

## SHIDEH DASHTI, Ph.D.

Assistant Professor

Geotechnical Engineering and Geomechanics

Department of Civil, Environmental, and Architectural Engineering

University of Colorado Boulder

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### Academic Background

|                                      |                                     |     |      |
|--------------------------------------|-------------------------------------|-----|------|
| University of California at Berkeley | Civil/Geotechnical Engineering      | PhD | 2009 |
| University of California at Berkeley | Civil/Geotechnical Engineering      | MS  | 2005 |
| Cornell University                   | Civil and Environmental Engineering | BS  | 2004 |

### Professional History

*Assistant Professor, University of Colorado at Boulder, Boulder, CO*

*01/2011-Present*

Shideh Dashti joined the faculty of Civil, Environmental, and Architectural Engineering (CEAE) at the University of Colorado Boulder (CU) in January 2011. Her research interests include physical and numerical modeling, performance-based design of soil-structure systems, resilience of geotechnical infrastructure, underground structures in urban settings, seismic soil-structure and structure-soil-structure interaction, liquefaction consequences and mitigation, earthquake reconnaissance. She has also served as the director of the Geotechnical Centrifuge Facility at CU since 2015.

*Postdoctoral Scholar, University of California at Berkeley, Berkeley, CA*

*2009-2010*

Dashti served as the lead post-doctoral scholar and project manager of a USGS funded research project titled “iShake: using cell phones as seismic sensors during earthquakes,” for 9 months at UC Berkeley. This research included planning and performing of 1-D and 3-D shaking table tests at the UC San Diego and UC Berkeley earthquake testing facilities. She also performed fully-coupled nonlinear dynamic simulations of building performance on liquefiable ground using FLAC, validated with centrifuge experimental results.

*Doctoral Researcher, University of California at Berkeley, Berkeley, CA*

*2006-2009*

Doctoral research: “NEESR-II: Towards Developing an Engineering Procedure for Evaluating Building Performance on Softened Ground.” Dashti performed a series of four centrifuge experiments at the NEES facility at UC Davis Center for Geotechnical Modeling (CGM), during which she led teams of professionals, student researchers, and faculty at CGM during four, two-month long experiments.

*Geotechnical Engineer, Bechtel National, Inc., San Francisco, CA*

*2005-2006*

After completing her M.S. degree and before pursuing Ph.D., Dashti joined Bechtel’s Geotechnical group, where she worked on several engineering projects in the US and around the world: she performed numerical analyses on the Bay Area Rapid Transit (BART) tunnel project; performed seismic slope stability analyses for the retrofit of the BART immersed tube; and worked with engineering seismologists to develop design ground motions for projects internationally.

### Awards and Honors

*Received after Joining University of Colorado*

- American Society of Civil Engineers (ASCE) Outstanding Reviewer Award (2016)
- Departmental Young Researcher Award, Civil, Architectural, and Env. Engineering, CU Boulder (2015)
- Dean’s Faculty Fellowship, College of Engineering and Applied Sciences, CU Boulder (2015)

- Departmental Teaching Award, Civil, Architectural, and Env. Engineering, CU Boulder (2014)
- National Science Foundation (NSF) Fellow for ENHANCE (since December 2012)

*Received as a Student*

- Outstanding Graduate Student Instructor Award from the Department of Civil and Environmental Engineering, UC Berkeley (2009)
- Graduate Research Assistantship (GRA) through NSF, UC Berkeley (2006 –2009)
- Graduate Full Fellowship in GeoEngineering, UC Berkeley (2004-2005)
- Magna cum Laude distinction from Cornell University (May 2004)
- Distinguished Leadership Award, Cornell University (April 2004)

**Publications**

Underline denotes Dashti's student or post-doctoral advisee (with Dashti often listed as the corresponding author). \*Denotes Dashti's PhD Advisor

*Refereed Journal Articles Accepted or Published*

- [J23] Bullock, Z., **Dashti, S.**, Liel, A., Karimi, Z., Bradley, B. (2017). "Ground Motion Prediction Equations for Arias Intensity, Cumulative Absolute Velocity, and Peak Incremental Ground Velocity for Rock Sites in Different Tectonic Environments," *Bulletin of the Seismological Society of America* (accepted and in press).
- [J22] Olarte, J., Paramasivam, B., **Dashti, S.**, Liel, L., Zannin, J. (2017). "Centrifuge Modeling of Mitigation-Soil-Foundation-Structure Interaction on Liquefiable Ground," *Soil Dynamics and Earthquake Engineering*, 97, 304-323.
- [J21] Karimi, Z., and **Dashti, S.** (2017). "Ground Motion Intensity Measures to Evaluate II: the Performance of Shallow-Founded Structures on Liquefiable Ground," *Earthquake Spectra Journal*, EERI, Vol. 33, No. 1, pp. 277-298. doi: <http://dx.doi.org/10.1193/103015EQS163M>.
- [J20] **Dashti, S.**, and Karimi, Z. (2017). "Ground Motion Intensity Measures to Evaluate I: the Liquefaction Hazard in the Vicinity of Shallow-Founded Structures," *Earthquake Spectra Journal*, EERI, Vol. 33, No. 1, pp. 241-276. doi: <http://dx.doi.org/10.1193/103015EQS162M>.
- [J19] Deniz, D., Arneson, E.E., Liel, A.B., **Dashti, S.**, Javernick-Will, A. (2016). "Flood Loss Models for Residential Buildings Based on the 2013 Colorado Floods," *Natural Hazards Journal*, doi: 10.1007/s11069-016-2615-3.
- [J18] Arneson, E., Deniz, D., Javernick-Will, A., Liel, A., and **Dashti, S.** (2016). "Information Deficits and Post-Disaster Recovery," *Natural Hazards Review*, 1546-1555.
- [J17] Hushmand, A., **Dashti, S.**, Davis, C., McCartney, J.S. Hushmand, B. (2016). "A Centrifuge Study of the Influence of Site Response, Relative Stiffness, and Kinematic Constraints on the Seismic Performance of Buried Reservoir Structures," *Soil Dynamics and Earthquake Engineering Journal*, 88, 427-438.
- [J16] Hushmand, A., **Dashti, S.**, Davis, C., Hushmand, B., McCartney, J., Hu, J., Lee, Y. (2016). "Seismic Performance of Underground Reservoir Structures: Insight from Centrifuge Modeling on the Influence of Backfill Soil Type and Geometry," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE 10.1061/(ASCE)GT.1943-5606.0001544 , 04016058.
- [J15] **Dashti, S.**, Hashash, Y., Gillis, K., Musgrove, M., and Walker, M. (2016). "Development of Dynamic Centrifuge Models of Underground Structures near Tall Buildings," *Soil Dynamics and Earthquake Engineering Journal*, 86, 89-105.
- [J14] Deng, Y.H., **Dashti, S.**, Hushmand, A., Davis, C., Hushmand, B (2016). "Seismic Response of Underground Reservoir Structures in Sand: Evaluation of Numerical Simulations using Centrifuge Experiments," *Soil Dynamics and Earthquake Engineering Journal*, 85, 202-216.

