

«Curriculum Vitae»

S. M. Reza Alavipour, PhD, PMP, CMIT

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Summary

A researcher, instructor, and construction and project management consultant with the cornerstone of Civil Engineering and problem solving skills who received a PhD from Illinois Tech (IIT) University in the United States with the highest GPA (4 out of 4). Top-performing and strategic-thinking professional with over many years of professional experience in the industry, and many years of academic experience in teaching and researching about different areas of Construction Engineering and Project Management resulting in many publications in international journals and conferences (published 7 journal papers and presented/published 4 conference papers). Have a PMP certification from PMI, and CMIT and CM Level 3 certifications from CMAA. Have extensive expertise in many areas of construction and project management including: (1) Business Analytics and Competitive Advantage Modeling, (2) System Analysis and Optimization Modeling, (3) Economic Analysis and Feasibility Study, (4) Cost Accounting and Financial Management, (5) Contract Administration and Legal Issues, (5) Decision Management Using Data Analysis, (6) Lean Methods, (7) Program Management and Implementation of PMO. To see more about my expertise, please see the rest of the CV.

Education and Qualifications

- PhD Construction Engineering and Management, GPA=4.0 out of 4.0** Graduated: August 2017
Illinois Institute of Technology Chicago, IL/USA
Relevant Courses: Business Analytics and Competitive Advantage Modeling, Construction Contract Administration, Construction Planning and Scheduling, Construction Methods and Cost Estimating, Legal Issues in Construction, Economic Decision Analysis, System Analysis in Construction, Lean Construction and Control, Construction Equipment Management
Paper: Published five journal papers and presented/published two conference papers
Dissertation: Project Scheduling Using Optimized Financing
Awards: Recognized as a **Iran's Elite National Talent** by Iran's National Elites Foundation
- MS Civil Engineering-Geotechnical Engineering** Graduated: March 2013
University of Guilan Rasht/Iran
Papers: Published two journal papers and presented/published two conference papers
Awards: Selected as the Top researcher in 2011
- BS Civil Engineering** Graduated: September 2010
Ferdowsi University of Mashhad Mashhad/Iran

International Management and Language Certifications

1. **PMP** from the Project Management Institute (PMI) in USA, 2017
 2. **CM Level 3** from the Construction Management Association of America (CMAA), 2016
 3. **CMIT** from the Construction Management Association of America (CMAA), 2016
 4. **TOEFL** from the ETS Institute, 2013
 5. **GRE** from the ETS Institute, 2012
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Professional Certificates

1. **Economics Course**, 16 hours, Aryana Industrial & Research Group, 2013
2. **Feasibility Study Workshop**, 24 hours, Aryana Industrial & Research Group, 2012
3. **Human Resource Management**, 8 hours, Aryana Industrial & Research Group, 2012
4. **Lessons Learned Management Workshop**, 8 hours, Aryana Industrial & Research Group, 2012
5. **WBS Creation in Projects**, 8 hours, Aryana Industrial & Research Group, 2012
6. **Risk Management in EPC Projects**, 8 hours, Aryana Industrial & Research Group, 2012
7. **Project Management Office Concept (PMO)**, 8 hours, Aryana Industrial & Research Group, 2012
8. **Appraising of Investment Opportunities**, 8 hours, Aryana Industrial & Research Group, 2012
9. **COMFAR111 Workshop**, 24 hours, Aryana Industrial & Research Group, 2012
10. **Project Management Principles using PMBOK**, 30 hours, Civil house R&D institute, 2011
11. **Project Management using MSP Software**, 30 hours, Civil house R&D institute, 2011
12. **Concrete Design**, 30 hours, Civil house R&D institute, 2010
13. **Building Calculations using ETABS&SAFE software**, 50 hours, Civil house R&D institute, 2009

Research and Consulting Expertise

- System Analysis and Optimization in terms of Scheduling, Resource Allocation, Time-Cost Trade-off, Financing, Warehouse Planning, Transportation, Assignments and Assignee, Queuing of Equipment
- Economic Decision Analysis for: (1) Investment, (2) Financing, (3) Portfolio Management, (4) Warehouse, (5) Transportation, (6) Resources
- Feasibility Study in terms of Market Research, Technical Study, and Financial Analysis
- Construction Cost Estimating
- Construction Cost Accounting, and Financial and Budget Management
- Construction Contract Document Preparation and best selection of Project Delivery System (DBB, DB/EPC, Multiple Primes, CM, IPD, BOT)
- Construction Claim Management and Delay Analysis using As-Planned vs. As-Built, Time Impact Analysis, Windows Analysis, Impacted As-Planned, Collapsed As-Planned
- Decision Management using Data Analysis and Decision Making Methods (Decision Tree, Excel Precision Tree, and Excel Solver)
- Lean Methods (VSM, 5S, A3 Reports, PDCA, CBA, Leveling Workload, Waste Reduction Method by Gemba Walk, etc.)
- Construction Equipment Planning
- Program Management in terms of Budgetary Planning, Execution, and Reporting Function
- PMO Planning and Implementation
- Project Planning based on PMBOK
- Risk Management
- Quality Management

