

# Ahmed Al-Bayati, Ph.D., PE, Associate DBIA™

Founding Director of the Construction Safety Research Center (CSRC)

Lawrence Technological University, Southfield, MI

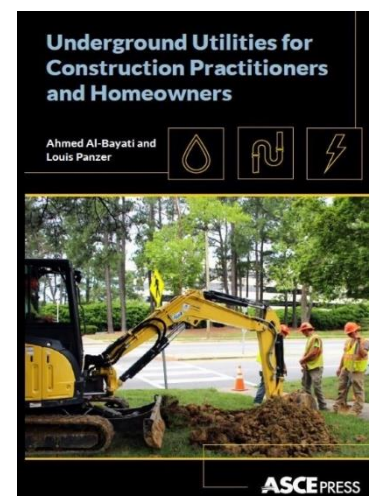
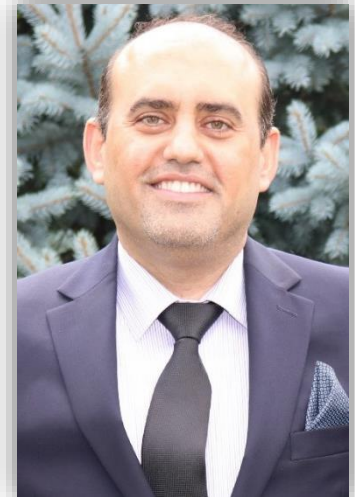
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With more than 20 years of experience in the construction industry, as a practitioner and a professor, I have also had the privilege of speaking at conferences and authoring articles in respected national and international peer-reviewed journals. My work has been cited more than 700 times as of June 2023.

My expertise lies in two areas:

- Construction worker safety, specifically in multi-employer worksites & ANSI/ASSP A10.33-2020, OSHA 1926 regulations, the general duty clause, Manual on Uniform Traffic Control Devices (MUTCD) Part 6 (temporary traffic control), the Hispanic construction workforce, Duty of Care, Common Work Area Doctrine, excavation safety, construction Safety culture, and Retained Control Doctrine.
- Sub-surface utility management, where my focus is on damage prevention laws, the investigation process for utility strikes or damages, and Subsurface Utility Engineering (SUE). In 2021, I published a book in collaboration with Mr. Louis Panzer, the director of North Carolina 811, titled "Underground Utilities for Construction Practitioners and Homeowners."

In addition to my wealth of experience, I am a **certified professional construction engineer (PE)**, an **OSHA-authorized trainer**, and an **Associate DBIA™** certified. I also volunteer on numerous local and national committees.



## Current Position

### Assistant Professor and the Founding Director of the CSRC

Civil and Architectural Engineering Department, Lawrence Technological University

## Expert Witness Services/Experience

- In 2022, a law firm hired me to assist with a utility damage case. I conducted a comprehensive examination of the case and assessed it with regard to the damage prevention law in Michigan and MISS DIG protocols. Based on the information at hand, I have reached an opinion with a reasonable degree of certainty based on the provided documents. The case was settled during the discovery phase.

- **How to Start, Build, and Run a Successful Expert Witness Practice (May 4-5, 2023)**

Organized by SEAK, Inc, Clearwater, FL

### **Professional Societies Membership**

**Member**, American Society of Civil Engineers (ASCE)

**Member**, American Society of Safety Professionals (ASSP)

**Member**, Common Ground Alliance (CGA)

**Member**, Construction Research Council (CRC)

### **Education**

#### **Ph.D. - Construction Engineering and Management**

Western Michigan University, Kalamazoo, MI, June 2017

#### **Master of Construction Management**

East Carolina University, Greenville, NC, May 2013

#### **Bachelor in Civil Engineering**

Babylon University, Babil, Iraq, May 2003

### **Awards**

#### **Best Paper Award - 2023**

The 59th Annual Associated Schools of Construction International Conference: Liverpool, UK. Paper titled "Where Do Minority Serving Institutions Stand in the U.S. Construction Education? -Exploring ASC and ACCE Communities Editor"

#### **Outstanding Early-Career Faculty Award - 2019**

College of Engineering and Technology, Western Carolina University

#### **Make a Difference Award - 2016**

Graduate Student Association, Western Michigan University

### **Professional Committees Membership**

#### **Subsurface Utility Engineering (SUE) & Investigations Committee**

- The American Society of Civil Engineers (ASCE) Utility Engineering and Surveying Institute (UESI) (2022 – Present)

#### **Site Construction Safety Committee**

- The ASCE's Construction Institute (2019 – Present)

#### **NORA Construction Sector Council**

- The National Institute for Occupational Safety and Health (NIOSH) (2019 – Present)

#### **The International Damage Incident Group**

- A group of international damage prevention leaders, known as IDIG, are currently seeking a way of working together beyond borders to improve underground utilities' damage prevention efforts. (2019 – 2020)

