



Exponent®
Engineering & Scientific Consulting

Zohreh Soltani, Ph.D., P.E.

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Professional Profile

Dr. Soltani focuses on helping her clients to resolve complex construction disputes. She specializes in delay and productivity analysis, damage calculations, and litigation support.

Dr. Soltani has over 10 years of experience in Civil Engineering/Construction Engineering and Management. Dr. Soltani is experienced in preparing 4D models to combine the construction schedule with the design data, as well as creating 3D Forensic Information Models (FIM). These models serve as the database and the presentation device to communicate the failure mechanism in a real-time manner or to demonstrate construction schedule impacts and constructability issues.

Dr. Soltani has mastering skills in Python, SQL, data visualization, hypothesis testing, and machine learning and has provided a various type of project management services including scheduling, cost estimate, project control, subcontract/contract negotiation, and change and risk management for heavy civil contractors, design-build joint ventures and engineering firms in different stages of the project lifecycle from initiation to close-out. Dr. Soltani has worked in different types of projects such as highways, power plants, residential and commercial buildings, sewer collecting networks, electric transmission lines, and onshore oil and gas facilities.

Academic Credentials & Professional Honors

Ph.D., Civil Engineering, Texas A&M University, 2018

M.S., Construction Management, Azad University (Sci and Res Branch), Tehran, 2008

B.S., Civil Engineering, Amirkabir University of Technology, Iran, 2004

Licenses and Certifications

Project Management Professional (PMP)

Academic Appointments

Research Assistant, Zachry Department of Civil Engineering, Texas A&M University, 2016-2018

Lecturer, Zachry Department of Civil Engineering, Texas A&M University, 2014-2015

Coordinator, Construction Creative Research Lab with focus on performing the user studies to investigate the effectiveness of modern visualization technologies such as BIM and VR in training, communication, and safety enhancement, Texas A&M University, 2016-2018

Professional Affiliations

Association for the Advancement of Cos Engineering (AACE)

Dispute Resolution Board Foundation (DRBF)

Construction Management Association of America (CMAA)

American Society of Civil Engineers (ASCE)

Project Management Institute (PMI)

Languages

Persian

Publications

Soltani Z. Investigating the persuasiveness of Forensic Information Models (BIM-based storytelling models) for jurors in construction disputes, Ph.D. Dissertation, Texas A&M University, 2018.

Soltani Z, Hosseinian S. Investigating the Effect of Refinancing on Financial Behavior of Energy Efficiency Projects. International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering 2015; 9(10), 3582 - 3595.

Presentation

Soltani Z, Anderson S & Kang J. Challenges of Using BIM in Construction Dispute Resolution Process, 53rd ASC Annual International Conference, Seattle, WA, 2017.

Project Experience

Dispute Resolution Projects

Performed data quality control and assisted with presenting the analysis results for a jury-based trial in a claim case on the construction of 32 bridges on behalf of the engineering firm in California, USA

Performed the change orders review and cost audit in a high-rise building project for an insurance company in Northern California, USA

Analyzed the impact of adverse weather on a pipeline project schedule on behalf of the owner and calculated the delay damages, West Virginia, USA

Analyzed the impact of safety issues on a pipeline project schedule on behalf of the owner and calculated the delay damages for a jury-based trial, West Virginia, USA

Analyzed the delays occurred in a Light Rail Transit project using the as-built versus as-planned technique on behalf of the trains manufacturing subcontractor for an arbitration, North America

Participated in the assessment of the delays in the construction of a four-story residential building on behalf of the owner for a mediation, USA

Project Management

Managed construction of transmission lines for Electric Generation Interconnect projects

Analyzed and prepared monthly progress of engineering and estimating teams for various Electric Transmission Line projects

Assisted the ownership team in reviewing the change orders and overseeing the change execution progress for a new sports arena in Northern California, USA

Implemented the risk management plan in the construction of a 60-million-dollar road and facility project in Africa

Developed and implemented the cost and risk management plan in a 500-million-dollar mass housing project in South America

Monitored the progress and measured the project performance using Earned Value Management technique (EVM) in a 170-million-dollar cultural center project including movie theaters, the national library, permanent exhibitions, and an artificial lake in Tehran, Iran

Scheduled and monitored the progress of several tunneling projects in the construction of highways, subways, and sewer collecting networks in several major cities in Iran

Scheduled, estimated, supervised the subcontracts, and monitored the progress of several pilling projects in the construction of power plants and construction of quay walls and skidways as part of the Oil and Gas Squares development plan.

Construction observation in bridge reconstruction, widening of Jane Addams Memorial Tollway (I-90) and construction of retaining walls and noise walls, Illinois, USA