- [J13] Karimi, Z., and **Dashti, S.** (2016). "Seismic Performance of Shallow Founded Structures on Liquefiable Ground: Validation of Numerical Simulations Using Centrifuge Experiments ," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 10.1061/(ASCE)GT.1943-5606.0001479.
- [J12] Hushmand, A., **Dashti, S.**, Davis, C., Hushmand, B., Zhang, M., Ghayoomi, M., McCartney, J., Lee, Y., Hu, J. (2016). "Seismic Performance of Underground Reservoir Structures: Insight from Centrifuge Modeling on the Influence of Structure Stiffness," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 10.1061/(ASCE)GT.1943-5606.0001477.
- [J11] Hashash, Y., **Dashti, S.**, Romero Arduz, M.I., Ghayoomi, M. (2015). "Evaluation of 1-D Seismic Site Response Modeling of Sand using Centrifuge Experiments," *Soil Dynamics and Earthquake Engineering Journal*, 78, 19-31.
- [J10] Karimi, Z., and **Dashti, S.** (2015). "Numerical and Centrifuge Modeling of Seismic Soil-Foundation-Structure-Interaction on Liquefiable Ground," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 142(1), 1-14.
- [J9] Gillis, K., **Dashti, S.**, Hashash, Y. (2015). "Dynamic Calibration of Tactile Sensors for Measurement of Soil Pressures in Centrifuge," *ASTM Geotechnical Testing Journal*, 38(3), 1-14.
- [J8] Ghayoomi, M., and **Dashti, S.** (2015). "Effect of Ground Motion Characteristics on Seismic Soil-Foundation-Structure Interaction," *Earthquake Spectra Journal*, Earthquake Engineering Research Institute, 31(3), 1-24.
- [J7] Bray, J.D.\*, and **Dashti, S.** (2014). "Liquefaction Induced Building Movement," *Bulletin of Earthquake Engineering*, 2(3), 1129-1156.
- [J6] **Dashti, S.**, Bray, J.D.\*, Reilly, J., Glaser, S., Bayen, A., Ervasti, M. (2014). "Evaluating the Reliability of Mobile Phones as Seismic Monitoring Instruments," *Earthquake Spectra Journal*, Earthquake Engineering Research Institute, 30(2), 1-22.
- [J5] Ghayoomi, M., **Dashti, S.**, and McCartney, J.S., (2013). "Performance of a Transparent, Flexible Shear Beam-Type Container in Dynamic Centrifuge Modeling of Geotechnical Systems," *Journal of Soil Dynamics and Earthquake Engineering*, 53, 230-239.
- [J4] **Dashti, S.**, and Bray, J.D.\* (2013). "Numerical Simulation of Building Response on Liquefiable Sand," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 139 (8), 1235-1249.
- [J3] Reilly, J., **Dashti, S.**, Ervasti, M., Bray, J.D.\*, Glaser, S., and Bayen, A. (2013). "iShake: Using Mobile Phones as Seismologic Sensors," *Journal of IEEE Transactions on Automation Science and Engineering*, IEEE Robotics and Automation Society, 10 (2), 242.
- [J2] **Dashti, S.**, Bray, J.D.\*, Pestana, J., Riemer, M.R., and Wilson, D. (2010b). "Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 136 (7), pp. 918-929.
- [J1] **Dashti, S.**, Bray, J.D.\*, Pestana, J.M., Riemer, M.R. and Wilson, D. (2010a). "Mechanisms of Seismically-Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 136 (1), pp. 151-164.

*Refereed Journal Articles Submitted and Under Review*

- [J35] Sextos, A., De Risi, R., Pagliaroli, A., Foti, S., Passeri, F., Ausilio, E., Cairo, R., Capatti, M.C., Chiabrando, F., Chiaradonna, A., **Dashti, S.**, De Silva, F., Dezi, F., Durante, M.G., Lanzo, G., Sica, S., Simonelli, A., Zimmaro, P. (forthcoming). "Local patterns and incremental damage of buildings during the 2016 Central Italy earthquake sequence," *Earthquake Spectra* (under review).
- [J34] Stewart, J.P., Zimmaro, P., Lanzo, G., Mazzoni, S., Ausilio, E., Aversa, S., Bozzoni, F., Cairo, R., Capatti, M.C., Castiglia, M., Chiabrando, F., Chiaradonna, A., d'Onofrio, A., **Dashti, S.**, De Risi, R., De Silva, F., Della Pasqua, F., Dezi, F., Di Domenica, A., Di Sarno, L., Durante, M.G., Falcucci, E., Foti, S., Franke, K.W., Galadini, F., Giallini, S., Gori, S., Kayen, R.E., Kishida, T., Lingua, A., Passeri, F., Pelekis, P., Pizzi, A., Reimschuessel, B., Santo, A., Magistris, F., Scasserra, G., Sextos, A., Silvestri, F.,

- Simonelli, A.L., Spano, A., Tommasi, P., Tropeano, G. (forthcoming). “Reconnaissance of 2016 Central Italy Earthquake Sequence,” *Earthquake Spectra* (under review).
- [J33] Olarte, J., Dashti, S., Liel, L. (forthcoming). “Can Ground Densification Improve Seismic Performance of Inelastic Structures on Liquefiable Soils?” *Journal of Earthquake Engineering and Structural Dynamics* (under review).
- [J32] Bullock, Z., Karimi, S., Dashti, S., Porter, K., Liel, A., Franke, K. (forthcoming). “A Physics-Informed Semi-Empirical Probabilistic Model for the Settlement of Shallow-Founded Structures on Liquefiable Ground,” *Geotechnique* (under review)
- [J31] Kirkwood, P., and Dashti, S. (forthcoming). “A Centrifuge Study of Seismic Structure-Soil-Structure Interaction on Liquefiable Ground and the Implications for Structural Performance,” *Earthquake Spectra* (under review)
- [J30] Kirkwood, P., and Dashti, S. (forthcoming). “Influence of Prefabricated Vertical Drains on the Seismic Performance of Similar Neighboring Structures Founded on Liquefiable Deposits,” *Geotechnique* (under review).
- [J29] Ramirez, J., Barrero, A., Chen, L., Dashti, S., Ghofrani, A., Taiebat, M., Arduino, P. (forthcoming). “Site Response in a Layered Liquefiable Deposit: Evaluation of Different Numerical Tools and Methodologies with Centrifuge Experimental Results,” *ASCE Journal of Geotechnical and GeoEnvironmental Engineering* (under review).
- [J28] Badanagki, M., Dashti, S., Kirkwood, P. (forthcoming). “An Experimental Study of the Influence of Dense Granular Columns on the Performance of Level and Gently Sloping Liquefiable Sites,” *ASCE Journal of Geotechnical and GeoEnvironmental Engineering* (under review).
- [J27] Paramasivam, B., Dashti, S., Liel, A. (forthcoming). “Influence of Prefabricated Vertical Drains on the Seismic Performance of Structures Founded on Liquefiable Soils,” *ASCE Journal of Geotechnical and GeoEnvironmental Engineering* (under review).
- [J26] Kirkwood, P., and Dashti, S. (forthcoming). “Considerations for Mitigation of Earthquake-Induced Soil Liquefaction in Urban Environments,” *ASCE Journal of Geotechnical and GeoEnvironmental Engineering* (under review).
- [J25] Karimi, Z., Dashti, S., Bullock, Z., Porter, K., Liel, A. (forthcoming). “Key Predictors of Structure Settlement on Liquefiable Ground: A Numerical Parametric Study,” *Soil Dynamics and Earthquake Engineering* (under review).
- [J24] Esmailzadeh, E., Jeong, C., Dashti, S., Hushmand, A., Taciroglu, E. (forthcoming). “Seismic response of buried reservoir structures: a comparison of numerical simulations with centrifuge experiments,” *Soil Dynamics and Earthquake Engineering* (under review).

