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ACADEMIC APPOINTMENTS

University of Connecticut, Storrs, CT

Assistant Professor, *Department of Civil and Environmental Engineering* 09/2011-Present

Member, *Institute of Materials Science* 04/2016-Present

Teaching structural and bridge design related courses. Performing research on novel structural materials and technologies to enhance the robustness and sustainability of critical infrastructure. Conducting engineering education research on the creative potential of engineering students with ADHD.

University of Nevada, Reno, NV

Research Scientist, *Department of Civil and Environmental Engineering* 12/2009-08/2011

Led the design of a large-scale test-bed structure for NSF NEESR-Grand Challenge: Simulation of the Seismic Performance of Nonstructural Systems. Studied the seismic performance of nonstructural systems as part of NSF NEESR-GC, NEES TIPS, and E-Defense experiments on a full-scale, five-story steel frame. Assisted in the design of the largest shake table test performed on a bridge model under a FHWA/Caltrans funded project: Seismic Effects on Multi-Span Bridges with High Degrees of Horizontal Curvature.

EDUCATION

University of Nevada, Reno, NV

PhD in Civil Engineering, *Department of Civil and Environmental Engineering* 01/2007-12/2009

Advisor: Professor M. "Saiid" Saiidi

Dissertation Title: "Seismic Design of Pipe-Pin Connections in Concrete Bridges"

Sharif University of Technology, Tehran, Iran

PhD Student of Structural Engineering, *Department of Civil Engineering* 02/2005-12/2006

Sharif University of Technology, Tehran, Iran

MSc in Earthquake Engineering, *Department of Civil Engineering* 09/2002-11/2004

Thesis: "Effect of Beam-to-Column Strength Ratio on Effectiveness of FRP Wrapping of Columns"

K. N. Toosi University of Technology, Tehran, Iran

BSc in Civil Engineering (with honors), *Department of Civil Engineering* 09/1998-09/2002

TEACHING EXPERIENCE

Courses Taught

<i>University of Connecticut, Storrs, CT</i>	Total # of Students	Years
CE 5620. Advanced Steel Structures	68	2012, 2015
CE 5380. Bridge Structures	70	2013, 2015
CE 4999. Undergraduate Independent Study	18	2012, 2013, 2014, 2015
CE 4900W. Civil Engineering Projects I	24	2013, 2014, 2015
CE 4920W. Civil Engineering Projects II	24	2014, 2015, 2016
CE 3630. Design of Steel Structures	362	2012, 2013, 2014, 2015, 2016
CE 3520. Civil Engineering Materials	63	2012
CE 2110. Applied Mechanics I (Statics)	65	2016
 <i>Sharif University of Technology, Tehran, Iran</i>		2006
Civil 20101. Solid Mechanics Laboratory		
Civil 20208. Construction Materials, Concrete Technology and Laboratory		

Evaluations

		Me	Department	University
Mean Score (Old System)	2011 – 2012	8.9/10	8.5/10	8.9/10
Mean Score (New System)	2012 – 2016	4.5/5	4.3/5	4.5/5

FUNDED RESEARCH PROJECTS

National Science Foundation

- “CAREER: Promoting Engineering Innovation Through Increased Neurodiversity by Encouraging the Participation of Students with ADHD,” January 1, 2017 to December 30, 2021, **\$519,970 (PI)**
- “PFI: AIR-TT: A Hybrid Metal/Glass Composite System for Multihazard Resilient Bridge Columns,” September 1, 2015 to February 28, 2017, **\$200,000 (PI)**
- “REU Site: Research Experience in Cyber and Civil Infrastructure Security for Students with ADHD: Fostering Innovation,” March 1, 2015 to September 30, 2018, **\$344,099+\$20,000 (RET Suppl.) (PI)**
- “Research Initiation Grant: Nurturing the Creativity of Students with ADHD in Engineering Disciplines,” September 1, 2014 to September 30, 2016, **\$149,997 (PI)**
- “Development of Seismic Protective Technologies for Ceiling-Piping-Partition Nonstructural Systems,” Sub award from the University of Nevada, Reno, January 2012 to August 2012, **\$26,700 (PI)**

Connecticut Department of Transportation (ConnDOT)

- Repair of Steel Beam/Girder Ends with Ultra High-Strength Concrete (Phase II), Sub-award from the Federal Highway Administration, March 1, 2015-June 30, 2018, **\$676,690 (PI)**
- Repair of Steel Beam/Girder Ends with Ultra High-Strength Concrete, July 2013 to December 2014, **\$131,771 (PI)**

Development of a Simplified Design Method and Reinforcement Detail for the Acute Corner of Skewed Bridge Decks, August 2016 to August 2017, **\$49,995 (PI)**

California Department of Transportation (Caltrans)

Development of a Rational Design Method for Shear Keys at In-Span Hinges in Multi-Frame Highway Bridges, July 2012 to June 2014, **\$105,542 (PI)**

Seismic Design of Column-Footing Connections with Pipe-Pin Hinges for Accelerated Bridge Construction, July 2011 to June 2013, **\$187,883 (Co-PI, PI: Prof. Saiid Saiidi)**

UConn Foundation

Development of a Novel Self-Centering Restraint System for Resilient Seismic Design of Mechanical Equipment, January 2012 to December 2012, **\$25,062 (PI)**

Industry Funding

Development of Smart PTFE for Bridge Bearings, Connecticut Center for Advanced Technology, Inc. and Enflo Corporation, March 1, 2015 to August 17, 2015, **\$71,732 (PI)**

Travel Awards

2016 Pan NSF-REU (Planning Workshop), April 28-30, 2016, Washington, DC.

Participated and presented in DO-IT workshop of AccessEngineering Capacity Building Institute, April 5-8, 2016, Seattle, WA.