#### **Public Relations Officer**

- West Michigan American Society of Safety Engineers. (2016 – 2017)

## Academic Teaching Experience

### Lawrence Technological University (Fall 2019 – Present)

#### Assistant Professor – Civil and Architectural Engineering Department

- ECE 5263 - Construction Safety Management
- ECE 5283 - Conceptual Estimating
- ECE 5213 - Principles of Design- Build
- CE 4243 - Construction Project Management

### Western Carolina University (Fall 2017 – Spring 2019)

#### Assistant Professor - Kimmel School of Construction Management

- CM 342 – Estimating II & Bidding
- CM 362 – Construction Planning and Scheduling
- CM 421 – Construction Human Factors/ Safety
- CM 562 – Construction Scheduling
- CM 621 – Construction Operations & Safety
- CM 653 – Research Methods in Construction
- CM 655 – Advance Topics in Construction

### Western Michigan University - Fall 2014 – Spring 2016

#### Teaching Assistant - Civil and Construction Engineering Department

- CCE 3360 - Soil Mechanics Course
- CCE 3080 - Engineering Materials Course

## Professional Work Experience

### Safety Coordinator, the City of Kalamazoo

Kalamazoo, MI, 6/2016 – 7/2017

### Site Safety Supervisor, Gaylor Electric

Dillon, SC, 2014

### Construction Inspector, A1-Consulting Group,

Morrisville, NC, 6/2012 – 12/2013

### Project Manager Assistant, Provincial Reconstruction Team (PRT)

Babil, Iraq, 6/2006 – 6/2010

### Construction Manager Assistant, Tetra Tech

Mosel, Iraq, 6/2004 – 5/2006

## Services to the Scientific Committee

**Reviewer**, The National Institute for Occupational Safety and Health (**NIOSH**), Centers for Occupational Safety and Health - 2021



**Reviewer**, The National Science Foundation (**NSF**), Future of Work at the Human-Technology Frontier (FW-HTF) - 2022

**Evaluator**, the Science, Mathematics, And Research for Transformation (SMART) Scholarship Program. SMART is a Department of Defense (DoD) civilian scholarship-for-service program that is a part of the National Defense Education Program (NDEP). (2021 – Present)

**Editor**, Journal of Practice Periodical on Structural Design and Construction, American Society of Civil Engineers (**2019 – Present**)

**Guest Editor**, Safety Performance Assessment and Management in Construction, a special issue of Safety (ISSN 2313-576X), (10/2021- 7/2022).

**Reviewer**, *Journal of Construction Engineering and Management*, American Society of Civil Engineers (ASCE). (2016 – Present)

**Reviewer**, *Journal of Management in Engineering*, American Society of Civil Engineers (ASCE). (2016 – Present)

### Peer-Reviewed Publications

#### Technical Papers

1. **Al-Bayati**, A. J., Renner, A.T., Listello, M.P., Mohamed, M. (2023) " PPE non-compliance among construction workers: An assessment of contributing factors utilizing fuzzy theory." *Journal of Safety Research*, Elsevier, <https://doi.org/10.1016/j.jsr.2023.02.008>
2. **Al-Bayati**, A. J., Ali, M., Nnaji, C. (2023) " Managing Work Zone Safety during Road Maintenance and Construction Activities: Challenges and Opportunities." *Practice Periodical on Structural Design and Construction*, American Society of Civil Engineers, 28(1). DOI: 10.1061/PPSCFX.SCENG-1212
3. **Al-Bayati**, A. J., Kelly, D., Hasanzadeh, S., York, D. (2023) " Practitioners' Views Concerning the Causal Effects of Project Delivery Methods and Procurement Methods on Construction Projects." *Practice Periodical on Structural Design and Construction*, American Society of Civil Engineers, 28(1). DOI:10.1061/(ASCE)SC.1943-5576.0000742
4. Al-Bayati, A. J., Sturgill, R., Panzer, L., Victorio, S. M., Omer. T. (2022) "Locating underground utilities in the United States: A comparative analysis of services provided by private locators." *Transportation Research Interdisciplinary Perspectives*. <https://doi.org/10.1016/j.trip.2022.100707>
5. Namian, M., Tafazzoli, M., **Al-Bayati**, A. J., and Kermanshachi, S. (2022). " Are Construction Managers from Mars and Workers from Venus? Exploring Differences in Construction Safety Perception of Two Key Field Stakeholders." *International Journal of Environmental Research and Public Health*, 19(10):6172. <https://doi.org/10.3390/ijerph19106172>
6. **Al-Bayati**, A. J. (2022). "Construction Safety Culture & Climate: The Relative Importance of Contributing Factors." *Professional Safety Journal*, 67 (2), 24-28

