

# Omar Albatayneh, Ph.D., E.I.T

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## SUMMARY

Omar Albatayneh holds a Ph.D. in transportation engineering from the University of Wyoming. His areas of expertise include transportation asset management, pavement design and analysis, and transportation data science.

**Specialties & Skills:** ArcGIS, AutoCAD Civil 3D, R-Studio, SPSS, SQL, Optimization, Synchro, HCS, VISSIM, and other traffic analysis software.

## EDUCATION

- Ph.D. Transportation Engineering  
**University of Wyoming** April 2020  
Laramie, Wyoming
- M.S. Transportation Engineering 2017
- B.S. Civil Engineering 2015  
**Jordan University of Science and Technology** Irbid, Jordan

## EXPERIENCE

**German Jordanian University, Civil and Environmental Engineering** Madaba, Jordan  
*Assistant Professor* September 2021

- Planned, prepared, and conducted Civil and Transportation Engineering courses (Pavement Design, Traffic Engineering, Highway Engineering & Statics, Engineering Economy).
- Assisted in drafting and updating engineering program curriculum requirements and guidelines (sustainability-based).
- Created syllabi based on the department's teaching requirements.
- Provided individual mentoring and advice to students as required.
- Supervised and assisted the students in seeking external funding, scholarships, etc.

**University of Wyoming, Department of Civil & Architectural Engineering** Laramie, Wyoming  
*Visiting Scholar* June 2022 – September 2022

- Manage and analyze project data using SAS for research reports and publications.
- Monitor postdoctoral fellows.
- Author and co-author peer-reviewed publications.
- Collaborate in ongoing research and new research proposals with faculty

**Fahad Bin Sultan University, Department of Civil Engineering** Tabuk, Saudi Arabia  
*Adjunct Professor (Remotely)* June 2020 - September 2021

- Planned, prepared, and conducted Transportation Engineering **Graduate and Undergraduate** courses (Pavement Design, Traffic Engineering, Highway Engineering & Engineering Economy).
- Created syllabi based on the department's teaching requirements.
- Provided individual mentoring and advice to students as required.
- Supervised and assisted the students in seeking external funding, scholarships, etc.

**University of Wyoming, Department of Civil & Architectural Engineering** Laramie, Wyoming  
*Postdoctoral Scholar Research Associate* April 2020

- Serve as a Principal Investigator (PI) and Co-Principal Investigator (CO-PI) on several research projects.
- Take responsibility for planning and developing research methods and techniques within the framework of the research program.
- Data Wrangling and preparing data for analytics tools.
- Provide guidance and support to any students associated with the projects.

**AgileAssets Inc.**  
*Resident Engineer / Client Success Manager*

Baton Rouge, LA  
March 2020 – March 2021

- Serve as Resident Engineer managing all technical aspects and ongoing on-site support of AgileAssets' maintenance manager implementation for the Louisiana Department of Transportation and Development as the client. Prepare, review, update, and maintain client's operations for strategic maintenance management, including GIS Network Definition; Performance Data Collection; Budget Optimization Analysis; and Report Design for State Roadway Asset Maintenance Plans and National Strategic Reports:

**Key Contributions:**

- Works and contributes as part of a team under the direction and leadership of lead engineers and project management.
- Contributed to AgileAssets' collaboration practice by means of sharing technical knowledge, experience, solutions, and feedback to LADOTD engineers and LADOA teams.
- Conducted technical and engineering presentations to demonstrate how AgileAssets' transportation asset lifecycle management solutions meet LADOTD's needs.

**University of Wyoming, Department of Civil & Architectural Engineering**  
*Teaching Assistant*

Laramie, Wyoming  
January 2018 - April 2020

Worked as a graduate teaching assistant at UYWO. Performed all assistant teaching duties, including mentoring, lecturing, researching, and clerical help for the following courses:

- Pavement Materials
- Pavement Design
- Pavement Management System

**University of Wyoming, Department of Civil & Architectural Engineering**  
*Research Assistant*

Laramie, Wyoming  
January 2018 - April 2020

- Solving real data problems with data science and machine learning.
- Develop optimization algorithm using the Genetic Algorithm and 0/1 Knapsack Problem.
- Conduct literature searches
- Help in conducting quantitative analytical processes of data using ArcGIS and Excel.
- Assist Ph.D. candidates in data analysis, GIS analysis, and statistical investigation.

**Jordan University of Science and Technology**  
*Teaching Assistant*

Irbid, Jordan  
January 2016- August 2017

Provide in-depth knowledge on subjects already taught by the class instructor for the following courses:

- Traffic Engineering
- Pavement Materials and Design
- Highway Maintenance
- Highway Laboratory

**Unibeton Ready Mix**  
*QA/ QC Engineer*

Dubai, UAE  
June 2015- January 2016

- Ensures the quality records, acceptance certificates, mechanical completion certificates and the documentation for specific systems and buildings/areas are prepared and collated in accordance with project requirements.
- Develops project objectives by reviewing project proposals and plans, conferring with management.

## LICENSES & CERTIFICATIONS

- Engineer In Training (E.I.T) - The Wyoming Board of Professional Engineers Professional Land Surveyors.
- Green Concrete Technology - Unibeton Ready Mix – Leading Through Innovation, Dubai, June 2015.
- Primavera P6. Jordan Engineers Association, Feb 2015.
- SQL Essential Training
- Advanced SQL for Data Scientists.