2014 Educator Workshop, American Institute of Steel Construction, July 30-31, 2014, Chicago, IL.

PATENTS AND INVENTIONS

Underlined names are advisees. Names in italics are former advisors.

1. **Zaghi, Arash Esmaili**, and Alicia Anisita Echevarria. "Reinforced Structural Column System" U.S. Patent Application No. 14/770,480.
2. **Zaghi, Arash Esmaili**, and Kevin, McMullen. "Force-Sensing Structural Bearing Assembly" Provisional Patent Application in Process, UCONN16-028.

SCHOLARLY CONTRIBUTIONS

Underlined names are advisees. Italic name is former advisor.

Invited Presentations and Workshops

1. National Academy of Engineering (NAE) Workshop on the Engagement of Engineering Societies in Undergraduate Engineering Education, January 26-27, 2017, Washington, DC.
2. "Design of a Test-Bed Structure for Shake Table Testing of Nonstructural Systems", NHERI@UCSD User's Workshop for the Large High Performance Outdoor Shake Table (LHPOST), December 12-13, 2016, San Diego, CA.
3. "Promoting Innovation by Encouraging the Participation of Students with ADHD in Engineering" National Academy of Engineering (NAE), 2016 Frontiers of Engineering Education, September 25-28, Irvine, CA.

4. “Steel Bridge Beam Rehabilitation Using Ultra-High Performance Concrete (UHPC),” The First International Symposium of UHPC, July 18-20, 2016, Des Moines, IA.
5. “Research Opportunity in Cyber and Civil Infrastructure Security for Students with ADHD: Developing the Next Generation of Creative Engineers,” 2016 Pan NSF-REU, April 28, 2016, Washington, DC.
6. “Creative Potential and Challenges of Students with ADHD in Engineering Programs,” AccessEngineering Capacity Building Institute, April 8, 2016, Seattle, WA.
7. “Design of Concrete-Filled FRP Tube Bridge Columns for Multihazard Resilience” Session 406: Multihazard Assessment and Design of Bridges, 93rd Annual Meeting of Transportation Research Board, Jan 14, 2014, Washington, DC.
8. “Next-Generation Multi-Hazard Resilient Bridge Columns for Accelerated Bridge Construction,” Accelerated Bridge Construction Workshop, Connecticut Society of Civil Engineers Section of ASCE, Oct. 23, 2013, Berlin, CT.
9. “Short Course on Principals of Seismic Design,” Live Seminars, HalfMoon Education, Nov. 29, 2012, Waterbury, CT.

Published Peer-Reviewed Journal Articles

1. O’Brien, C. N., McBride, A., Zaghi, A. E., Burke, K. A., and Hill, A. (2017) “Mechanical Behavior of Stainless Steel Fiber-Reinforced Composites Exposed to Accelerated Corrosion,” *Materials*, 10 (7), 772. [doi:10.3390/ma10070772](https://doi.org/10.3390/ma10070772)
2. McBride, A. K., Turek, S. L., Zaghi, A. E., Burke, K. A., (2017) “Mechanical Behavior of Hybrid Glass/Steel Fiber Reinforced Epoxy Composites” *Polymers* 9, 151. [doi:10.3390/polym9040151](https://doi.org/10.3390/polym9040151)
3. Bruneau, M., Padgett, J. E., Barbato, M., **Zaghi, A. E.**, Li, Y., Mitrani-Reiser, J. (2017) “State-of-the-Art of Multihazard Design” *Journal of Structural Engineering*, 140 (10), ASCE, 03117002. [doi: 10.1061/\(ASCE\)ST.1943-541X.0001893](https://doi.org/10.1061/(ASCE)ST.1943-541X.0001893)
4. Zmetra, K., McMullen, K., Zaghi A. E., Wille, K (2017) “Experimental Study of UHPC Repair for Corrosion Damaged Steel Girder Ends” *Journal of Bridge Engineering*, ASCE, Vol. 22, No. 8. [doi:10.1061/\(ASCE\)BE.1943-5592.0001067](https://doi.org/10.1061/(ASCE)BE.1943-5592.0001067)
5. Zmetra, K., Hain, A., Zaghi, A. E., and Wille, K. (2017) “Finite Element Analysis and Experimental Comparison for Repair of Corrosion Damaged Steel Girder Ends Using Ultra-High Performance Concrete Encasement” 96th *Transportation Research Record: Compendium of Papers* (No. 17-05019).
6. **Zaghi, A. E.**, Reis, S., Renzulli, J., Kaufman, J. C. (2016) “Exploring the Creativity Potential of ADHD Students in Engineering Programs” *Gifted and Talented International*, (in press)
7. **Zaghi, A. E.**, Padgett, J. E.; Bruneau, B., Barbato, B., Li, Y., Mitrani-Reiser, J., McBride, A. (2016) “Forum Paper: Establishing Common Nomenclature, Characterizing the Problem, and Identifying Future Opportunities in Multi-Hazard Design” *Journal of Structural Engineering*, ASCE, H2516001. [doi:10.1061/\(ASCE\)ST.1943-541X.0001586](https://doi.org/10.1061/(ASCE)ST.1943-541X.0001586)
8. Asgarian, B., Dadras Eslamlou, S., **Zaghi, A. E.**, Mehr, M. (2016) “Progressive Collapse Analysis of Power Transmission Towers”, *Journal of Constructional Steel Research*, Volume 123, August 2016, Pages 31–40. [doi:10.1016/j.jcsr.2016.04.021](https://doi.org/10.1016/j.jcsr.2016.04.021)