*Refereed Conference Proceedings Accepted or Published*

- [C32] Kirkwood, P., and Dashti, S. (2017). “Influence of vertical prefabricated drains on the response of two adjacent structures founded on liquefiable ground,” *Proceedings of the Third Conference in Performance-Based Design in Earthquake Geotechnical Engineering*, Vancouver, Canada.
- [C31] Paramasivam, B., Dashti, S., Liel, A., Olarte, J. (2017b). “Effects of Drains on the Performance and Damage Potential of Shallow-Founded Structures,” *Proceedings of the 3rd Performance Based Design Conference in Earthquake Geotechnical Engineering*, Vancouver, Canada.
- [C30] Karimi, Z., Bullock, Z., Dashti, S., Liel, A., Porter, K. (2017c). “Influence of Soil and Structural Parameters on Liquefaction-Induced Settlement of Foundations,” *Proceedings of the Third Conference in Performance-Based Design in Earthquake Geotechnical Engineering*, Vancouver, Canada.
- [C29] Karimi, Z., Bullock, Z., Dashti, S., Liel, A., Porter, K. (2017b). “Seismic Settlement of Shallow-Founded Structures on Liquefiable Ground,” *Proceedings of ASCE Geo-Risk*, Denver, CO.
- [C28] Deniz, Derya, Bruce Ellingwood, Abbie Liel, and Shideh Dashti (2017). “Flood Loss and Recovery Models for Residential Housing Stock: A Case Study of the 2013 Boulder, Colorado Floods,” *ICOSSAR 2017*, Vienna, Austria.

- [C27] Kayen, R., **Dashti, S.**, Franke, T.K, Oettle, N.K., Wham, B., Kokusho, T, Hazarika, H., Calderon, J.R. (2017). “Case Histories of Geotechnical Engineering Damage from the 2016 MW 6.0, MW 6.2, and MW 7.0 Kumamoto Earthquakes,” *Proceedings of 16th World Conference on Earthquake Engineering*, Santiago, Chile.
- [C26] Olarte, J.S., Liel, A.B., **Dashti, S.**, Paramasivam, B., Scheetz, R., Elfeji, J., Valigura, J. (2017). “Structural Models for Centrifuge Testing of Liquefaction-Related Building Damage,” *Proceedings of 16th World Conference on Earthquake Engineering*, Santiago, Chile.
- [C25] Paramasivam, B., **Dashti, S.**, Liel, A.B., Olarte, J.C., Souza Junior, L.D., Gomes, L.S. (2017). “Performance of Inelastic, Shallow Founded Structures on Liquefiable Ground and the Effectiveness of Mitigation Strategies,” *Proceedings of 16th World Conference on Earthquake Engineering*, Santiago, Chile.
- [C24] Musgrave, M., Hashash, Y.M.A., **Dashti, S.**, Gillis, K., Walker, M., Ellison, K. (2017). “Centrifuge and Numerical Modeling of Shallow Underground Structures Adjacent to Tall Buildings,” *Proceedings of 16th World Conference on Earthquake Engineering*, Santiago, Chile.
- [C23] Karimi, Z., **Dashti, S.**, Bullock, Z. (2017). “Influence of Soil and Structural Properties on the Response of Shallow- Founded Structures on Layered Liquefiable Deposits,” *Proceedings of 2017 GeoFrontiers*, Orlando, Florida, USA.
- [C22] Calderon, J.R., Badanagki, M. Rahimi, M., ElGhoraiby, M.A., Manzari, M.T., Dashti, S., Barrero, A., Taiebat, M., Ziotopoulou, K., Liel, A. (2017). “Seismic Performance of a Layered Liquefiable Site: Validation of Numerical Simulations Using Centrifuge Modeling,” *Proceedings of 2017 GeoFrontiers*, Orlando, Florida, USA.
- [C21] Davis, C., Hushmand, A., **Dashti, S.** (2016). “Dynamic Increment of Pressure on Underground Rigid Wall: Comparing Analytical and Physical Models,” *Proceedings of the 2nd Huixian International Forum on Earthquake Engineering for Young Researchers*, Harbin, China.
- [C20] Hushmand, A., **Dashti, S.**, Davis, C. (2016). “A Centrifuge Study: Influence of Site Response on the Seismic Performance of Buried Reservoir Structures,” *Proceedings of the 2nd Huixian International Forum on Earthquake Engineering for Young Researchers*, Harbin, China.
- [C19] Karimi, Z., and **Dashti, S.** (2016). “Effects of Ground Motion Intensity Measures on Liquefaction Triggering and Settlement near Structures,” *Proceedings of the 1st International Conference on Natural Hazards and Infrastructure*, Chania, Greece.
- [C18] Gillis, K., **Dashti, S.**, Hashash, Y., Jones, C., Musgrove, M., Walker, M. (2015). “Seismic Performance of Shallow Underground Structures Adjacent to Tall Buildings: A Centrifuge Experimental Study,” *Proceedings of the 6th International Conference on Earthquake Geotechnical Engineering*, Christchurch, New Zealand.
- [C17] Hushmand, A., **Dashti, S.**, Davis, C., Hushmand, B., Zhang, M., Lee, Y., Hu, J. (2015). “Centrifuge Study: Influence of Base Fixity on the Seismic Response of Buried Reservoir Structures,” *Proceedings of the 6th International Conference on Earthquake Geotechnical Engineering*, Christchurch, New Zealand.
- [C16] Karimi, Z., and **Dashti, S.** (2015). “Numerical Simulation of Earthquake Induced Soil Liquefaction: Validation against Centrifuge Experimental Results,” *Proceedings of the 2015 Geo-Congress*, Geo-Institute, ASCE.
- [C15] **Dashti, S.**, Palen, L., Heris, M., Anderson, K. M., Anderson, S., Anderson, J. T. (2014). “Supporting Disaster Reconnaissance with Social Media Data: A Design-Oriented Case Study of the 2013 Colorado Floods,” *Proceedings of the 11th International Conference on Information Systems for Crisis Response and Management*, University Park, PA, USA.
- [C14] Hushmand, A., **Dashti, S.**, Zhang, M., McCartney, J. S., Ghayoomi, M., Hushmand, B., Mokarram, N., Davis, C., Yangsoo, L., Hu, J. (2014). “Seismic Soil-Structure-Interaction and Lateral Earth Pressures on Buried Reservoir Structures,” *Proceedings of the 2014 Geo-Congress*, Geo-Institute, ASCE, Oakland, CA.