## GRANTS

- ❖ **Title of Project:** Evaluation of the WYDOT Research Center (2021)  
**Name of Funding Organization:** Wyoming Department of Transportation  
**Amount Awarded:** \$70,000  
**Period of Grant Award:** 2021 - 2023  
**Principal Investigators:**  
1- Omar Albatayneh, Ph.D., E.I.T  
2- Khaled Ksaibati, Ph.D., P.E.
- ❖ **Title of Project:** Wyoming Transportation Asset Management Plan (TAMP).  
**Name of Funding Organization:** Wyoming Department of Transportation  
**Amount Awarded:** \$165,566  
**Period of Grant Award:** 2022 - 2024  
**Principal Investigators:**  
1- Marwan Hafez, Ph.D., P.E  
2- Omar Albatayneh, Ph.D., E.I.T.  
3- Muhammad Tahmidul Haq, Ph.D., P.E.  
4- Khaled Ksaibati, Ph.D., P.E.

## PUBLICATIONS

- 1- **Albatayneh, O.**, Forslöf, L., & Ksaibati, K. "Developing and validating an image processing algorithm for evaluating gravel road dust." *International Journal of Pavement Research and Technology* 12, no. 3 (2019): 288-296.  
<https://link.springer.com/article/10.1007/s42947-019-0035-y>
- 2- **Albatayneh, O.**, Forslöf, L., & Ksaibati, K. (2020). Image Retraining Using TensorFlow Implementation of the PretrainedInception-v3 Model for Evaluating Gravel Road Dust. *Journal of Infrastructure Systems*, 26(2), 04020014.  
<https://ascelibrary.org/doi/abs/10.1061/%28ASCE%29IS.1943-555X.0000545>
- 3- **Albatayneh, O.**, Forslöf, L., & Ksaibati, K. "Utilizing Smartphones and Image Processing Analysis for Evaluating Dust on Gravel Roads." 12th TRB International Conference on Low Volume Roads. September 15-18, 2019 in Kalispell, Montana.  
<http://onlinepubs.trb.org/onlinepubs/circulars/ec248.pdf>
- 4- Aleadelat, W., Ksaibati, K., and **Albatayneh, O.** "An optimization tool to select gravel roads for dust chemicaltreatment projects using genetic algorithms", *International Journal of Pavement Engineering* (2018),  
<https://www.tandfonline.com/doi/abs/10.1080/10298436.2018.1545092>
- 5- **Albatayneh, O.**, Moomen, M., Farid, A., & Ksaibati, K. (2020). Complementary Modeling of Gravel Road Traffic-Generated Dust Levels Using Bayesian Regularization Feedforward Neural Networks and Binary Probit Regression. *International Journal of Pavement Research and Technology*, 1-8. <https://link.springer.com/article/10.1007/s42947-020-0261-3>
- 6- Aleadelat, W., **Albatayneh, O.**, & Ksaibati, K. (2020). Developing an Optimization Tool for Selecting Gravel Roads Maintenance Strategies using a Genetic Algorithm. *Transportation Research Record*, 0361198120915201.  
<https://journals.sagepub.com/doi/full/10.1177/0361198120915201>
- 7- **Albatayneh, O.**, Aleadelat, W., & Ksaibati, K. (2019). Dynamic Programming of 0/1 Knapsack Problem for Network-Level Pavement Asset Management System. *Canadian Journal of Civil Engineering*, (ja). <https://doi.org/10.1139/cjce-2019-0368>.

- 8- Khasawneh, M. A., Taamneh, M. M., & **Albatayneh, O.** (2019). Evaluation of static creep of FORTA-FI strengthened asphalt mixtures using experimental, statistical and feed-forward back-propagation ANN techniques. *International Journal of Pavement Research and Technology*, 12(1), 43-53. <https://doi.org/10.1007/s42947-019-0006-3>
- 9- Farid, A., **Albatayneh, O.**, & Ksaibati, K. (2020). Assessing the applicability of the highway safety manual to gravel roads: A case study of Wyoming. *Journal of Transportation Safety & Security*, 1-15. <https://doi.org/10.1080/19439962.2020.1772428>
- 10- **Albatayneh, O.**, Husein, D., Farid, A., Ksaibati, K. "A Developed Methodology for Determining Gravel Roads' Level of Service: A Case Study of Wyoming", *International Journal of Pavement Research and Technology*. <https://doi.org/10.1007/s42947-021-00052-y>
- 11- Abu Daoud, O., **Albatayneh, O.**, Forslof, L., & Ksaibati, K. (2021). Validating the practicality of utilising an image classifier developed using TensorFlow framework in collecting corrugation data from gravel roads. *International Journal of Pavement Engineering*, 1-12. <https://doi.org/10.1080/10298436.2021.1921773>
- 12- **Albatayneh, O.** Husein, D., and Ksaibati, K Integrating a Multi-Criteria Route Optimization with ArcGIS for Gravel Road Data Collection. Under Review. *Journal of Traffic and Transportation Engineering (English Edition)*.
- 13- **Albatayneh, O** & Ksaibati, K. A Review for a Dust Mitigation Tool; Submitted to: The U.S. DOT Volpe Center's Environmental Measurement and Modeling Division.
- 14- Roy U, **Albatayneh O**, Ksaibati K. Pavement Marking Practices, Standards, Applications, and Retroreflectivity. *Transportation Research Record*. July 2022. doi:10.1177/03611981221107920