Software Skills

- Primavera, MS Project, Prism (graphpad.com), MATLAB, Microsoft Office (Excel, Word, PowerPoint), Excel Solver, Excel Precision Tree, On Screen Takeoff, RSMMeans Online

Academic and Professional Experience

December 2017-Present **Researcher, Instructor, Construction** **Self-Employed** **Tehran/Iran**
and Project Management Consultant

- The work is classified into three categories, namely: (1) Researching, (2) Training, and (3) Consulting. The services are provided for Project-Based Organizations (PBOs) or individuals who deal with projects or project concepts. The services help Owners, Architects/Designers, General Contractors, Specialty Contractors, Industrial and Corporate Companies, and other Project-Based Organizations (PBOs): (1) to optimize their procedures to increase productivity, decrease cost, and achieve higher profit; (2) to provide optimum solutions based on their needs. Research and training services are also provided for Educators, Researchers, Project Managers, Construction Managers, and those who deal with projects and project concepts. The services help these individuals to gain required knowledge to promote themselves in their professions and solve their problems on their own.

December 2017-Present **Advisor to CEO** **Paran Beton LLC** **Tehran/Iran**

- Advising on economic decision, cost control, and financial management.
- Advising on how to improve and optimize the procedures to reduce costs.
- Advising on how to utilize revenue growth with investing in the future.
- Advising on new technology and new machinery.

January 2016-August 2017 **Teaching Assistant** **Illinois Tech** **Chicago/USA**

- Teaching Assistant in the courses: (1) Construction Methods and Cost Estimating, (2) Legal Issues in Civil Engineering, and (3) Construction Cost Accounting and Control.

August 2014-November 2017 **Research Assistant** **Illinois Tech** **Chicago/USA**

- Conducted a research about project scheduling optimization by integrating time-cost tradeoff analysis and financing optimization considering cash flow forecast that resulted in proposing 5 different models and many international publications.
- Conducted an investigation of the duties and responsibilities of Construction Managers during the life cycle of a construction project. The study conducted under the direction and supervision of the ASCE Committee on Management Practices in Construction (MPIC). The data were gathered from top 2,200 construction companies ranked by ENR. The data were analyzed by statistical analysis. The paper published by ASCE and the results presented in a conference in the United States in Texas. More papers are also being published in international journals. This project was a joint project supported and funded by the ASCE Construction Institute and the CMAA (Construction Management Association of America).

July 2012-December 2013 **Engineering Program Manager** **Paran Beton LLC** **Tehran/Iran**

- Designed strategic and action plans in terms of production, productivity, quality, and customer-service.
- Analyzed project portfolio management using economic decision analysis to make sure the company selects the profitable project portfolio.
- Prepared financial program by forecasting requirements and annual budget for strategic plans.
- Calculated economic life of all equipment in the company and replaced uneconomical equipment based on economic analysis resulted in saving of \$25,000 in a year.
- Used a method of economic comparison for alternatives of purchasing raw materials to replace uneconomical alternatives with economical ones resulted in saving of \$85,000 in a year.
- Developed cost accounting system to find big portion of costs resulted in saving of \$45,000 in a year by eliminating non-value added activities.
- Prepared documentations and monthly management updates.
- Leded regularly scheduled team meeting to identify trends and determine improvements for the strategic plans.
- Developed the interface management strategy for the company and multiple, concurrent projects.
- Performed problem solving method using A3 report to provide as the lessons learned to the company.
- Designed and executed quality management system (ISO 9001:2008) and 5S.

September 2010-June 2012 **Technical Manager** **Paran Beton LLC** **Tehran/Iran**

- Prepared and reviewed contract's documents and reports (Cost, Time, Quality and Scope Report).
- Planned events and scheduled activities, in addition to budgeting time and cost using MS Project Software.
- Prepared job description for 35 workers; coordinated daily activities; inspected quality and safety in the job site.
- Created documentation and reporting system to update the plans by monitoring actual work (Internal Schedule)
- Analyzed qualitative risks, risk response, and risk control system.