7. **Al-Bayati, A. J., and Panzer, L. (2022)** " Resilience of Infrastructure Damage Prevention: Vital Role of One Call Centers in the United States." *Practice Periodical on Structural Design and Construction*, American Society of Civil Engineers, 27(2). DOI:10.1061/(ASCE)SC.1943-5576.0000674
8. **Al-Bayati, A.J. (2021)** " Firm Size Influence on Construction Safety Culture and Construction Safety Climate." *Practice Periodical on Structural Design and Construction*, 26(4).  
[https://doi.org/10.1061/\(ASCE\)SC.1943-5576.0000610](https://doi.org/10.1061/(ASCE)SC.1943-5576.0000610)
9. **[Editor's Choice] Al-Bayati, A.J. (2021)** "Impact of Construction Safety Culture and Construction Safety Climate on Safety Behavior and Safety Motivation." *Safety*, 7(41).  
<https://doi.org/10.3390/safety7020041>
10. **Al-Bayati, A. J., Bilal, G. A., Esmaeili, B., Karakhan, A., and York, D. (2021)** "Evaluating OSHA's fatality and catastrophe investigation summaries: Arc flash focus." *Safety Science*, Elsevier. 140 (105287), DOI:10.1016/j.ssci.2021.105287
11. **Al-Bayati, A. J., Al-Kasasbeh, M., Awolusi, I., Abudayyeh, O., and Umar, T. (2021)** "Trends of Occupational Fatal and Nonfatal Injuries in Electrical and Mechanical Specialty Contracting Sectors: Necessity for a Learning Investigation System." *Journal of Construction Engineering and Management*, American Society of Civil Engineers, 147 (7), DOI:10.1061/(ASCE)CO.1943-7862.0002105
12. **[Editor's Choice] Al-Bayati, A. J., Salem, N., Abudayyeh, O., Newquist, J. (2021).** "Legitimacy of the General Duty Clause Citations: Court Cases Review." *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, American Society of Civil Engineers, 13 (2), [DOI: 10.1061/\(ASCE\)LA.1943-4170.0000469](https://doi.org/10.1061/(ASCE)LA.1943-4170.0000469)
13. **Karakhan, A., Gambatese, J. A., Simmons, D. R., Al-Bayati, A. J. (2021)** "Identifying Pertinent Indicators for Assessing and Fostering Diversity, Equity, and Inclusion of the Construction Workforce." *Journal of Management in Engineering*, American Society of Civil Engineers, 37(2):04020114, DOI:10.1061/(ASCE)ME.1943-5479.0000885
14. **Al-Bayati, A. J., Hasan, R. A., and Alomari, K. (2021).** "Implementing a TQM Framework for Public Services in Iraq: An Exploratory Study" *Journal of Practice Periodical on Structural Design and Construction*, American Society of Civil Engineers, 26(2), DOI:10.1061/(ASCE)SC.1943-5576.0000565
15. **Al-Bayati, A. J., and Panzer, L. (2020).** "Reducing Damages to Underground Utilities: Importance of Stakeholders' Behaviors." *Journal of Construction Engineering and Management*, American Society of Civil Engineers, 146(9), 04020107.
16. **Al-Bayati, A. J., O'Barr, K., Suk S., Albert A., and Chappell J. (2020).** "Experience Modification Rate as a Prequalification Criterion for Safety Performance." *Professional Safety Journal*, 65 (7), 31-38