- [C13] Gillis, K., **Dashti, S.**, Hashash, Y., Arduz, M. I. R., Walker, M. C. (2014). “Dynamic Centrifuge Testing of a Temporary Braced Excavation in Dry Sand,” *Proceedings of the 2014 Geo-Congress*, Geo-Institute, ASCE, Oakland, CA.
- [C12] Ghayoomi, M., and **Dashti, S.** (2014). “Effects of Ground Motion Intensity Parameters on Soil-Foundation-Structure-Interaction and Site Response,” *Proceedings of the 8th International Conference on Physical Modeling in Geotechnics*, Perth, Australia.
- [C11] Gillis, K., **Dashti, S.**, Hashash, Y., Arduz, M. I. R. (2014). “Seismic Response of a Cut-and-Cover Underground Structure in Dry Sand: Centrifuge Modeling,” *Proceedings of the 8th International Conference on Physical Modeling in Geotechnics*, Perth, Australia.
- [C10] **Dashti, S.**, Hushmand, A., Ghayoomi, M., McCartney, J. S., Zhang, M., Hushmand, B., Mokarram, N., Bastani, A., Davis, C., Yangsoo, L., Hu, J. (2013). “Centrifuge Modeling of Seismic Soil-Structure-Interaction and Lateral Earth Pressures for Large Near-Surface Underground Structures,” *Proceedings of the 18th International Conference on Soil Mechanics and Geotechnical Engineering*, Paris, France.
- [C9] **Dashti, S.**, Gillis, K., Ghayoomi, M., and Hashash, Y. (2012). “Sensing of Lateral Seismic Earth Pressures in Geotechnical Centrifuge Modeling,” *Proceedings of the 15th World Conference on Earthquake Engineering*, Lisbon, Portugal.
- [C8] **Dashti, S.**, Bray, J.D.\*, Reilly, J., Glaser, S., Bayen, A. (2012). “iShake: Reliability of Phones as Seismic Sensors,” *Proceedings of the 15th World Conference on Earthquake Engineering*, Lisbon, Portugal.
- [C7] Bray, J.D.\*, and **Dashti, S.** (2012). “Liquefaction-Induced Building Movements,” Invited Keynote Paper, Proceedings of the 2nd International Conference on Performance-Based Design Earthquake Geotechnical Engineering, Taormina, Italy.
- [C6] Ghayoomi, M., **Dashti, S.**, McCartney, J.S. (2012). “Effect of Boundary Conditions on the Performance of a Transparent Flexible Shear Beam-Type Container,” *Proceedings of the 2nd International Conference on Performance-Based Design Earthquake Geotechnical Engineering, Taormina, Italy*.
- [C5] **Dashti, S.**, and Bray, J.D.\* (2012). “Numerical Insights into Liquefaction-Induced Building Settlement,” Proceeding of the 2012 Geo-Congress, Geo-Institute, ASCE, Oakland, CA.
- [C4] Ervasti, M., **Dashti, S.**, Reilly, J., Glaser, S., Bayen, A., Bray, J.D.\* (2011). “iShake: Mobile Phones as Seismic Sensors – User Study Findings,” *Proceedings of 10th International Conference on Mobile and Ubiquitous Multimedia*, Beijing, China.
- [C3] Bray, J.D.\* and **Dashti, S.** (2010). “Liquefaction-Induced Movements of Buildings with Shallow Foundations,” Invited Keynote Paper, *5th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, San Diego, CA, USA.
- [C2] **Dashti, S.**, Bray, J.D.\*, Pestana, J., Riemer, M.R., and Wilson, D. (2010). “Experimental Insight into Liquefaction-Induced Building Settlement.” *Proc., 9th US National and 10th Canadian Conference on Earthquake Engineering: Reaching Beyond Borders*, Toronto, Canada.
- [C1] **Dashti, S.**, Bray, J.D.\*, Riemer, M.R., Wilson, D. (2008). “Centrifuge Experimentation of Building Performance on Liquefied Ground,” *Proc., 4th Decennial Geotechnical Earthquake Engineering and Soil Dynamics Conference, Sacramento, CA, USA*.

#### Reports

- [R7] Stewart, J.P., Lanzo, G., Aversa, S., Bozzoni, F., Chiabrande, F., **Dashti, S.**, Sarno, L.D., Durante, M.G., Foti, S., Franke, K., Galadini, F., Falcucci, E., Gori, S., Kayen, R., Mylonakis, G., Katsiveli, E., Pagliaroli, A., Giallini, S., Scasserra, G., Magistris, F.S., Sica, S., Mucciacciaro, M., Silvestri, F., D’Onofrio, A., Chiaradonna, A., Silva, F., Simonelli, A., Penna, A., Tommasi, P., Zimmaro, P. (2016). “Engineering Reconnaissance following the 2016 M 6.0 Central Italy Earthquake,” Geotechnical Extreme Event Reconnaissance (GEER) Report, September 2016, DOI:10.18118/G61S3Z.
- [R6] Robert Kayen, **Shideh Dashti**, Takaji Kokusho, Hemanta Hazarika, Kevin Franke, Nicolas Oettle, Brad Wham, Jenny Ramirez Calderon, Dallin Briggs, Samantha Guillies, Katherine Cheng, Yutaka Tanoue, Katsuji Takematsu , Daisuke Matsumoto , Takayuki Morinaga, Hideo Furuichi, Yuuta Kitano,

Masanori Tajiri, Babloo Chaudhary, Kengo Nishimura, Chu Chu. (2016). “Geotechnical Aspects of the 2016 MW 6.2, MW 6.0, and MW 7.0 Kumamoto Earthquakes,” Geotechnical Extreme Event Reconnaissance (GEER) Report, July 2016, DOI:10.18118/G6JS3M.