9. Soroushian, S., Maragakis, E. "M.", **Zaghi, A.E.**, Rahmanishamsi, E., Itani, A.M., Pekcan, G. (2016) "Response of a 2-Story Test-Bed Structure for the Seismic Evaluation of Nonstructural Systems" *Earthquake Engineering and Engineering Vibration*, 15 (1), pp.19. [doi:10.1007/s11803-016-0302-8](https://doi.org/10.1007/s11803-016-0302-8)
10. Mehr, M., and **Zaghi, A. E.** (2016) "Seismic Response of Multi-Frame Bridges" *Bulletin of Earthquake Engineering* 14.4, 1219-1243. [doi:10.1007/s10518-016-9882-y](https://doi.org/10.1007/s10518-016-9882-y)
11. **Zaghi, A.**, Soroushian, S., Echevarria Heiser, A., Maragakis, M., and Bagtzoglou, A. (2016) "Development and Validation of a Numerical Model for Suspended-Ceiling Systems with Acoustic Tiles" *Journal of Architectural Engineering*, 04016008. [doi:10.1061/\(ASCE\)AE.1943-5568.0000213](https://doi.org/10.1061/(ASCE)AE.1943-5568.0000213)
12. Zmetra, K., Mehr, M., **Zaghi, A. E.**, (2016) "Performance of Pipe Extender/Shear Key at In-span Hinges of Multiframe Bridges" *Transportation Research Record: Journal of the Transportation Research Board*, No. 2592. [doi:10.3141/2592-15](https://doi.org/10.3141/2592-15)
13. Echevarria, A., **Zaghi, A. E.**, Chiarito, V., Christenson, R., Woodson, S. (2015) "Experimental Comparison of the Performance and Residual Capacity of CFFT and RC Bridge Columns Subjected to Blasts," *Journal of Bridge Engineering*, ASCE, Published Online 15 May 2015. [doi:10.1061/\(ASCE\)BE.1943-5592.0000762](https://doi.org/10.1061/(ASCE)BE.1943-5592.0000762)
14. Echevarria, A., **Zaghi, A. E.**, Christenson, R., Plank, R. (2015). Residual Axial Capacity Comparison of CFFT and RC Bridge Columns after Fire. *Polymers*, 7(5), 876-895. [doi:10.3390/polym7050876](https://doi.org/10.3390/polym7050876)
15. Soroushian, S., **Zaghi, A. E.**, Maragakis, M., Echevarria, A., Tian, Y., & Filiatrault, A. (2015) Analytical Seismic Fragility Analyses of Fire Sprinkler Piping Systems with Threaded Joints" *Earthquake Spectra*, 31(2), 1125-1155. [doi:10.1193/083112EQS277M](https://doi.org/10.1193/083112EQS277M).
16. Echevarria, A., **Zaghi, A.**, Christenson, R., and Accorsi, M. (2015) "CFFT Bridge Columns for Multihazard Resilience." *Journal of Structural Engineering*, C4015002. [doi:10.1061/\(ASCE\)ST.1943-541X.0001292](https://doi.org/10.1061/(ASCE)ST.1943-541X.0001292)
17. **Zaghi, A. E.**, Soroushian, S., Itani, A., Maragakis, E. M., Pekcan, G., & Mehrraoufi, M. (2015) "Impact of Column-to-Beam Strength Ratio on the Seismic Response of Steel MRFs" *Bulletin of Earthquake Engineering*, 13(2), 635-652. [doi:10.1007/s10518-014-9634-9](https://doi.org/10.1007/s10518-014-9634-9)
18. Soroushian, S., **Zaghi, A.**, Maragakis, E., Echevarria, A., Tian, Y., and Filiatrault, A. (2014). "Seismic Fragility Study of Fire Sprinkler Piping Systems with Grooved Fit Joints." *Journal of Structural Engineering*, ASCE, Published Online 28 Jul 2014. [doi:10.1061/\(ASCE\)ST.1943-541X.0001122](https://doi.org/10.1061/(ASCE)ST.1943-541X.0001122)
19. Soroushian, S., **Zaghi, A. E.**, Maragakis, E. M., Echevarria, A., (2014) "Seismic Fragility Study of Displacement Demand on Fire Sprinkler Piping Systems," *Journal of Earthquake Engineering*, 18.7, 1129-1150. [doi:10.1080/13632469.2014.917059](https://doi.org/10.1080/13632469.2014.917059)
20. Wieser, J., Pekcan, G., **Zaghi, A. E.**, Itani, A., and Maragakis, E. M. (2013) "Floor Accelerations in Yielding Special Moment Resisting Frame Structures" *Earthquake Spectra*, EERI, Vol. 29, No. 3, pp. 987-1002. [doi:10.1193/1.4000167](https://doi.org/10.1193/1.4000167)
21. **Zaghi, A. E.**, Maragakis, E. M., Itani, A., and Goodwin, E. (2012) "Experimental and Analytical Studies of Hospital Piping Assemblies Subjected to Seismic Loading," *Earthquake Spectra*, EERI, 28(1), pp. 367-384. [doi:10.1193/1.3672911](https://doi.org/10.1193/1.3672911)
22. **Zaghi, A. E.**, Saiidi, M., and Mirmiran, A., (2012) "Shake Table Response and Analysis of a Concrete-Filled FRP Tube Bridge Column," *Composite Structures*, Elsevier, Volume 94, Issue 5, April 2012, Pages 1564–1574. [doi:10.1016/j.compstruct.2011.12.018](https://doi.org/10.1016/j.compstruct.2011.12.018)