17. **Al-Bayati**, A. J., and Panzer, L. (2019) "Reducing Damages to Underground Utilities: Lessons Learned from Damage Data and Excavators in North Carolina." *Journal of Construction Engineering and Management*, American Society of Civil Engineers. 145 (12), DOI:10.1061/(ASCE)CO.1943-7862.0001724
18. **Al-Bayati**, A. J., Albert, A. and Ford, G. (2019) "Construction Safety Culture and Climate: Satisfying the Necessity for an Industry Framework." *Practice Periodical on Structural Design and Construction*, American Society of Civil Engineers. 24 (4), DOI:10.1061/(ASCE)SC.1943-5576.0000452
19. **Al-Bayati**, A. J., Panzer, L., and Karakhan. A. (2019) "Reducing Damages to Underground Infrastructure: Performance Evaluation of One-call Notification Program." *Practice Periodical on Structural Design and Construction*, American Society of Civil Engineers, 24 (4), DOI:10.1061/(ASCE)SC.1943-5576.0000441
20. **Al-Bayati**, A. J., and Panzer, L. (2019) "Requirements and Practices of Underground Construction Activities: A Review of Recently Updated Act." *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, American Society of Civil Engineers, 11 (3), DOI:10.1061/(ASCE)LA.1943-4170.0000300
21. **Al-Bayati**, A. J. (2019) "Satisfying the Need for Diversity Training for Hispanic Construction Workers and Their Supervisors at US Construction Workplaces: A Case Study." *Journal of Construction Engineering and Management*, American Society of Civil Engineers, 145 (6), DOI: 10.1061/(ASCE)CO.1943-7862.0001663
22. Ladewski, B., and **Al-Bayati**, A. J. (2019) "Quality and safety management practices: The theory of quality management approach." *Journal of Safety Research*, Elsevier, DOI: 10.1016/j.jsr.2019.03.004
23. Pandit, B., Albert, A., Patil, Y., and **Al-Bayati**, A. J. (2018). "Fostering Safety Communication among Construction Workers: Role of Safety Climate and Crew-level Cohesion" *International Journal of Environmental Research and Public Health*, MDPI, 16(1):71. DOI: 10.3390/ijerph16010071
24. Shirazinejad, R. S., Dissanayake S, **Al-Bayati** A. J., York D. D. (2018). "Evaluating the Safety Impacts of Increased Speed Limits on Freeways in Kansas Using Before-And-After Study Approach." *Sustainability*, MDPI, 11(1):119. DOI:10.3390/su11010119
25. Pandit, B., Albert, A., Patil, Y., and **Al-Bayati**, A. J. (2018) "Impact of Safety Climate on Hazard Recognition and Safety Risk Perception." *Safety Science*, Elsevier. DOI: 10.1016/j.ssci.2018.11.020
26. **Al-Bayati**, A. J., and York, D. (2018) "Fatal Injuries among Hispanic Workers in the US Construction Industry: Findings from FACE Investigation Reports." *Journal of Safety Research*, Elsevier. DOI: 10.1016/j.jsr.2018.09.007

27. **Al-Bayati**, A. J., and Al-Zubaidi, H. (2018). "Inventory of Nanomaterials in Construction Products for Safety and Health." *Journal of Construction Engineering and Management*, American Society of Civil Engineers. Technical Note, DOI: 10.1061/(ASCE)CO.1943-7862.0001547
28. **Al-Bayati**, A. J., Abudayyeh, O., and Albert, A. (2018). "Managing Active Cultural Differences in US Construction Workplaces: Perspectives from Non-Hispanic Workers." *Journal of Safety Research*, Elsevier. DOI: 10.1016/j.jsr.2018.05.004
29. **Al-Bayati**, A. J., Abudayyeh, O., Fredericks, T., and Butt, S. (2017) "Managing Cultural Diversity at US Construction Sites: Hispanic Workers' Perspectives." *Journal of Construction Engineering and Management*, American Society of Civil Engineers. DOI: 10.1061/(ASCE)CO.1943-7862.0001359
30. **Al-Bayati**, A. J., Abudayyeh, O., Fredericks, T., and Butt, S. (2017). "Reducing Fatality Rates of the Hispanic Workforce in the US Construction Industry: Challenges and Strategies." *Journal of Construction Engineering and Management*, American Society of Civil Engineers. DOI: 10.1061/(ASCE)CO.1943-7862.0001269

### **Conference Proceedings**

1. **[Best Paper Award]** Isingizwe, J., Eiris, R., **Al-Bayati**, A. J., Bhawani, S., and Sparkling, A. (2023). "Where Do Minority Serving Institutions Stand in the U.S. Construction Education? - Exploring ASC and ACCE Communities" The 59th Annual Associated Schools of Construction International Conference: Liverpool, UK
2. **Al-Bayati, A.J.**, Panzer., L. (2022) " Rethinking Subsurface Infrastructure Management: The Emerging Need for Private Locating Firms" *Proc. Pipelines 2022*, 67-72, American Society of Civil Engineers, *Indianapolis, Indiana* <https://doi-org.ezproxy.ltu.edu/10.1061/9780784484289.008>
3. **Al-Bayati, A.J.**, Kinter, A. (2022) " Subsurface Utility Engineering in Practice: Scope of Service Focus" *Proc. Pipelines 2022*, 166-170, American Society of Civil Engineers, *Indianapolis, Indiana* <https://doi-org.ezproxy.ltu.edu/10.1061/9780784484272.020>
4. **Al-Bayati, A.J.**, Karakhan, A. (2022) " Annual Revenue's Influence on the Safety Performance of Construction Firms." *Proc. Construction Research Congress*, American Society of Civil Engineers, Arlington, Virginia. <https://doi.org/10.1061/9780784483985.039>
5. Karakhan, A., **Al-Bayati, A.J.**, Izadi, Moud, Al-Saffar, O. T. (2022) " Impact of Green Construction on Safety Performance in the Built Environment." *Proc. Construction Research Congress*, American Society of Civil Engineers, Arlington, Virginia. <https://doi.org/10.1061/9780784483985.041>

