

EDUCATION

- | | |
|---|-------------|
| Ph.D. in Construction Engineering and Management | 2014 |
| <i>Texas A&M University, Texas, USA</i> | |
| Dissertation Title: Automated and Optimized Project Scheduling Using BIM; <i>GPA: 4.0</i> | |
| M.Sc. in Construction and Project Management | 2006 |
| <i>University of Tehran, Tehran, Iran</i> | |
| Thesis title: Virtual Management in Construction Projects; <i>GPA: 3.7</i> | |
| B.Sc. in Civil Engineering | 2003 |
| <i>University of Tehran, Tehran, Iran</i> | |

RESEARCH INTERESTS

1. Building Information Model (BIM)
2. Automation in project scheduling
3. IT methods for cost and time reduction
4. Real-time modeling of construction sites
5. Web-based solutions for international project managers
6. Artificial intelligence in project management
7. Virtual team working solutions
8. Construction automation and robotics
9. Decision making systems for project managers
10. System Dynamics

JOURNAL PUBLICATIONS

Published:

7. **Faghihi, V.**; Reinschmidt, K.; and Kang, J. (2016) "Objective-driven and Pareto Front Analysis: Optimizing Time, Cost, and Job-site Movements", *Automation in Construction*, Volume 69, September 2016, Pages 79-88, ISSN 0926-5805, DOI: 10.1016/j.autcon.2016.06.003
6. **Faghihi, V.**; Nejat, A.; Reinschmidt, K.F.; Kang, J. (2015). "Automation in Construction Scheduling: a Review of the Literature", *International Journal of Advanced Manufacturing Technology*, December 2015, 81(9), pp. 1845-1856, doi: 10.1007/s00170-015-7339-0
5. **Faghihi, V.**; Hessami, A.R. and Ford, D.N. (2015). "Sustainability Improvement Program Design using Energy Efficiency and Conservation", *Journal of Cleaner Production*, Vol. 107, 16 November 2015, pp. 400-409, ISSN 0959-6526, doi: 10.1016/j.jclepro.2014.12.040
4. **Faghihi, V.**; Reinschmidt, K.F.; Kang, J. (2014). "Construction Scheduling Using Genetic Algorithm Based on Building Information Model", *Expert Systems With Applications*, 41(16), pp. 7565-7578, doi: 10.1016/j.eswa.2014.05.047
3. Damjanovic, I.; **Faghihi, V.**, Scott, C.; McTigue, E. and Reinschmidt, K. (2013). "Educational Prediction Markets: A Construction Project Management Case Study", *Journal of Professional Issues in Engineering Education and Practice*, 139(2), 134-138, DOI: 10.1061/(ASCE)EI.1943-5541.0000127
2. **Faghihi, V.** and Vahdat, A.T. (2012). "Risk and Diversification in International Construction", *The Business Review, Cambridge*, 20 (2): 95-102.
1. **Faghihi, S.V.** and Vojoudi, M. (2008). "Introduction to virtual management in disaster management", *International Road and Structure Monthly Magazine*, Year 6, No. 53.

Under Review:

2. **Faghihi, V.** and Kang J. (2014). “BIM for Small Projects, a Case Study”, *Journal of the National Institute of Building Sciences*
1. **Faghihi, V.**; Reinschmidt, K.F.; Kang, J. (2014). “Extended Genetic Algorithm for Optimized BIM-based Construction Scheduling”, *Computer-Aided Civil and Infrastructure Engineering*