23. **Zaghi, A. E., Saiidi, M., and El-Azazy, S.** (2011) "Shake Table Studies of a Concrete Bridge Pier Utilizing Pipe-Pin Two-Way Hinges," *Journal of Bridge Engineering*, ASCE, 16 (5), pp. 587-596. [doi:10.1061/\(ASCE\)BE.1943-5592.0000191](https://doi.org/10.1061/(ASCE)BE.1943-5592.0000191)
24. **Zaghi, A. E., and Saiidi, M.** (2011) "Bearing and Shear Failure of Pipe-Pin Hinges Subjected to Earthquakes," *Journal of Bridge Engineering*, ASCE, 16 (3), pp. 340-350. [doi:10.1061/\(ASCE\)BE.1943-5592.0000160](https://doi.org/10.1061/(ASCE)BE.1943-5592.0000160)
25. **Zaghi, A. E., and Saiidi, M.** (2010) "Seismic Performance of Pipe-Pin Two-Way Hinges in Concrete Bridge Columns," *Journal of Earthquake Engineering*, Taylor & Francis, UK, 14(8), pp. 1253-1302. [doi:10.1080/13632469.2010.490321](https://doi.org/10.1080/13632469.2010.490321) (Invited extended paper).
26. Khaloo, A.R. and **Esmaili, A.** (2007), "Strengthening Design Limitations of an RC Frames Using FRP Column Wrapping Considering Column-to-Beam Strength Ratio," *Scientia Iranica*, 14(5), pp. 405-413. http://www.sid.ir/en/vewssid/j_pdf/95520070506.pdf

Submitted and In Preparation Journal Articles

1. **Mehr, M., and Zaghi, A. E.** (20xx) "Seismic Demand on In-Span Hinge Shear keys in Multi-Frame Bridges," *Earthquake Spectra*, (Submitted in June 2016)
2. Stromquist-LeVoir, G., **Zaghi, A. E.**, Christenson, R., and **Zmetra, K., McMullen, K.** (20xx) "A Novel Approach for Bridge Weigh in Motion Using Acceleration Data," *Journal of Bridge Engineering*, (Submitted 11/29/2016)

Conference Proceedings and Presentations

1. **Zaghi, A. E.**, "Beam End Repair Options" *Northeast Bridge Preservation Partnership 2016 Meeting*, September 19-21, 2016, Baltimore, MD.
2. **McMullen, K., Kruszewski, D., Zaghi, A. E., Wille, K.** "A Novel Repair Method for Steel Girders with Corrosion Damage Utilizing UHPC" *The International Bridge Conference*, June 5-8, 2017, National Harbor, MD.
3. Hain, C. C., Turek, W. C., **Zaghi, A. E., Hain, A.**, "Experiences of Pre-College Teachers Working with Undergraduate Engineering Students with ADHD in Research Laboratories" *2017 ASEE Annual Conference & Exposition*, June 25-28, 2017, Columbus, OH.
4. Overturf, B., **Zaghi, A. E.** "Repair of Steel Beam and Girder Ends with Ultra-High-Strength Concrete" *Transportation Research Board (TRB) 96th Annual Meeting (State Department of Transportation High-Value Research Projects)*, January 8-12, 2017, Washington, DC.
5. **Zmetra, K., Hain, A., Zaghi, A. E., Wille, K.** (2017) "Finite Element Analysis and Experimental Comparison for Repair of Corrosion Damaged Steel Girder Ends Using Ultra-High Performance Concrete Encasement" *Transportation Research Board (TRB) 96th Annual Meeting*, January 8-12, 2017, Washington, DC.
6. **Zaghi, A. E., Reis, S., Renzulli, J., Kaufman, J. C.** "Unique Potential and Challenges of Students with ADHD in Engineering Programs" *2016 ASEE Annual Conference & Exposition*, June 26- 29, 2016 New Orleans, LA. [doi:10.18260/p.27107](https://doi.org/10.18260/p.27107)
7. **Zaghi, A. E., Tehranipour, M., O'Brien, C.** "Major Observations from a Specialized REU Program for Engineering Students with ADHD" *2016 ASEE Annual Conference & Exposition*, June 26- 29, 2016 New Orleans, LA. [doi:10.18260/p.25588](https://doi.org/10.18260/p.25588)