6. Sanni, T. O., Nnaji, C., Awolusi, I., and **Al-Bayati**, A. J. (2022). "Safety Innovation Adoption in Construction: Role of Safety Compliance and Safety Attitude." *Proc. Construction Research Congress*, American Society of Civil Engineers, Arlington, Virginia.  
<https://doi.org/10.1061/9780784483985.078>
7. Namian, M., **Al-Bayati**, A. J., and Nnaji, C. (2022). "Role of Safety Training in Reducing Fatigue among Construction Workers." *Proc. Construction Research Congress*, American Society of Civil Engineers, Arlington, Virginia. <https://doi.org/10.1061/9780784483985.065>
8. Shojaei, A., Mahdavian, A., Rokooei, S., and **Al-Bayati**, A. J. (2022). "Use of Virtual Site Visits in Construction Management Distance Education." *Proc. Construction Research Congress*, American Society of Civil Engineers, Arlington, Virginia.  
<https://doi.org/10.1061/9780784483985.019>
9. Awolusi, I., Akinsemoyin, A., Chakraborty, D., and **Al-Bayati**, A. J. (2022). "Worker Safety and Health Activity Monitoring in Construction Using Unmanned Aerial Vehicles and Deep Learning." *Proc. Construction Research Congress*, American Society of Civil Engineers, Arlington, Virginia <https://doi.org/10.1061/9780784483961.049>
10. **Al-Bayati, A.J.** (2021) " Infrastructure Damage Prevention Approaches in the United States." *Proc. Pipelines 2021*, 102-108, American Society of Civil Engineers, *Virtual Experience*  
<https://doi-org.ezproxy.ltu.edu:9443/10.1061/9780784483619.011>
11. York, D.D., **Al-Bayati, A.J.**, Al-Shabbani, Z. Y. (2020) "Potential Applications of UAV within the Construction Industry and the Challenges Limiting Implementation." *Proc. Construction Research Congress 2020*, 31-39, American Society of Civil Engineers, Tempe, Arizona
12. **Al-Bayati, A.J.**, Butrouna, K. H., Steffen, R. E., Salman, B., Al-Qaralleh, M. (2020) "Utilizing Graphite Powder to Improve Concrete Conductivity, Compressive Strength, and Workability." *Proc. Construction Research Congress 2020*, 881-888, American Society of Civil Engineers, Tempe, Arizona
13. **Al-Bayati, A.J.**, Tafazzoli, M., York, D.D., Umar, T (2020) "Cyclical Construction Workforce Shortage: An Evaluation of the Current Shortage in Western North Carolina." *Proc. Construction Research Congress 2020*, 643-650, American Society of Civil Engineers, Tempe, Arizona
14. **Al-Bayati, A. J.**, Panzer., L., Kaddoura, K. (2020) "Minimizing Underground Infrastructure Damages: Utility Locators' Perspectives." *Proc. Pipelines 2020*, 387-391, American Society of Civil Engineers, Virtual Experience



15. Kaddoura. K., Gehrig. B., **Al-Bayati. A. J.** (2020). "Developing a Decision-Support System to Optimize Rehabilitation and Replacement Programs for Ferrous Distribution Mains in Municipal Water Systems." *Proc. Pipelines 2020*, 290-300, American Society of Civil Engineers, Virtual Experience
16. Namian, M., **Al-Bayati, A. J.**, Karji, A., Tafazzoli, M. (2020) "Investigating Barriers to Implement and Develop Sustainable Construction." *Proc. JIC Smart Cities*, Cairo, Egypt
17. Namian, M., Kermanshachi, S., Khalid, M., **Al-Bayati, A. J.** (2020) "Construction Safety Training: Exploring Different Perspectives of Construction Managers and Workers." *Proc. 2020 ASEE Annual Conference & Exposition*, Montreal, Canada
18. **Al-Bayati, A. J.**, and Alomari, K. (2019). "Construction Stakeholders' Perception toward the Success Factors of Construction Projects." *Proc. 7th CSCE International Construction Specialty Conference*, CSCE, Montreal, Canada.
19. **Al-Bayati, A. J.**, Karatas, A., and White, J. (2019). "Fall Prevention Supplementary Devices for Bridge Construction Workers: A Life-Cycle Cost Analysis." *Proc. 7th CSCE International Construction Specialty Conference*, CSCE, Montreal, Canada.
20. Alomari, K., Gambatese, J. and **Al-Bayati, A. J.**, (2019). "Exponential Random Graph Modeling: A Promising Tool for Construction Safety Research." *Proc. 7th CSCE International Construction Specialty Conference*, CSCE, Montreal, Canada.
21. Alghamdi, A., **Al-Bayati, A. J.**, Abudayyeh, O. (2019) "Performance Indicators for Construction Safety Culture and Climate: A Comprehensive State-of-the-Art Study." *Proc. 7th CSCE International Construction Specialty Conference*, CSCE, Montreal, Canada.
22. Alomari, K., Gambatese, J., Gerkey, D., and **Al-Bayati, A. J.**, (2019). "Analyzing Hazardous Interactions on Construction Jobsites Using Social Network Analysis." *Proc. 7th CSCE International Construction Specialty Conference*, CSCE, Montreal, Canada.
23. **Al-Bayati, A. J.**, Namian, O., Karakhan A. (2019). "How We Can Better Learn from OSHA Forms: From a Bulletin Board to the Vision Board." *Proc. The 55th ASC Annual International Conference*, Associated Schools of Construction, Denver, CO
24. Al Assdi, R. J., and **Al-Bayati, A. J.** (2018). "Using a Compact Ceramic System to Filter Raw Water in Iraq: Challenges and Opportunities." *Proc. International Low Impact Development Conference*, ASCE, Nashville, Tennessee. DOI: 10.1061/9780784481783.001