- [R5] **Gillis, K., Dashti, S.**, Hashash, Y., and Jones, C. (2014). “Test-1 through 6: Seismic Response of an Isolated Cut and Cover Tunnel in Dry Sand.” Network for Earthquake Engineering Simulation (NEES). Dataset. DOI: 10.4231/D3JQ0SW10, D3DZ0328H, D39882N7F, D35H7BV39.
- [R4] Keaton, J., Anderson, S., Santi, P., **Dashti, S.** (2013). “Geotechnical Effects of Intense Precipitation on August 9, 2013, on Slopes above Manitou Springs, Colorado, that were Burned in the 2012 Waldo Canyon Fire,” Geotechnical Extreme Event Reconnaissance (GEER) Report, December 2013.
- [R3] EERI Special Earthquake Report (2011). “Geotechnical Effects of the M9.0 Tohoku, Japan Earthquake of March 11, 2011,” Learning from Earthquakes EERI Newsletter, September 2011.
- [R2] **Dashti, S.**, Reilly, J., Bray, J.D./8, Bayen, A.M., Glaser, S., Mari, E. (2011). “iShake: Using Personal Devices to Deliver Rapid Semi-Quantitative Earthquake Shaking Information,” GeoEngineering Report, Department of Civil and Environmental Engineering, University of California at Berkeley, Feb 28.
- [R1] **Dashti, S.**, Bray, J.D./8, Pestana, J., Riemer, M.R., Wilson, D. (2009). “NEESR-II Project: Towards Developing an Engineering Procedure for Evaluating Building Performance on Softened Ground – Centrifuge Data Reports for Test Series SHD01-04,” reports on NEEShub available to the public.

### Selected Invited Lectures and Seminars

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| University of California, Los Angeles, Dept. of Civil and Environmental Eng., LA, CA           | A Physics-Informed Semi-Empirical Probabilistic Model for the Settlement of Structures on Liquefiable Ground | 2017 |
| ASCE-GeoInstitute and Struct. Eng. Association of Utah, University of Utah, Salt Lake City, UT | A Physics-Informed Semi-Empirical Probabilistic Model for the Settlement of Structures on Liquefiable Ground | 2017 |
| US-New Zealand-Japan Workshop on Soil Liquefaction, Berkeley, CA                               | Current and Future Research Direction on Consequences of Liquefaction  | 2016 |
| National Science Foundation, Washington DC   | Research Directions on Seismic Response and Interaction of Infrastructure Systems.                           | 2016 |
| George Washington University, Department of Civil and Environmental Engineering, Washington DC | Performance of Shallow-Founded Structures on Liquefiable Sand: Evaluation and Mitigation                     | 2016 |
| 2015 NHERI/E-Defense Meeting in Kobe, Japan  | Seismic Response of Underground Structures and Liquefaction Mitigation in Dense Urban Environments           | 2015 |
| 2013 NEES/E-Defense Meeting in Kyoto, Japan  | Seismic Response of Underground Structures in Dense Urban Environments                                       | 2013 |
| United States Geological Survey (USGS), Golden, CO   | Seismic Performance of Interacting Infrastructure Systems  | 2013 |
| University of Cambridge, Department of Engineering, Cambridge, UK                              | Seismic Performance of Interacting Infrastructure Systems  | 2013 |
| University of Chieti-Pescara, Pescara, Italy   | Response of Shallow-Founded Structures on Liquefiable Sand   | 2012 |
| United States Geological Survey (USGS), Menlo Park, CA   | iShake: Phones as Seismic Sensors  | 2011 |

### Selected Conference Presentations by Research Team

|   |   |      |
|---|---|------|
| 3 <sup>rd</sup> Conference on Performance-Based Design in Earthquake Geotechnical Engineering, Vancouver, Canada              | Prediction of liquefaction induced settlements below shallow foundations (Theme lecture)                            | 2017 |
| 3 <sup>rd</sup> Conference on Performance-Based Design in Earthquake Geotechnical Engineering, Vancouver, Canada              | Effect of prefabricated vertical drains on the seismic performance of buildings                                     | 2017 |
| 3 <sup>rd</sup> Conference on Performance-Based Design in Earthquake Geotechnical Engineering, Vancouver, Canada              | Influence of drains on the response of adjacent structures in urban settings  | 2017 |
| 16 <sup>th</sup> World Conference on Earthquake Engineering, Santiago, Chile  | Response of Shallow Underground Structures next to Tall Buildings   | 2017 |
| 16 <sup>th</sup> World Conference on Earthquake Engineering, Santiago, Chile  | Structural Models for Centrifuge Testing of Liquefaction-Related Building Damage                                    | 2017 |
| 1 <sup>st</sup> International Conference in Natural Hazards and Infrastructure, Chania, Greece                                | Effects of Ground Motion Intensity Measures on Liquefaction Triggering and Settlement near Structures               | 2016 |
| The 2016 Geotechnical-Structural Congress, ASCE, Phoenix, Az  | Seismic Soil-Foundation-Structure-Interaction on Liquefiable Ground   | 2016 |
| The 2016 Geotechnical-Structural Congress, ASCE, Phoenix, Az  | Performance-Based Liquefaction Assessment and Mitigation  | 2016 |
| Earthquake Engineering Research Institute (EERI) Annual Meeting   | Seismic Interactions between Tall Buildings and Underground Structures  | 2016 |
| 6 <sup>th</sup> International Conference on Earthquake Geotechnical Engineering, Christchurch, New Zealand                    | Seismic Performance of Shallow Underground Structures Adjacent to Tall Buildings: A Centrifuge Experimental Study   | 2015 |
| 2015 Natural Hazards Workshop, Broomfield, CO   | Building Resilience After Disaster: Boulder, Colorado After the 2013 Floods   | 2015 |
| The 2015 IFCEE, Geo-Institute, ASCE, San Antonio, TX  | Numerical Simulation of Earthquake Induced Soil Liquefaction: Validation against Centrifuge Experimental Results    | 2015 |
| The 11 <sup>th</sup> International Conference on Information Systems for Crisis Response and Management, University Park, PA. | Supporting Disaster Reconnaissance with Social Media Data: A Design-Oriented Case Study of the 2013 Colorado Floods | 2014 |
| The 8 <sup>th</sup> International Conference on Physical Modeling in Geotechnics, Perth, Australia.                           | Seismic Response of a Cut-and-Cover Underground Structure in Dry Sand: Centrifuge Modeling                          | 2014 |
| The 2014 Geo-Congress, Geo-Institute, ASCE, Atlanta, GA   | Seismic Response of Buried Water Reservoir Structures   | 2014 |
| The 2014 Geo-Congress, Geo-Institute, ASCE, Atlanta, GA   | Seismic Response of a Temporary Braced Excavations near Midrise Buildings   | 2014 |
| The 18 <sup>th</sup> International Conference on Soil Mechanics and Geotechnical Engineering, Paris, France                   | Seismic Soil Structure Interaction near Buried Water Reservoir Structures   | 2013 |
| NSF Annual Meeting, University of Nevada at Reno  | Seismic Response of Cut-and-Cover Box Structures in Dense Urban Environments: Centrifuge and Numerical Simulations  | 2013 |