8. McMullen, K., Zaghi, A. E., Hoagland, M., Bokinsky, A. C. “Feasibility of Integrating Force Sensing Technology on PTFE Bearing Design” *8th World Congress on Joints, Bearings and Seismic Systems for Concrete Structures*, September 25-29, 2016, Atlanta, GA.
9. Zmetra, K., Zaghi, A., Wille, K., “Rehabilitation of Steel Bridge Girders with Corroded Ends Using Ultra-High Performance Concrete”, *ASCE/SEI Structures Congress*, April 2015, Portland, OR. [doi:10.1061/9780784479117.121](https://doi.org/10.1061/9780784479117.121)
10. Soroushian, S., Maragakis, M., Zaghi, A., and Echevarria, A. “Numerical Simulation of Integrated Suspended Ceiling-Sprinkler Systems”, *ASCE/SEI Structures Congress*, April 2015, Portland, OR. [doi:10.1061/9780784479117.162](https://doi.org/10.1061/9780784479117.162)
11. Echevarria, A., Zaghi, A. E., Chiarito, V., Christenson, R., “Blast Resilience of Concrete-Filled FRP Tube (CFFT) Bridge Columns”, *7th International Conference on Bridge Maintenance, Safety and Management (IABMAS 2014)*, Shanghai, China, July 7-11. [doi:10.1201/b17063-225](https://doi.org/10.1201/b17063-225)
12. Echevarria, A., Zaghi, A. E., Chiarito, V., Christenson, R., “The Seismic, Blast and Fire Resilience of Concrete Filled FRP Tube (CFFT) Bridge Columns”, *7th International Conference on Bridge Maintenance, Safety and Management (IABMAS 2014)*, Shanghai, China, July 7-11. [doi:10.1201/b17063-110](https://doi.org/10.1201/b17063-110)
13. Soroushian, S., Maragakis, M., Jenkins, C., Zaghi, A., and Echevarria, A. “Analytical Simulation of the Performance of Ceiling-Sprinkler Systems in Shake Table Tests Performed on a Full-Scale 5-Story Building” *ASCE/SEI Structures Congress*, May 2014, Boston, MA. [doi:10.1061/9780784413357.164](https://doi.org/10.1061/9780784413357.164)
14. Echevarria, A., Zaghi, A. E., Chiarito, V., Christenson, R. “Performance Evaluation of Reinforced Concrete Bridge Columns through Experimental Blast Testing” *ASCE/SEI Structures Congress*, May 2014, Boston, MA. [doi:10.1061/9780784413357.042](https://doi.org/10.1061/9780784413357.042)
15. Echevarria, A., Zaghi, A. E., Saiidi, M. “Applicability of Concrete Filled FRP Tube (CFFT) System for Multihazard Resilient Bridge Columns” *ASCE/SEI Structures Congress*, May 2014, Boston, MA. [doi:10.1061/9780784413357.041](https://doi.org/10.1061/9780784413357.041)
16. Echevarria, A., Zaghi, A. E., Christenson, R., (2014) “Performance Evaluation of Reinforced Concrete Bridge Columns after Fire Exposure” *ASCE/SEI Structures Congress*, May 2014, Boston, MA. [doi:10.1061/9780784413357.039](https://doi.org/10.1061/9780784413357.039)
17. Echevarria, A., Zaghi, A. E., Christenson, R. "Fire Resistance of Concrete Filled FRP Tube (CFFT) Bridge Columns", *ASCE/SEI Structures Congress*, May 2013, Pittsburg, PA.
18. Zaghi, A.E., Echevarria, A., Christenson, R., Chiarito, V., Woodson, S. "Blast Performance of Concrete Filled FRP Tube (CFFT) Bridge Columns", *ASCE/SEI Structures Congress*, May 2013, Pittsburg, PA.
19. Soroushian, S., Zaghi, A. E., Maragakis, M., Echevarria, A., Tian, Y., Filiatrault, A. “Seismic Fragility Study of Fire Sprinkler Piping Systems”, *ASCE/SEI Structures Congress*, May 2013, Pittsburg, PA. [doi:10.1061/9780784412848.135](https://doi.org/10.1061/9780784412848.135)
20. Soroushian, S., Zaghi, A. E., Maragakis, M., Pekcan, G., Itani, A., Rahmanishamsi, E. “Development of Shake Table Motions for System-Level Full-Scale Seismic Evaluation of Drift-Sensitive Nonstructural Systems”, *ASCE/SEI Structures Congress*, May 2013, Pittsburg, PA.
21. Soroushian, S., Maragakis, M., Zaghi, A. E., Echevarria, A., Tian, Y., and Filiatrault, A., “Numerical Seismic Fragility of Fire Sprinkler Piping Systems with Threaded Joints” *10th International Conference on Urban Earthquake Engineering (10CUEE)*, March 2013, Tokyo Institute of Technology, Tokyo, Japan.

