- Machine Learning (Ph.D., Fall 2022)
- Special Topics in Engineering Management (Human Factors) (M.Sc., Spring 2019)
- Operations Research and Management (M.Sc., Spring 2018)
- Advanced Engineering Materials (M.Sc., Spring 2018).
- Design of Engineering Experiments (M.Sc., Fall 2018)
- Reliability and Quality Control (M.Sc., Fall 2018)
- Advanced Manufacturing Processes (M.Sc., Fall 2018)
- Product Realization (M.Sc., Spring 2019)
- Data Science Essentials (M.Sc., Spring 2019)