|  |  |      |
|--|--|------|
| The 15th World Conference on Earthquake Engineering, Lisbon, Portugal.   | Sensing of Lateral Seismic Earth Pressures in Geotechnical Centrifuge Modeling | 2012 |
| Earthquake Engineering Research Institute (EERI) Annual Meeting, Memphis, TN   | Geotechnical Lessons Learned from the 2011 Tohoku-Kanto Earthquake in Japan    | 2012 |
| The 2012 Geo-Congress, Geo-Institute, ASCE, Oakland, CA  | Numerical Insights into Liquefaction-Induced Building Settlement               | 2012 |
| American Geophysics Union Fall Meeting, San Francisco, CA  | iShake: Mobile Phones as Seismic Sensors                                       | 2010 |
| 9th US National and 10th Canadian Conference on Earthquake Engineering: Reaching Beyond Borders, Toronto, Canada                                       | Response of Shallow Founded Structures on Liquefiable Ground                   | 2010 |
| 4th decennial Geotechnical Earthquake Engineering and Soil Dynamics Conference organized by the EESD Committee of ASCE's Geo-Institute, Sacramento, CA | Liquefaction Induced Building Settlement                                       | 2008 |

### Externally Funded Research Projects

Total External Funds as PI: \$1,759,031.21; Total External Funds as Co-PI: \$1,385,053

#### *National Science Foundation (NSF)*

Title: RAPID: Collaborative Research – Investigating Unanticipated Geotechnical Phenomena in Kumamoto, Japan Observed from the April 2016 Earthquake Sequence  
Total Award: \$43,464 (CU Portion out of \$200,000 total)  
Total Award Period Covered: 04/01/2017-03/31/2018  
PIs: K. Franke (Brigham Young University), S. Dashti (University of Colorado Boulder), R. Kayen (University of California at Berkeley)  
PI Time Commitment Per Year: 0.25 Summer Month

#### *Government of Ecuador and Geotechnical Consulting Company GeoEstudios*

Title: Microzonation of Tarqui, Ecuador  
Total Award: \$40,005  
Total Award Period Covered: 08/01/2016-Current  
PI: S. Dashti (University of Colorado, Boulder)  
PI Time Commitment Per Year: 0.7 Summer Month

#### *Department of Education*

Title: Graduate Assistance in Areas of National Need (GAANN) Program: Engineering Community Resilience  
Total Award: \$885,834  
Total Award Period Covered: 09/01/2015-08/31/2018  
PIs: R. Corotis, S. Dashti, A. Liel, A. Javernick-Will, K. Porter, and others (University of Colorado, Boulder)  
PI Time Commitment Per Year: 0 Pay

#### *National Science Foundation (NSF)*

Title: CAREER: Toward a New Paradigm in Evaluating and Mitigating Urban Liquefaction  
Total Award: \$500,000  
Total Award Period Covered: 06/01/2015-05/31/2020  
PI: Shideh Dashti (University of Colorado, Boulder)  
PI Time Commitment Per Year: 0.5 summer month in Years 1 through 5

*National Science Foundation (NSF)*

Title: Performance of Buildings on Liquefiable Soils: Evaluation and Mitigation  
Total Award: \$353,492 + \$10,000 (REU Supplement)  
Total Award Period Covered: 06/01/2014-05/31/2017  
Location of Project: University of Colorado, Boulder  
PI: Shideh Dashti (University of Colorado, Boulder)  
Co-PI: Abbie Liel (University of Colorado, Boulder)  
PI Time Commitment Per Year: 0.5 summer month in Year 1, 1 summer month in Year 2 and 3  
Other Collaborators: University of Cambridge, UK

*National Science Foundation (NSF)*

Title: RIPS Type 1—The Interdependence of Built, Social, and Information Infrastructures for Community Resilience: A Participatory Process  
Total Award: \$299,219  
Total Award Period Covered: 10/01/2014-09/31/2015  
Location of Project: University of Colorado, Boulder  
PI: Abbie Liel; Co-PI's: Shideh Dashti, Leysia Palen, Bruce Goldstein, and Amy Javernick-Will (University of Colorado, Boulder)  
PI Time Commitment Per Year: 0.5 summer month

*Network for Earthquake Engineering Simulation Research (NEESR) of NSF*

Title: NEESR: Seismic Response of Shallow Underground Structures in Dense Urban Environments  
Total Award: \$704,843  
Total Award Period Covered: 09/01/2011-08/31/2014 (extended at no cost to 2016)  
Location of Project: University of Colorado, Boulder  
PI: Shideh Dashti (University of Colorado, Boulder)  
Co-PI: Youssef Hashash (University of Illinois, Urbana Champaign)  
PI Time Commitment Per Year: 1.25 summer month  
Other Collaborators: Japan E-Defense, ARUP San Francisco

*Los Angeles Department of Water and Power through Hushmand Associates Inc.*

Title: Centrifuge Testing to Investigate the Seismic Soil-Structure-Interaction Effects near Buried Rectangular Reinforced Concrete Reservoirs  
Total Award: approximately \$150,691.21 (funding to centrifuge cost center, not through OCG)  
Total Award Period Covered: 09/01/2011-06/01/2015  
Location of Project: University of Colorado, Boulder  
PI's: Shideh Dashti and John McCartney (University of Colorado, Boulder)  
Time Commitment Per Year: approximately 1 summer month

**Internal Research Grants**

*Implementation of Multicultural Perspectives and Approaches in Research and Teaching (IMPART) Fellowship*

Title: Locating Underrepresented Perspectives in Environmental Design Curriculum and Pedagogy  
Total Award: \$3,815.00  
Total Award Period Covered: 07/01/2014-06/31/2015  
Location of Project: University of Colorado, Boulder  
PI: Shideh Dashti (University of Colorado, Boulder)  
Co-PI: Tori Derr, Sheryl Koutsis, Shawhin Roudbari (University of Colorado, Boulder)

*University of Colorado Engineering Excellent Fund Major Award 2013*

Title: Development of a Cyclic Triaxial Testing Device  
Total Award: \$ 20,000

Location of Project: University of Colorado, Boulder  
PI: Parnaz Boodagh (University of Colorado, Boulder)  
Co-PI: Shideh Dashti (University of Colorado, Boulder)

*University of Colorado Engineering Excellent Fund Major Award 2011*

Title: Large Laminar Container for Earthquake Simulation  
Total Award: \$ 19,000  
Location of Project: University of Colorado, Boulder  
PI: Majid Ghayoomi (University of Colorado, Boulder)  
Co-PI: Shideh Dashti (University of Colorado, Boulder)

*University of Colorado Engineering Excellent Fund Minor Award 2011*

Title: Realistic Earthquake Simulation with a Tilted Shake Table  
Total Award: \$ 2,000  
Location of Project: University of Colorado, Boulder  
PI: Shideh Dashti (University of Colorado, Boulder)

## **Teaching**

### **New Course Development**

*Spring 2011, CVEN4838/5838: Special Topics -- Geotechnical Earthquake Engineering*

Created a new cross-listed advanced undergraduate and graduate level course on Geotechnical Earthquake Engineering. The purpose of this course is to familiarize students with earthquake hazards and methods for seismic analysis and design: fundamentals of engineering seismology, site response, liquefaction assessment and mitigation design, seismic slope stability, and seismic design of retaining structures. This course was later formalized as CVEN5818.