22. Sorooshian, S., Maragakis, M., Ryan, K., **Zaghi, A. E.**, Sato, E., Mosqueda, G., Tedesco, L., and Alvarez, D., “Seismic Response of Nonstructural Systems in NEES TIPS/NEES Nonstructural/NIED Collaborative Tests,” *9th International Conference on Urban Earthquake Engineering & 4th Asia Conference on Earthquake engineering*, March 2012, Tokyo Institute of Technology, Tokyo, Japan.
23. **Echevarria, A., Zaghi, A. E.**, Sorooshian, S., and Maragakis, M., “Seismic Fragility of Suspended Ceiling Systems” *15th World Conference on Earthquake Engineering (15WCEE)*, Sep. 2012, Lisbon, Portugal. http://www.iitk.ac.in/nicee/wcee/article/WCEE2012_4325.pdf
24. Wieser, J., Maragakis, E., Buckle, I., and **Zaghi, A. E.** “Experimental Evaluation of Seismic Pounding at Seat-Type Abutments of Horizontally Curved Bridges” *15th World Conference on Earthquake Engineering (15WCEE)*, Sep. 2012, Lisbon, Portugal. http://www.iitk.ac.in/nicee/wcee/article/WCEE2012_4633.pdf
25. Soroushian, S., Ryan, K.L., Maragakis, M., Wieser, J., Sasaki, T., Sato, E., Okazaki, T., Tedesco, L., **Zaghi, A.E.**, Mosqueda, G., Alvarez, D., “NEES/E-Defense Tests: Seismic Performance of Ceiling / Sprinkler Piping Nonstructural Systems in Base Isolated and Fixed Base Building” *15th World Conference on Earthquake Engineering (15WCEE)*, Sep. 2012, Lisbon, Portugal. http://www.iitk.ac.in/nicee/wcee/article/WCEE2012_5101.pdf
26. McClure, D., **Zaghi, A. E.**, “Vulnerability of Lattice Towers to Blast Induced Damage Scenarios” *Electrical Transmission and Substation Conference, ASCE*, Nov. 2012, Ohio, USA. [doi:10.1061/9780784412657.004](https://doi.org/10.1061/9780784412657.004)
27. Soroushian, S., **Zaghi, A. E.**, Ryan, K., Maragakis, M., Mosqueda, G., “Seismic Response of Steel Studded Gypsum Partition Walls in NEES TIPS/NEES Nonstructural/NEID Collaborative Tests on a Full Scale 5-Story Building” *ASCE/SEI Structures Congress*, March 2012, Chicago, USA.
28. Soroushian, S., Ryan, K., Maragakis, M., Sato, E., Sasaki, T., Okazaki, T., Tedesco, L., **Zaghi, A.**, Mosqueda, G., and Alvarez, D. (2012) “Seismic Response of Ceiling/Sprinkler Piping Nonstructural Systems in NEES TIPS/NEES Nonstructural/NIED Collaborative Tests on a Full Scale 5-Story Building.” *ASCE/SEI Structures Congress*, Mar. 2012, Chicago, USA. [doi:10.1061/9780784412367.118](https://doi.org/10.1061/9780784412367.118)
29. Ryan, K., Dao, N., Soroushian, S., Sato, E., Maragakis, M., **Zaghi, A. E.**, Sasaki, T., Mosqueda, G., McMullin, K., Okazaki, T., “Seismic Interaction of Structural System and Nonstructural Components in the NEES TIPS/NEES Nonstructural/NIED Collaborative Tests at E-Defense” *ASCE/SEI Structures Congress*, March 2012, Chicago, USA.
30. Wieser, J., **Zaghi, A. E.**, Maragakis, E. M., Buckle, I., “A Methodology for the Experimental Evaluation of Seismic Pounding at Seat-Type Abutments of Horizontally Curved Bridges” *ASCE/SEI Structures Congress*, March 2012, Chicago, USA. [doi:10.1061/9780784412367.055](https://doi.org/10.1061/9780784412367.055)
31. *Saiidi, M.*, Vosoughi, A., **Zaghi, A.**, Motaref, S., and Cruz, C. “Innovative Earthquake-Resistant Bridges Repair, Connections, and Materials,” IBSBI 2011, October 13-15, 2011, Athens, Greece.
32. Dao, N., Ryan, K., Sato, E., Okazaki, T., Mahin, S., **Zahgi, A.**, Kajiwara, K., and Matsumori, T. “Experimental Evaluation of an Innovative Isolation System for a Lightweight Steel Moment Frame Building at E-Defense.” *ASCE/SEI Structures Congress*, April 2011, Las Vegas, USA. [doi:10.1061/41171\(401\)256](https://doi.org/10.1061/41171(401)256)
33. Maragakis, E. M., **Zaghi, A. E.**, Itani, A., Pekcan, G., Soroushian, S. and Wieser, J., “Development of a Large-Scale Test Bed for the Simulation of the Seismic Performance of Nonstructural Systems,” *8th International Conference on Urban Earthquake Engineering*, Mar 2011, Tokyo Institute of Technology, Tokyo, Japan.

34. **Zaghi, A. E.**, Soroushian, S., Wieser, J., Maragakis, E. M., Pekcan, G., Itani, M., “Seismic Analysis of Fire Sprinkler Systems,” *Eighth International Conference on Structural Dynamics EURODYN 2011*, Jul 2011, Leuven, Belgium. <http://www.eurodyn2011.org/papers/MS02-1099.pdf>
35. Maragakis, E. M., **Zaghi, A. E.**, Itani, A., Pekcan, G., Soroushian, S. and Wieser, J., “Simulation of the Seismic Performance of Nonstructural Systems: Development of a Large Scale Test-Bed Structure,” *NSF Engineering Research and Innovation Conference*, Jan. 2011, Georgia, Atlanta, GA, USA.
36. **Zaghi, A. E.**, Maragakis, E. M., Itani, A., and Goodwin, E. “Experimental and Analytical Studies of Hospital Piping Subassemblies Subjected to Seismic Loading” *ASCE/SEI Structures Congress*, Apr. 2011, Las Vegas, USA. [doi:10.1061/41171\(401\)105](https://doi.org/10.1061/41171(401)105)
37. Soroushian, S., Maragakis, E. M., Itani, M., Pekcan, G., **Zaghi, A. E.** “Design of a Test Bed Structure for Shake Table Simulation of the Seismic Performance of Nonstructural Systems” *ASCE/SEI Structures Congress*, Apr. 2011, Las Vegas, USA. [doi:10.1061/41171\(401\)106](https://doi.org/10.1061/41171(401)106)
38. **Zaghi, A. E.**, *Saiidi, M. S.*, Doyle, K. “Telescopic Pipe-Pin Two-Way Hinges” Poster presentation, *EERI Annual Meeting*, Feb. 2009, Salt Lake City, UT.
39. **Zaghi, A. E.**, and *Saiidi, M.* “Mechanism of Shear Force Transfer in RC Columns with Pipe-Pins,” *Tenth Pan American Congress of Applied Mechanics*, Cancun, Mexico, January 2008, pp. 243-246.
40. **Zaghi, A.**, and *Saiidi, M.* “A Simple Nonlinear Model for Pipe-Pin Shear Keys in Concrete Bridges – Bearing Failure Mode,” *First International Conference on Computational Technologies in Concrete Structures (CTCS '09)*, Session W4A, Jeju, S. Korea, May 2009.
41. Khaloo, A.R., and **Esmaili, A.** "Effect of Beam to Column Strength Ratio on Seismic Performance of RC Frames with FRP Wrapped Column", *3rd International Structural Engineering and Construction Conference*, Sep. 2005, Shunan, Japan, pp.167-174.

