

Mamdouh Al-Ghzawi

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Education:

University of Illinois at Urbana-Champaign (UIUC)

PhD Student in Civil Engineering / Construction Management August 2016 – Present
Optimizing the construction planning of airport expansion projects GPA (3.96)

University of Illinois at Urbana-Champaign (UIUC)

Master of Science in Civil Engineering / Construction Management August 2015 – August 2016
GPA (3.91)

Jordan University of Science and Technology (JUST) - Irbid, Jordan

Bachelor of Science in Civil Engineering September 2014
GPA (88%) - Dean's List (Top 1%)
Royal Scholarship for Undergraduate Study in (JUST)

Teaching Experience:

Teaching Assistant at University of Illinois at Urbana-Champaign Champaign, IL

Department of Civil and Environmental Engineering

Construction Planning - CEE 421 (ranked as excellent teacher) August 2017 – Present

- Teach lectures focusing on discussing application example for the use of construction planning tools
- Prepare and instruct lab tutorials of software packages, including Primavera (P6), and Navisworks
- Manage the course and assist in upgrading the course design to integrate scheduling and 4D modeling

Construction Optimization - CEE 526 (ranked as excellent teacher) January 2020 – Present

- Teach lectures focusing on discussing application example for optimization methods and problems
- Prepare and instruct lab tutorials of software packages solving optimization problems such as solver
- Manage the course website and assist in upgrading the course design to integrate the latest optimization tools such as Genetic Algorithm

Experience:

Virtual Design and Construction Engineer at Reconstruct Inc. Champaign, IL October 2019 – May 2021

Working with artificial intelligence, data analytics, and applications of machine learning and computer vision in the field of construction monitoring and control.

- Coordinate, align, and review BIM, reality model and analytics deliverables
- Create and manage 4D/5D plans
- Develop and update progress reports across various customer projects

Project Engineer at Airport International Group (AIG)

June 2014 – May 2015

Queen Alia International Airport (QAIA) Expansion Project - Amman, Jordan

- Prepared and extracted conditions, outlines and information from contracts
- Supervised casting works including Precast and Cast-in-place concrete for the new terminal
- Performed Quality Control inspection tours to the supplying steel factories

Summer Exchange Program

Summer 2013

Water in the Arid Land (The Engineered Water Cycle Program in Jordan)

Jordan University of Science and Technology (JUST) and University of Washington (UW)

Team Leader, Teaching Assistant and coordinator of day-to-day arrangements of the program

- Performed lab tests on drinking water to ensure the quality and validity of the water
- Designed a drinking water treatment plant for Syrian refugee camps in Jordan

Projects:

Constructing A Locally-Dense General Site Map (*Visual Sensing for Civil Infrastructure*) January – May 2017

- Generated a locally-dense and detailed map of the construction site using ORB-SLAM2 and OpenSFM
- Developed an automatic localization tool to place the dense point clouds into a sparse map

Newmark Civil Engineering Lab Renovation and Expansion Project January – May 2016

- Prepared a Design-Build Bid Proposal that incorporated design, schedule, and cost estimating
- Developed a 4D Model of the building as a part of the Building Information Modeling (BIM) Project

Management plan for the construction of residential houses (Team Leader) August – December 2015

- Developed a planning project and construction scheduling using Primavera and Navisworks
- Performed Work Breakdown Structure, quantity take-off, cost estimation, and cash flow analysis

New model of Queen Alia International Airport (QAIA) (Team Leader) Fall 2013 – Spring 2014

Designed and created a novel 5D model of QAIA Terminal using Revit, Primavera, and Navisworks

Certifications & Membership:

- Mavis Future Faculty Fellow (2020 – 2021)
- Leadership Certificate from Illinois Leadership Center at UIUC (2021)
- Certificate in Foundations of Teaching (Center for Innovation in Teaching & Learning at UIUC)
- Fundamentals of Engineering (Engineer in Training)
- Teachers ranked as excellent by their students
- Leadership in Energy and Environmental Design (LEED) – Green Associate (GA)
- Occupational Safety Health Administration – (OSHA 30-hour)
- S.M. American Society of Civil Engineers (ASCE)
- Member in Jordan Engineers Association
- President of Jordanian Student Association at University of Illinois at Urbana-Champaign (2016-2018)

Languages & Skills:

- **Arabic** (Mother Language)
English (Fluent)
French (Basic Knowledge with Delf A1 and A2)
- Interests: Construction planning and control, Scheduling, Infrastructure, Optimization, Genetic Algorithm, Evolutionary optimization techniques, Evolutionary algorithms, Building Information Modeling (BIM), Virtual Design and Construction (VDC), LEED, Machine Learning, Computer Vision, Data Analytics, Real Estate Finance, Airport Expansion Projects and Operational Facilities.
- Advanced Computer skills: Synchro, Solibri, Navisworks, Revit, Primavera, Python, Genetic Algorithm, ETABS, AutoCAD, SAFE, ProEngineer and C++