25. Bilal, G. A., Hashim, H., Comez, P., Abdel-Qader, I., and **Al-Bayati**, A. J. (2018). "Arc Flash Assessment: Two-Case Study of Public Service Facilities in Kalamazoo, Michigan." *Proc. 7th Annual IEEE International Conference on Electro/Information Technology (EIT)*, Rochester, Michigan. DOI: 10.1109/EIT.2018.8500083
26. Shirazinejad, R. and **Al-Bayati**, A. J. (2018). "Impact of advertising signs on freeway crashes within a certain distance in Michigan." *Proc. Construction Research Congress*, ASCE, New Orleans, Louisiana. DOI: 10.1061/9780784481288.068
27. **Al-Bayati**, A. J., Abudayyeh, O., Ahmed, S. (2017). "Managing Workforce Diversity at Gulf Cooperation Council Construction Sites." *Proc. of the 9th International Conference on Construction in the 21st Century (CITC-9)*, Dubai, United Arab Emirates.
28. **Al-Bayati**, A. J., and Abudayyeh, O. (2016). "Safety Challenges in the US Construction Industry: The Hispanic Workforce Perspective." *Proc. Construction Research Congress*, ASCE, San Juan, Puerto Rico. DOI: 10.1061/9780784479827.295

### Presentations

<b>PPE Non-Compliance among Construction Workers</b>	<b>4/2023</b>
Michigan Safety Conference, <b>Grand Rapids, MI</b>	
<b>Construction Safety Culture and Climate</b>	<b>4/2022</b>
Michigan Safety Conference, <b>Lansing, MI</b>	
<b>Improving the Quality in Construction: Total Quality Management Approach</b>	<b>6/2021</b>
The American University of Kurdistan (AUK), <b>Duhok, Iraq</b>	
<b>The Resilience of Infrastructure Damage Prevention</b>	<b>5/2020</b>
Michigan Infrastructure Conference, <b>Virtual</b>	
<b>Construction Safety Culture and Climate</b>	<b>4/2020</b>
Michigan Safety Conference, <b>Virtual</b>	
<b>Underground Damages Case Study: Use of Comprehensive Data Analysis</b>	<b>4/2020</b>
Global Excavation Safety, <b>Virtual</b>	
<b>The Current Trends of Project Delivery Methods and Procumbent Options</b>	<b>10/2020</b>
The University of Technology, Baghdad, Iraq, Via Zoom	
<b>EMR as a Prequalification Criterion for Safety Performance</b>	<b>02/2020</b>
Construction Institute Summit 2020, <i>American Society of Civil Engineers</i> , Los Angeles, California. <u>Peer-Reviewed</u>	
<b>Confined Spaces in Construction: 29 CFR 1926 – Section AA</b>	<b>11/2018</b>
<b>Guest Speaker</b> The Building Construction Science Dept., <i>Mississippi State University</i> , Starkville, MS.	

**Safety Culture at Construction Sites: An Assessment of a Practical Model 10/2018**

National Occupational Injury Research Symposium (NOIRS), *National Institute for Occupational Safety and Health*, Morgantown, WV, Peer-Reviewed

**Hispanic Workforce in Construction: Challenges & Opportunities 8/2018**

An Integrated Safety & Health Management System National Symposium, *the Voluntary Protection Programs Participants' Association, Inc. (VPPPA) and the Tennessee Safety & Health Conference*, Nashville, TN.

**Managing Cultural Diversity: Hispanic Workers Perspective 5/2018**

The 2<sup>nd</sup> International Symposium to Advance Total Worker Health, *National Institute for Occupational Safety and Health*, Bethesda, MD. Peer-Reviewed

**Hispanic Workforce in Construction: Challenges and Strategies 9/2017**

**(Keynote Speaker)** 2017 ABC Carolinas Safety/ HR Conference, *Associated Builders and Contractors*, Concord, NC.

**Managing Active Cultural Differences on US Construction Sites 3/2017**

ASA Chicago Construction Expo & Safety Conference, Oakbrook Terrace, IL

**The Hispanic Workforce in the US Construction Industry 10/2016**

Michigan Safety Conference, Grand Rapids, MI.