Peer-Reviewed Technical Reports

1. **Zaghi, A. E.**, Wille, K., **Zmetra, K.**, (2015) “Repair of Steel Beam/Girder Ends with Ultra High Strength Concrete (Phase I)” *Connecticut Department of Transportation, Bureau of Policy and Planning*, Report Number CT-2282-F-15-2
<http://www.ct.gov/dot/lib/dot/documents/dpolicy/research/bridgebeam.pdf>
2. **Mehr, M.**, **Zaghi, A. E.**, (2014) “Development of a Rational Design Method for Shear Keys at In-Span Hinges in MultiFrame Highway Bridges, Part-1: A Rational Seismic Analysis Method for In-Span Hinge Shear Keys” *California Department of Transportation, Division of Engineering Services*, Report No. CA 14-2424 <http://worldcat.org/oclc/940513899>
3. **Zmetra, K.**, **Mehr, M.**, **Zaghi, A. E.**, (2014) “Development of a Rational Design Method for Shear Keys at In-Span Hinges in MultiFrame Highway Bridges, Part-2: Performance of Pipe Shear Key Detail” *California Department of Transportation, Division of Engineering Services, Division of Engineering Services*, Report No. CA 14-2424 <http://worldcat.org/oclc/940513695>
4. Soroushian, S., Maragakis, E. M., **Zaghi, A. E.**, **Echevarria, A.**, Tian, Y., Filiatrault, A., (2014) “Comprehensive Analytical Seismic Fragility of Fire Sprinkler Piping Systems” *Multidisciplinary Center for Earthquake Engineering Research (MCEER)*, Report No. MCEER 14-0002, University at Buffalo, the State University of New York. <http://hdl.handle.net/10477/29487>
5. Wieser, J., Pekcan, G., **Zaghi, A. E.**, Itani, A., and Maragakis, E. M., (2012) “Assessment of Floor Accelerations in Yielding Buildings,” *Multidisciplinary Center for Earthquake Engineering Research (MCEER)*, Report No. MCEER-12-0008, University at Buffalo, the State University of New York. <http://hdl.handle.net/10477/25373>

6. **Zaghi, A. E., Saiidi, M.** (2010) “Seismic Design of Pipe-Pin Connections in Concrete Bridges” *Center for Civil Engineering Earthquake Research, Department of Civil and Environmental Engineering, University of Nevada, Reno, Nevada, Report No. CCEER-10-01.*
http://www.dot.ca.gov/hq/esc/earthquake_engineering/Research_Reports/vendor/un_reno/2010-01/CCEER10_01.pdf

Other Significant Intellectual Contributions

1. **Zaghi, A. E., Cachany, M.**, “Development of a new element model for OpenSees to simulate the impact/pounding and friction phenomena.” “ZeroLengthImpact3D.”
<http://opensees.berkeley.edu/wiki/index.php?title=ZeroLengthImpact3D&redirect=no>

HONORS AND AWARDS

National Science Foundation CAREER Award	2017
Project on Bridge Repair was selected as High-Value Sweet Sixteen Projects by TRB	2016
Selected for the National Academy of Engineering’s (NAE) 2016 Frontiers of Engineering Education Symposium (FOEE)	2016
Nominated for the National Academy of Engineering’s (NAE) 2016 US Frontiers of Engineering Symposium (US FOE)	2016
Featured by the Prism Magazine of the American Society for Engineering Education (ASEE)	2015
C. R. Klewin, Inc. Excellence in Teaching Award, University of Connecticut	2014
Educator of the Year, Finalist, Connecticut Construction Industry Association	2014
Honorary Faculty Member of the National Civil Engineering Honor Society (Chi Epsilon)	2014
C. R. Klewin, Inc. Excellence in Teaching Award, University of Connecticut,	2013
D.E. Crow Innovation Prize for Creative Ideas and Entrepreneurship	2013
Best Venture Business Model, Connecticut Collegiate Business Model Competition	2012
Outstanding Reviewer of the Journal Bridge of Engineering, ASCE	2012
Elected Member of the Honor Society of Phi-Kappa-Phi	2010
PhD with Honors at the University of Nevada, Reno (GPA 4.0)	2009
Ranked First in the graduating class of K. N. Toosi University of Technology	2002

PROFESSIONAL REGISTRATION AND LICENSURE

Structural Engineer (SE), State of Nevada	2017
Professional Engineer (PE), State of California (C 77755)	2011
Professional Engineer (PE), State of Connecticut (0030415)	2013
ACI Examiner for ACI Certification Programs	2012
Concrete Field Testing Technician - Grade I	
Concrete Strength Testing Technician	
Concrete Laboratory Testing Technician – Level 2	
Aggregate Testing Technician – Level 1 & 2	
Aggregate Base Testing Technician	
Certified Engineer for “Seismic Retrofit and Strengthening of Existing Structures,” Iran State Management and Planning Organization	2006

PROFESSIONAL EXPERIENCE

<i>Advanced Column Solutions, LLC., Storrs, CT</i> Co-Founder, Manager of Research and Development	2012-Present
<i>NexGen Infrastructure, LLC., Storrs, CT</i> Co-Founder, Innovation Director	2016-Present
<i>Tazand Civil/Structural Consulting Engineers, Co., Tehran, Iran</i> (A prominent engineering design firm in Iran) Structural Engineering Consultant, Project Engineer	2001-2006
<i>Sub Station, Co., Tehran, Iran</i> (Well-known contractor of electrical power transmission lines and sub stations) Structural Design Consultant	2002-2006