CONFERENCE PUBLICATIONS

11. **Faghihi, V.** and Kang, J. (2013). “SatraPM, a Customizable Web-based Project Management Software” *The 30th International Symposium on Automation and Robotics in Construction (ISARC 2013)*, IAARC, pp 9-18, August, Montréal, Canada.
10. Lee, J.; **Faghihi, V.** and Kang, J. (2013), “Automatic Generation of Cobie Data from Revit”, *The 30th International Symposium on Automation and Robotics in Construction (ISARC 2013)*, IAARC, pp 653-660, August, Montréal, Canada.
9. Kang, J.; Ganapathi, A.; Lee J. and **Faghihi V.** (2012). “BIM to field: Robotic total station and BIM for quality control” *eWork and eBusiness in Architecture, Engineering and Construction - ECPPM 2012*, July, Reykjavik, Iceland. DOI: 10.1201/b12516-113
8. Kim, A.; **Faghihi, V.**; Hessami, A. and Ford, D. (2012). “Designing Perpetual Sustainability Improvement Programs for Built Infrastructures”, *The 30th International Conference of the System Dynamics Society*, July, St. Gallen, Switzerland.
7. Kang, J.; Ryoo, B. and **Faghihi, V.** (2012). “Five Challenges You Need to Know for Successful BIM Application in Developing Countries”, *Third International Conference on Construction in Development Countries*, July, Bangkok, Thailand.
6. **Faghihi, S.V.** (2009). “Implementation of SatraPM in project-based state organizations (IPDC case study)”, *Proceedings of the 5th International Conference of Project Management*, Aug., Tehran, Iran.
5. **Faghihi, S.V.** (2008). “Optimizing power plant project management processes by using SatraPM”, *4th International Conference of Project Management*, Aug., Tehran, Iran.
4. **Faghihi, S.V.** (2008). “Survey of traditional and virtual management in project procurement management”, *Proceedings of the 2nd Project Procurement System*, Feb., Tehran, Iran.
3. **Faghihi, S.V.** (2007). “Virtual management in construction projects (Survey of applying virtual management in 4th Fath Abad metro terminal)”, *3rd International Conference of Project Management*, Apr., Tehran, Iran.
2. Besharati G., M.H. and **Faghihi, S.V.** (2006). “Implementation of virtual management in Iranian maritime projects”, *Proceedings of the 2nd International Conference of Project Management*, Mar., Tehran, Iran.
1. Vojoudi, M. and **Faghihi, S.V.** (2005). “Traditional and virtual management in disaster management”, *1st International Conference of Disaster Management*, Nov., Tehran, Iran.

UNDER PREPARATION PAPERS

3. **Faghihi, V.**; Reinschmidt, K.F.; Kang, J. (2015?). “Mathematical Framework for Spatial Relationships of the Project 3D Elements”
2. **Faghihi, V.** (2014), “Energy Improvements in Campus Buildings”
1. **Faghihi, V.** and Hessami, A.R. (2015?). “Dynamic Management of Energy Improvement Programs in Campus Buildings”

OTHER PUBS. & PRES.

10. **Faghihi, V.** (2014). “Automatic Construction Scheduling Inspired by Fetal Growth”, *Student Research Week, Texas A&M University*
9. **Faghihi, V.** (2014). “Automated and Optimized Project Scheduling Using BIM”, *Amirkabir Sustainable Transportation Infrastructure Center (ASSET Seminar Series), Amirkabir University of Technology, Tehran, Iran*
8. **Faghihi, V.** (2013). “BIM-based Construction Project Scheduling Using Genetic Algorithm”, *Seminar in Construction Engineering and Management Group, Sharif University of Technology, Tehran, Iran*
7. **Faghihi, V.** (2013). “BIM-based Construction Project Scheduling Using Genetic Algorithm”, *Construction Engineering Management Program, Amirkabir University of Technology, Tehran, Iran*
6. **Faghihi, V.** (2013). “BIM-based Automatic Construction Scheduling”, *BIM College Seminar, College of Architecture, Texas A&M University*
5. **Faghihi, V.** (2013). “Automatic Construction Scheduling Inspired by Fetal Growth”, *Student Research Week, Texas A&M University*
4. **Faghihi, V.** and Kang, J. (2012). “Benefits of Using BIM for Small Projects”, *BIM: Reality Check and Future Agenda, 8-9 November, Texas, USA*
3. **Faghihi, V.** and Kang, J., (2012). “BIM Efficiency in Projects Smaller than \$5M”, *ASCE Construction Research Congress 2012 PhD Student Poster Session Proceedings, pp. 26, 21-23 May, Indiana, USA*
2. Sadegh-azar, M., (2007). “Equipping, Arranging and Economy of Construction Sites”, Tarhe Jame’ Institute, (interviewing managers, collecting and translating unprocessed data)
1. Rezaee A., (2006). “Basis of Workability”, Tarhe Jame’ Institute, (final revisions)

RESEARCH EXPERIENCE

| | |
|---|------------------|
| Postdoc Research Associate | 2016 |
| <i>Zachry Department of Civil Engineering, Texas A&M University</i> | |
| Secretary of “BIM: Reality Check and Future Agenda” Conference | 2012-2013 |
| <i>Texas BIM Alliance and Department of Construction Science, Texas A&M University</i> | |
| Secretary of “Contractors BIM Experience Evaluation” Committee | 2012-2013 |
| <i>Texas BIM Alliance and Department of Construction Science, Texas A&M University</i> | |
| Building Information Model for Dallas Library Project (City of Dallas) | 2011-2013 |
| <i>Department of Construction Science, Texas A&M University</i> | |
| Building Information Model and Robotic Total Station (Skanska USA Building) | 2011 |
| <i>Department of Construction Science, Texas A&M University</i> | |
| Evaluating TxDOT Evaluation Tools | 2011 |
| <i>Texas Transportation Institute (TTI) & Zachry Dept. of Civil Eng., Texas A&M Univ.</i> | |
| Prediction Market for Construction Engineering and Management | 2010-2011 |
| <i>The Zachry Department of Civil Engineering, Texas A&M University</i> | |