### **Courses Taught**

*CVEN5818: Geotechnical Earthquake Engineering*

Number of students: 13; Term: Spring 2017;  
Course Evaluations (out of 6.0): course overall = 5.8; instructor overall = 6.0; instructor respect/professional treatment = 6.0; intellectual challenge = 5.3; how much learned = 5.5.

*CVEN4899: Civil Engineering Senior Project (Co-Taught with 3 Other Faculty)*

Number of students: 53; Term: Spring 2017;  
Course Evaluations (out of 6.0): course overall = 4.6; instructor overall = 5.1; instructor respect/professional treatment = 5.8; intellectual challenge = 5.5; how much learned = 5.2.

*CVEN4828/5828: Foundation Engineering*

Number of students: 16; Term: Fall 2016;  
Course Evaluations (out of 6.0): course overall = 5.9; instructor overall = 5.9; instructor respect/professional treatment = 6.0; intellectual challenge = 5.2; how much learned = 5.9.

*CVEN5818: Geotechnical Earthquake Engineering*

Number of students: 9; Term: Spring 2016;  
Course Evaluations (out of 6.0): course overall = 5.9; instructor overall = 6.0; instructor respect/professional treatment = 6.0; intellectual challenge = 5.0; how much learned = 5.9.

*CVEN3718: Geotechnical Engineering II – Introduction to Soil Mechanics and Laboratory Testing*

Number of students: 39; Term: Spring 2016;

Course Evaluations (out of 6.0): course overall = 5.4; instructor overall = 5.6; instructor respect/professional treatment = 5.9; intellectual challenge = 4.8; how much learned = 5.5.

*CVEN4899: Civil Engineering Senior Project (Co-Taught with 3 Other Faculty)*

Number of students: 47; Term: Fall 2015;

Course Evaluations (out of 6.0): course overall = 4.6; instructor overall = 5.0; instructor respect/professional treatment = 5.9; intellectual challenge = 5.1; how much learned = 4.4.

*CVEN3708: Geotechnical Engineering I – Introduction to Geotechnical Engineering*

Number of students: 23; Term: Spring 2015;

Course Evaluations (out of 6.0): course overall = 5.3; instructor overall = 5.7; instructor respect/professional treatment = 5.8; intellectual challenge = 4.5; how much learned = 5.1.

*CVEN5818: Geotechnical Earthquake Engineering*

Number of students: 7; Term: Spring 2015;

Course Evaluations (out of 6.0): course overall = 5.9; instructor overall = 6.0; instructor respect/professional treatment = 6.0; intellectual challenge = 5.3; how much learned = 5.7.

*CVEN3708: Geotechnical Engineering I – Introduction to Geotechnical Engineering*

Number of students: 60; Term: Fall 2014;

Course Evaluations (out of 6.0): course overall = 4.8; instructor overall = 5.5; instructor respect/professional treatment = 6.0; intellectual challenge = 4.3; how much learned = 5.0.

*CVEN3708: Geotechnical Engineering I – Introduction to Geotechnical Engineering*

Number of students: 34; Term: Spring 2014;

Course Evaluations (out of 6.0): course overall = 5.4; instructor overall = 5.9; instructor respect/professional treatment = 6.0; intellectual challenge = 4.4; how much learned = 5.3.

*CVEN5818: Geotechnical Earthquake Engineering*

Number of students: 13; Term: Spring 2014;

Course Evaluations (out of 6.0): course overall = 5.6; instructor overall = 5.8; instructor respect/professional treatment = 6.0; intellectual challenge = 5.0; how much learned = 5.3.

*CVEN3708: Geotechnical Engineering I – Introduction to Geotechnical Engineering*

Number of students: 38; Term: Fall 2013;

Course Evaluations (out of 6.0): course overall = 5.3; instructor overall = 5.6; instructor respect/professional treatment = 6.0; intellectual challenge = 4.7; how much learned = 5.3.

*CVEN3718: Geotechnical Engineering II – Introduction to Soil Mechanics and Laboratory Testing*

Number of students: 72; Term: Spring 2013;

Course Evaluations (out of 6.0): course overall = 5.4; instructor overall = 5.8; instructor respect/professional treatment = 6.0; intellectual challenge = 4.3; how much learned = 5.2.

*CVEN5818: Geotechnical Earthquake Engineering*

Number of students: 10; Term: Spring 2013;

Course Evaluations (out of 6.0): course overall = 5.6; instructor overall = 6.0; instructor respect/professional treatment = 6.0; intellectual challenge = 5.4; how much learned = 5.5.

*CVEN3718: Geotechnical Engineering II – Introduction to Soil Mechanics and Laboratory Testing*

Number of students: 31; Term: Fall 2012;

Course Evaluations (out of 6.0): course overall = 5.4; instructor overall = 5.7; instructor respect/professional treatment = 5.9; intellectual challenge = 4.7; how much learned = 5.3.

*CVEN4838/5838: Geotechnical Earthquake Engineering*

Number of students: 15; Term: Spring 2012

Course Evaluations (out of 6.0): course overall = 4.8; instructor overall = 5.0; instructor respect/professional treatment = 5.7; intellectual challenge = 5.0; how much learned = 5.2.

*CVEN4838/5838: Geotechnical Earthquake Engineering*

Number of students: 18; Term: Spring 2011

Course Evaluations (out of 6.0): course overall = 5.3; instructor overall = 5.5; instructor respect/professional treatment = 5.9; intellectual challenge = 5.1; how much learned = 5.4.