**Safety Challenges in Construction: The Hispanic Workforce Perspective 6/2016**

Construction Research Congress, *American Society of Civil Engineers*, San Juan, Puerto Rico.  
Peer-Reviewed

**Professional Development****How to Start, Build, and Run a Successful Expert Witness Practice (May 4-5, 2023)**

Organized by SEAK, Inc, Clearwater, FL

**Introducing and Embedding Safety Culture Concepts in Undergraduate Education (August 18, 2022)**

Organized online by the National Academy of Construction and University of Kansas, Lawrence, KS

**Drive learning and leadership through your own stories! (August 11-13, 2022)**

Organized online by the Kern Entrepreneurial Engineering Network (KEEN), Denver, CO

**ASCE 75 and ASCE 38: New and Re-released Standards in Risk Mitigation (July 31, 2022)**

Organized by the ASCE Utility Engineering & Surveying Institute (UESI), Indianapolis, IN

**The Civil Underground Curriculum Workshop & Outreach Program (June 19 -22, 2022)**

Organized by the Underground Construction Association (UCA), Philadelphia, PA

**TapRooT® Root Cause Analysis (October 19 - 21, 2021)**

Presented On-line by System Improvements, Inc.

**The 9th UESI Utility Investigation School (August 9-13, 2021)**

Organized by the Buried Asset Management Institute and CSRC at LTU campus

**Pix4Dmapper In-depth Online Workshop (May 4-6, 2021)**

Organized online by Pix4D

**Integrating Curriculum with Entrepreneurial Mindset - June 2020**

Organized online by Kern Entrepreneurial Engineering Network (KEEN)

**Fast-Track Online Course Design Institute (OCDI) (May – June 2020)**

Organized online by North Carolina University System

**Design-Build Workshop (November 13-15, 2019)**

Organized by Design-Build Institute of America (DBIA), Jacksonville, FL

**Design-Build Institute of America's (DBIA) 2019 Educator Workshop (November 5, 2019)**

Organized by Design-Build Institute of America (DBIA), Las Vegas, NV

**Damage Investigation & Claims Resolution Workshop (March 26, 2019)**

Organized CGA Excavation Safety Conference & Expo, Tampa, FL

**Safety Inspections Course (February 14, 2019)**

Organized by National Safety Council, Irmo, SC

**Bluebeam Extreme Conference (September 17-19, 2018)**

Organized by Bluebeam U.S., Austin, TX

**Green Infrastructure and LID Practice Construction Workshop (August 12, 2018)**

Organized by the International Low Impact Development (LID) Conference, Nashville, TN

**Building a Stronger Curriculum - Kiewit Faculty Workshop (June 14 -16, 2018)**

Organized & sponsored by Kiewit Corporation, Omaha, NE

**NIH Regional Seminars on Program Funding and Grants Administration (May 2-4, 2018)**

Organized and National Institute for Occupational Safety and Health, the Office of Extramural Research (OER), Washington, DC.

**Basic Blueprint Reading & Material Take-Off Course (February 16-17, 2018)**

Organized by Building Material Suppliers Association (BMSA), Hickory, NC

**OSHA #500 Trainer Course in OSH Standards for Construction (August 14-17, 2017)**

Organized by Southeastern OSHA Training Institute, Myrtle Beach, SC

**Construction Law (May 11, 2017)**

Organized by HalfMoon Education Inc., East Lansing, MI

**Safety Training Methods (November 1-3, 2016)**

Organized by National Safety Council, Itasca, IL

**Grants and Contracts****Commercial Motor Vehicle Driver Shortage/Retention Research and Solutions**

Michigan Department of State Police

Sponsor: The Michigan Office of Highway Safety Planning (OHSP)

Role on Project: Co-Principal Investigator – Collaboration with Western Michigan University

Project Duration: 11/2021– 11/2022

(\$106,698)

**Residential Construction Hazards**

Susan Harwood Training Grant Program

Sponsor: Occupational Safety and Health Administration (OSHA)

Role on Project: Co-Principal Investigator – Collaboration with Michigan Tech. University (MTU)

Project Duration: 9/2021– 9/2022

(\$75,000)

**Construction Work Zones Training for Construction Firms and Public Service Departments**

Consultation Education and Training Grant Program

Sponsor: Michigan Occupational Safety and Health Administration (MIOSHA)

Role on Project: Principal investigator (PI)

Project Duration: 9/2021– 9/2022

(\$47,000)

**Satisfying the Need for a Systematic Incident Investigation Learning Program**

Sponsor: Thomas Glavinich ELECTRI International 2021 Early Career Award

Role on Project: Principal investigator (PI)