PROFESSIONAL MEMBERSHIPS AND SERVICES

Significant Scholarly Services

- Panelist, National Science Foundation (NSF)
- Member of the Editorial Board of the *International Journal of Earthquake Engineering and Hazard Mitigation (IREHM)*
- Member of ASCE “Multi-hazard Mitigation Committee” (October, 2013 to September, 2019)
- Member of ASCE “Fire Protection Committee” (October, 2013 to September, 2019)
- Chair of “Next-Generation Multihazard Resilient Bridge Systems” Technical Session in Structural Engineering Institute's 2014 Structures Congress, Boston
- Co-Chair of “Evaluation and Assessment of Bridges Subject to Fire” Technical Session in Structural Engineering Institute's 2014 Structures Congress, Boston
- Chair of “Fire Risks and Impacts to Bridges” Technical Session in Structural Engineering Institute's 2013 Structures Congress, Pittsburgh
- Chair of “Seismic Response of Nonstructural Systems in the NEES TIPS/NEES Nonstructural/NIED Collaborative Tests at E-Defense” session in Structural Engineering Institute's 2012 Structures Congress, Chicago
- Co-chair of “Experimental Investigation of the Seismic Performance of Horizontally Curved Bridges” session in Structural Engineering Institute's 2012 Structures Congress, Chicago
- Co-chair of “Seismic Response of Ceiling-Piping-Partition Nonstructural Systems” session in Structural Engineering Institute's 2011 Structures Congress, Las Vegas
- Associate member of ACI Committee 369, “Seismic Repair and Rehabilitation”
- Reviewer of technical proposals for Oregon Transportation Research and Education Consortium (OTREC)

Reviewer for the *Journal of Structural Engineering*, ASCE
Reviewer for the *Journal of Bridge Engineering*, ASCE
Reviewer for the *Earthquake Spectra*, Earthquake Engineering Research Institute (EERI)
Reviewer for *Engineering Structures*, Elsevier
Reviewer for *Composite Structures*, Elsevier
Reviewer for *Structure and Infrastructure Engineering*, Taylor & Francis
Reviewer for *KSCE Journal of Civil Engineering*, Korean Society of Civil Engineers (KSCE)
Reviewer for *Materials*, MDPI AG
Reviewer for *Journal of Composites for Construction*, ASCE
Member of selection committee of Nevada Medal for Distinguished Graduate Student Paper in Bridge Engineering
Referee for Centers of Research Excellence (CoREs) Royal Society of New Zealand

Professional Membership

Member, American Society of Civil Engineering (ASCE)
Member, American Society for Engineering Education (ASEE)
Member, Council on Undergraduate Research (CUR)
Educator Member, American Institute Steel Construction (AISC)
Member, Earthquake Engineering Research Institute (EERI)

MEDIA PRESENCE AND INTERVIEWS

News Articles

[*UConn Researchers Say Super-Strong Concrete Could Be a Fix for Nation's Bridge Problems*](#),
WNPR.org, by Ryan Caron King (April 2016)

[*Impulsive Ingenuity*](#), Prism Magazine, American Society of Engineering Education, by Mary Lord is
deputy editor of Prism.

[*Research Validates Promising Bridge Repair Method*](#), Civil Engineering, the Magazine of the American
Society of Civil Engineers, by Jenny Jones

[*S&T Fellow Tests Innovative Bridge Repair Method*](#), Department of Homeland Security

Interviews

[*UConn Researchers Say Super-Strong Concrete Could Be a Fix for Nation's Bridge Problems*](#),
WNPR.org, by Ryan Caron King (April 2016)

[*UConn Professor works to Engineer ADHD Success*](#), Understood.org, by Geri Coleman Tucker

GRADUATE STUDENTS

Completed PhD Students

Kevin Zmetra, PhD, PE	2015
Professional Service Industries Inc., <i>Washington, DC</i>	
Dissertation: Repair of Corrosion Damaged Steel Bridge Girder Ends by Encasement in Ultra-High Strength Concrete, http://digitalcommons.uconn.edu/dissertations/769	
Masoud Mehrraoufi, PhD, PE	2015
WSP Parsons Brinckerhoff, <i>Glastonbury, CT</i>	
Dissertation: Seismic Transverse Response of Multi-Frame Bridges, http://digitalcommons.uconn.edu/dissertations/762	
Alicia Echevarria, PhD, PE	2014
HNTB Corporation, <i>New York, NY</i>	
Dissertation: Comparison of the Performance of RC and CFFT Bridge Piers under Multiple Hazards, http://digitalcommons.uconn.edu/dissertations/578	

Current PhD Students

Christa L. Taylor	
Kevin McMullen, EIT	2018
Alexandra Hain, EIT	2019
Caitlin O'Brien	2019
Angela Lanning	

Completed Masters Students

Amanda McBride, EIT	2016
Thesis: Mechanical Behavior of Hybrid Glass/Steel Reinforced Epoxy Composites http://digitalcommons.uconn.edu/gs_theses/955	
Kevin Zmetra, PhD, PE	2012
Thesis: The Effects of Bolt Pretension, In-Plane Eccentricity and Friction on the Ductility of Block Shear Connections http://digitalcommons.uconn.edu/gs_theses/345	

UNDERGRADUATE STUDENT RESEARCHERS

Undergraduate Honors Thesis

Jessica Manson	2016
Thesis: <i>A State of the Art Report on Concrete-Filled FRP Tube (CFFT) Structural System</i>	
Hamza Aslam	2015
Thesis: <i>Seismic Analysis of Structures with Damping Devices</i>	
Robert Rosa	2013
Thesis: <i>Creation and Evaluation of Concentrated Plasticity Models for Seismic Analysis</i>	
Pearse McManus	2013

Thesis: *A Structural Approach to Blast Mitigation Using a Bucking Cylinder Shield*

Undergraduate Independent Study

Advised Eighteen Undergraduate Students

2012, 2013, 2014, 2015, 2016