June 2007-September 2007 **Assistant Quality Manager** **Paran Beton LLC** **Tehran/Iran**

June 2006-September 2006

- Assisted the manager to design the process of quality control for the production line.
 - Assisted the manager to design and perform the quality management system (ISO 9001:2008).
 - Inspected the production line for quality check.
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Publications (in English)

- Arditi, D., **Alavipour, S. M. R.**, and the Committee on Management Practices in Construction (ASCE Construction Institute), (2018). “Trends in expectations about duties and responsibilities of construction managers.” *Journal of Construction Engineering and Management*, (ISI Journal Paper (Q1)/Published).
- **Alavipour, S. M. R.** and Arditi, D. (2018). “Maximizing expected contractor profit using an integrated model.” *Engineering, Construction and Architectural Management*, 26(1), 118-138 (ISI Journal Paper (Q1)/published).
- **Alavipour, S. M. R.** and Arditi, D. (2019). “Time-cost tradeoff analysis with minimized project financing cost.” *Automation in Construction*, 98, 110-121 (ISI Journal Paper (Q1)/Published).
- **Alavipour, S. M. R.** and Arditi, D. (2018). “Impact of contractor’s optimized financing cost on project bid price.” *International Journal of Project Management*, 36(5), 808-818 (ISI Journal Paper (Q1)/Published).
- **Alavipour, S. M. R.** and Arditi, D. (2018). “Optimizing financing cost in construction projects with fixed project duration.” *Journal of Construction Engineering and Management*, 144(4), 04018012 (ISI Journal Paper (Q1)/Published).
- Arditi, D. and **Alavipour, S. M. R.** (2018). “Expectations about the duties and responsibilities of construction managers.” *CI Summit, A Conference of the Construction Institute of ASCE*, Fort Worth, Texas, USA, (Conference Paper/ Presented)
- **Alavipour, S. M. R.** and Arditi, D. (2018). “Optimizing financing cost using a line-of-credit and a long-term loan.” *13th International Project Management Conference*, Tehran, Iran, (Conference Paper/Presented and Published).
- **Alavipour, S. M. R.** (2017). *Project scheduling using optimized financing*, Illinois Institute of Technology, Chicago, Illinois, USA, (PhD Dissertation/Published).
- Veiskarami, M., Ghorbani, A., and **Alavipour, M.** (2012). “Development of a constitutive model for rockfills and similar granular materials based on the disturbed state concept.” *Frontiers of Structural and Civil Engineering*, 6(4), 365-378, (ISI Journal Paper (Q1)/Published).
- Veiskarami, M., Ghorbani, A., and **Alavipour, M.** (2012). “Application of the disturbed state concept in evaluation of a developed elasto-plastic constitutive model for rockfills.” *Proceedings of V-th International Geomechanics Conference*, Varna, Bulgaria, pp. 65-74, (Conference Paper/Presented and Published).

Publications (in Farsi)

- Ghorbani, A., Veiskarami, M., and **Alavipour, S. M. R.** (2015). “Investigation of geomechanical properties of coarse aggregates considering stress levels.” *Sharif Journal of Civil Engineering*, 31(2.2), 109-119, (Journal Paper/Published).
- **Alavipour, S. M. R.** (2013). *The effect of shape, type and aggregation distribution on geomechanical properties of granular materials considering stress level*, University of Guilan, Rasht, Iran, (Master Thesis/Published).
- **Alavipour, M.**, Veiskarami, M., and Ghorbani, A. (2011). “The effect of shape, type and aggregation distribution on geomechanical properties of granular materials considering stress level.” *The Congress of Research Week*, University of Guilan, Rasht, Iran, (Conference Paper/Presented).

Reviewed Papers for:

- ASCE Journal of Computing in Civil Engineering
 - KSCE Journal of Civil Engineering
 - Journal of Construction
 - Engineering, Construction and Architectural Management
 - Australian Journal of Civil Engineering
 - International Journal of Advanced Robotics and Automation
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Funded Projects:

- Trends in expectations about the duties and responsibilities of construction managers supported by financial support (\$10,000) of ASCE Committee on Management Practices in Construction (MPIC) and Construction Management Association of America (CMAA).

Honors and Awards:

- Acknowledged as the best researcher during the Congress of Research Week at the University of Guilan for presenting the paper of “the effect of shape, type and aggregation distribution on geomechanical properties of granular materials considering stress level” (2011).
- Qualified in the first round of the National Mathematics Olympiads (2006).

Memberships

- **Member of IPMA** (International Project Management Association) December 2017-Present
- **Member of IEAA** (Iran Educational Administration Association) December 2017-Present
- **Member of PMI** (Project Management Institute) April 2016-Present
- **Member of CMAA** (Construction Management Association of America) September 2014-Present
- **Member of IRCEO** (Iran Construction Engineering Organization) November 2013-Present

References

David Arditi (USA)	Professor of Construction Engineering and Management	arditi@iit.edu
Jamshid Mohammadi (USA)	Professor of Civil and Architectural Engineering	rlemming@iit.edu
Raymond Lemming (USA)	Adjunct Professor of Law, MBA, and Construction Engineering and Management	rlemming@iit.edu
Ricky Cooper (USA)	Associate Professor of Finance	rcooper3@stuart.iit.edu
Mehdi Veiskarami (Iran)	Associate Professor of Civil and Environmental Engineering	mkarami@gmail.com