Project Duration: 8/2021– 7/2022

(\$12,500)

**COVID-19 Best Practices Training for Construction Firms**

Consultation Education and Training Grant Program

Sponsor: Michigan Occupational Safety and Health Administration (MIOSHA)

Role on Project: Principal investigator (PI)

Project Duration: 9/2020– 9/2021

(\$24,980)

**Wind Tower Construction and Maintenance Hazards**

Susan Harwood Training Grant Program

Sponsor: Occupational Safety and Health Administration (OSHA)



Role on Project: Co-Principal Investigator

Project Duration: 9/2019– 9/2020

(\$75,000)

### **Silica Protection in The Construction Industry**

Susan Harwood Training Grant Program

Sponsor: Occupational Safety and Health Administration (OSHA)

Role on Project: Principal investigator (PI)

Project Duration: 9/2018– 9/2019

(\$75,000)

### **A Pilot Training and Evaluation to Improve Roofers' Safety Using Virtual Reality (VR)**

Sponsor: Job-site Safety Institute.

Role on Project: Principal Investigator (PI)

Project Duration: 1– 10/2019

(\$45,271)

### **Pilot-test: The Spanish S-CATSC with Hispanic Construction Contractors and Workers**

Sponsor: Small Study Program, The Center for Construction Research and Training (CPWR)

Role on Project: Co-PI with Dr. Luz S. Marin (PI, Indiana University of Pennsylvania)

Project Duration: 6 - 9/2018.

(\$39,316)

### **Analyzing North Carolina 811 Data Using Quantitative Methods**

Sponsor: North Carolina Call before Dig

Role on Project: Principal Investigator

Project Duration: 3-12/2018

(\$13,089.50)

### **Internal Grants**

#### **The LTU's College of Engineering Research Seed Grant Program – 2020**

Study Title: Satisfying the Need for Diversity Training for Hispanic Construction Workers and their Supervisors.

(\$5,000)

#### **Grant Writer Travel Award (GWTA) – 2018**

Western Carolina University's Office of Research Administration. Grant-funded the attendance of National Institutes of Health (NIH) seminar for new investigators in Washington D.C., May 2018. (\$1500)

#### **The Chancellor's Travel Fund – 2018 & 2019**

Western Carolina University's Chancellor travel fund to the Construction Research Congress in New Orleans, Louisiana.  
(\$1,200)

**Graduate Student Travel Grant – 2016**

Western Michigan University, Graduate College.  
(\$1200)

**Workshops/Short Courses****Improving the Quality of Construction Projects: Total Quality Management Approach**

The American University of Kurdistan, Duhok, Iraq (June 21-22, 2021)

**OSHA 30-Hour and 10-Hour Construction Industry Courses**

Designed for construction workers, superintendents, site engineers, safety professionals, construction managers, plant engineers, and any other personnel who are responsible for workplace safety. Training includes topics such as OSHA standards, OSHA recordkeeping, excavation hazards, scaffolding hazards, confined space entry, personal protective equipment, and so forth.

Western Carolina University, Cullowhee, NC (February 2019)

Western Carolina University, Cullowhee, NC (July 2018)

Western Carolina University, Asheville, NC (March 2018)

Wake Tech Community College, Raleigh, NC (April 2014)

**Arc Flash Awareness**

The ARC Flash Awareness Training aims to keep workers safe while working on or around electrically energized equipment. The course is structured to help companies fulfill requirements outlined in NFPA 70E – 2018 edition "Standard for Electrical Safety in the Workplace."

Western Carolina University, Asheville, NC (April 2019)

Western Carolina University, Asheville, NC (July 2018)

**Construction Project Management Training**

Training consists of the following subjects: project planning and scheduling, follow-up and control techniques, cost control, and the administration of construction contracts.

Wake Tech Community College, Raleigh, NC (May 2014)

**University Services****College**

- Doctoral Governance Committee – College of Engineering, LTU, 2023– Present
- Dean's Faculty Advisory Committee – College of Engineering and Technology, WCU, 2017-2018
  - Chair of Distinguished Research and Scholarly Engagement Award

- Committee Member, Collegial Review Document Committee, WCU, 2017- 2019
- Committee Member, Curriculum Committee, WCU, 2017- 2019
- Committee Member, Assessment Committee, WCU, 2017- 2019

**Institutional**

- Committee member, Assessment Committee, LTU, 2019 – Present
- Committee Member, Academic Affairs Division, WCU, 2017 – 2018
- Committee Member, Research and Scholarship Celebration (RASC) committee, WCU, 2017 – 2018
- Committee Member, Professional Development Grant Committee, WCU, 2017 – 2018
- Committee Member, Academic Integrity Committee (AIC), WMU, 2014 – 2017