TEACHING EXPERIENCE

| | |
|--|-------------------|
| Project Management for Engineers (Texas A&M University) | 2016-pres. |
| Civil Engineering Project Management (Texas A&M University) | 2016 |
| Construction Modeling Methods (Amirkabir University of Technology) | 2015-pres. |
| Advanced Project Planning, Scheduling and Control (Amirkabir University of Technology) | 2014 |
| Advanced Construction Visualization (Texas A&M - Guest Lecturer) | 2014 |
| Project Risk Management (Texas A&M - GTA) | 2012-2013 |
| Methods Improvement for Construction Managers (Texas A&M - GTA) | 2012-2013 |
| Project Management for Engineers (Texas A&M - GTA) | 2011-2013 |

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| Construction Graphics (<i>Texas A&M - Guest Lecturer</i>) | 2012 |
| PHP Programming Language (<i>Amir-kabir Institute</i>) | 2005 |
| General English Course (<i>Shokouh's English Language Institute</i>) | 2002 |

AWARDS AND HONORS

| | |
|--|------------------|
| Second Place among Graduate Research Presenters, Eng. and Arch. | 2014 |
| Chevron Project Management Fellowship (<i>Chevron Corporate</i>) | 2011-2014 |
| Peter C. Forster Fellowship in Civil Engineering (<i>Texas A&M University</i>) | 2010-2014 |
| Williams Brothers Construction Fellowship in Civil Engineering | 2012-2013 |
| Competitive Graduate Scholarship (<i>Texas A&M University</i>) | 2010-2013 |
| Superior Researcher Among 500 Employees (<i>IPDC</i>) | 2010 |
| Entitled Special Expert (<i>IPDC</i>) | 2007 |
| Entitled Exceptionally Talented Graduate Student (<i>Iranian Cabinet Award</i>) | 2004 |
| Ranked 2nd Among 2200 Competitors for Project Management M.Sc. (<i>Iranian National Entrance Examination</i>) | 2003 |

BRIEF SOFTWARE SKILLS

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| BIM | <i>Autodesk NavisWorks, Autodesk Revit Architecture, Structure & MEP, Autodesk Revit Parametric Modeling, Autodesk Buzzsaw, SketchUp</i> |
| Technical | <i>Primavera Project Planner, Primavera 6, MS Project, Primavera Risk Analysis (Pertmaster), SAP, SPSS, Autodesk AutoCAD</i> |
| Web programming languages | <i>PHP, MySQL, HTML, JavaScript, XML, CSS</i> |
| Prog. languages | <i>QBasic, Visual Basic 6.0, C++, Fortran, C#, ActionScript</i> |
| Graphics | <i>Photoshop, Macromedia Flash, 3DSMax</i> |
| General | <i>MS Office, MS FrontPage, MS SharePoint Design, MS Visio</i> |

WORK EXPERIENCE

FACULTY MEMBER

| | |
|---|-------------------|
| Lecturer <i>Texas A&M University</i> | 2016-pres. |
| Adjunct Faculty Member <i>Amirkabir University of Technology</i> | 2015-pres. |

PROJECT MANAGEMENT/PLANNING

| | |
|--|-------------------|
| Project Manager <i>Milestone ME Co. (Scipers)</i> | 2015-pres. |
| IT Project Manager <i>Riskopedia Analytics LLC</i> | 2014-pres. |
| IT Manager <i>Boom Sazeh e-Publication (CIVILICA®)</i> | 2005-2015 |
| Planning Expert <i>Power Plant Development Company (IPDC)</i> | 2006-2010 |

CONSULTING

| | |
|--|------------------|
| Professional Consultant for Virtual Workshop (<i>IUST</i>) | 2009-2010 |
| Professional Consultant for Web-based Banking (<i>IUST</i>) | 2008-2009 |

WEB APPLICATION DEVELOPMENT

| | |
|---|-------------------|
| Implementing Prediction Market for Construction Eng. and Mgmt. | 2011-2014 |
| Implementing Wiki-based Website for Risk Management | 2010-2011 |
| Developer of the Virtual Project Management System | 2005-pres. |
| Developer of Science Content Management Package | 2005-pres. |
| Developer of Conference Electronic Management Package | 2005-pres. |
| Developer of Company Product Management Package | 2007-pres. |