**Student Advising**

<sup>1</sup> MS thesis option      <sup>2</sup> MS report option

*Current PhD Student Committee Chair or Co-Chair*

|                     |  |               |
|---------------------|--|---------------|
| Juan Carlos Olarte  | “Effects of Densification on Building Perf on Liq. Ground”         | Expected 2017 |
| Jenny Calderon      | “Influence of Liquef. Mitigation on Building Perf. in Urban Areas” | Expected 2018 |
| Balaji Paramasivam  | “Effects of Drainage on Building Perf on Liq. Ground”              | Expected 2018 |
| Mahir Badanagki     | “Effects of Gravel Columns on Lateral Spread & Accelerations”      | Expected 2019 |
| Zachary Bullock     | “Perf. Based Eval. of Liquef. Effects and Design of Drains”        | Expected 2019 |
| Juan Carlos Tiznado | “Gravel Columns to Avoid Bridge Damage on Liq. Ground”             | Expected 2019 |

*Current MS Student Committee Chair or Co-Chair*

|                                  |  |               |
|----------------------------------|--|---------------|
| David Provost <sup>1</sup>       | “Influence of Irregular Cyclic Loading on Nevada Sand” | Expected 2017 |
| Sobhan Bhattacharya <sup>1</sup> | “Num. Simulation of Seismic Resp. of Reservoir Struc.” | Expected 2017 |

*Past Doctoral Student Committee Chair*

|                  |   |      |
|------------------|---|------|
| Ashkaan Hushmand | “Seismic Performance of Buried Structures”                    | 2016 |
| Zana Karimi      | “Liquef. Induced Building Settlement and Tilt: A Prob. Model” | 2016 |
| Kenneth Gillis   | “Seismic Resp. Underground Struc in Dense Urban Env.”         | 2015 |

*Past MS Student Committee Chair*

|                              |  |      |
|------------------------------|--|------|
| Devon McLay <sup>1</sup>     | “Physical and Num. Modeling of Seis Perf. of Buried Struc.”    | 2013 |
| Kenneth Gillis <sup>1</sup>  | “Tactile Sens. Calib and Data Anal for Geotech Cent. Modeling” | 2013 |
| Christina Jones <sup>1</sup> | “Seismic Perf. of Temp Exc. in Dense Urban Env.”               | 2015 |
| Cyrus Hoda <sup>2</sup>      | “Liquefaction Remediation Strategies”                          | 2015 |

*Post-Doctoral Scholars and Research Associates (Advisor or Co-Advisor)*

|                    |   |              |
|--------------------|---|--------------|
| Dr. Majid Ghayoomi | Post-doctoral Scholar                           | 2011-2012    |
| Dr. Min Zhang      | Research Associate and Centrifuge Engineer      | 2012-2015    |
| Dr. Derya Deniz    | Post-doctoral Scholar (Co-advised with A. Liel) | 2014-15      |
| Dr. Zana Karimi    | Post-doctoral Scholar                           | 2016-2017    |
| Dr. Peter Kirkwood | Post-doctoral Scholar                           | 2016-Current |

*Graduate Committee Participation (other than the primary advisor)*

Robert Chase, PhD Comprehensive Exam, Structural Engineering, 2017  
Michael Musgrove, PhD Comprehensive Exam, Geotechnical Engineering, University of Illinois at Urbana Champaign, 2016  
Matthew Rankins, MS, Architectural Engineering, 2016  
Carson Ellis Brown, MS, Architectural Engineering, 2016  
Mohammad Amin Hariri Ardebili, PhD Candidate, Structural Engineering, 2015  
Charles Coccia, PhD Candidate, Geotechnical Engineering, 2015  
Meera Raghunandan, PhD, Structural Engineering, 2013

Karim Farokhnia, PhD, Structural Engineering, 2013  
Holly Bonstrom, PhD, Structural Engineering, 2013  
Jared Debock, PhD, Structural Engineering, 2013  
Thamer Al Yacoub, PhD, Geotechnical Engineering, 2011  
Sarah Joy Welsh-Huggins, MS, Structural Engineering, 2015  
Cletus Blum, MS, Geotechnical Engineering, 2015  
Hannah Iezzoni, MS, Geotechnical Engineering, 2014  
Russell Dutta, MS, Geotechnical Engineering, 2014  
Daniel Jewoong Hahn, MS, Structural Engineering, 2014  
Alexander Vega, MS, Geotechnical Engineering, 2012  
Takis Vlasakakis, MS, Geotechnical Engineering, 2012  
Jack Thorpe, MS, Structural Engineering, 2012  
Derek Bauer, MS, Structural Engineering, 2012

#### *Undergraduate Student Research Advising*

Ms. Daniarely Loma Jasso, Summer 2017-Current  
Ms. Isabel McLeod, Summer 2017  
Ms. Nicole Souder, Fall 2016  
Ms. Samantha Guillies, Fall 2016-Spring 2017  
Ms. Lianne Brito, the SMART Program, Summer 2016  
Mr. Matthew Paul Egeler, Fall 2015-Spring 2016  
Mr. Luciano De Oliveira Souza Junior, Fall 2015-Summer 2016  
Mr. Leonardo Soligo Gomes, Fall 2015-Summer 2016  
Ms. Rebecca Scheetz, August 2014-Spring 2016  
Ms. Anisha Lamsal, September 2014-2015  
Ms. Devon Marsh, September 2014-2015  
Mr. Tiago De Oliveira Almeida, Summer 2014  
Ms. Jalila Elfeji, the Summer Multicultural Access to Research Training (SMART) Program, 2014  
Mr. Frias Miguel, the SMART Program, Summer 2013  
Mr. Christian G. Hernandez Negron, the SMART Program, Summer 2012

#### **Service Activities**

##### *Professional Development*

- Journal editorial board: Soils and Foundation
- Elected as the board member of the United States Universities Council on Geotechnical Education and Research (USUCGER), <http://www.usucger.org/>.
- Committee member of the *International Society of Soil Mechanics and Geotechnical Engineering* (ISSMGE TC 104), ASCE Geo-Institute.

##### *Conference Session Organizing*

- Co-organizer of session on underground and retaining structures at the PBDIII conference in Vancouver, Canada, 2017.
- Organizer and chair of session on soil liquefaction at GeoRisk, ASCE 2017 conference in Denver, Co.
- Co-organizer and co-chair of session on soil liquefaction at the 1st International Conference on Natural Hazards and Infrastructure, Chania, Greece, 2016.
- Organizer and chair of one panel session in 2016 Geo- and Structural-Congress, ASCE, Phoenix, AZ.
- Session organizer and co-chair of the 2012 Geo-Congress, Oakland, *Roles and Influence of Physical Modeling on State of the Art and Practice in Geotechnical Earthquake Engineering*.

#### *National and International Committee Participation*

- American Society of Civil Engineers (ASCE)
- International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE TC 104 committee member), ASCE Geo-Institute
- Earthquake Engineering and Soil Dynamics Committee of ASCE
- Earthquake Engineering Research Institute (EERI)
- GeoEngineering Extreme Event Reconnaissance (GEER), including leading 1 reconnaissance team and participating in 3 others since 2011

#### *Departmental Committee Participation*

- Graduate Committee (2013 – current)
- Awards Committee (2012)
- Environmental Engineering and Geotechnical Engineering Faculty Search Committee (2013 -2016)

#### *Journal Article Peer-Review Activities*

- ASCE Journal of Geotechnical and GeoEnvironmental Engineering
- Geotechnique
- EERI Journal of Earthquake Spectra
- Canadian Geotechnical Journal
- Journal of Earthquake Engineering
- Geotechnical Testing Journal
- Soils and Foundations
- Soil Dynamics and Earthquake Engineering
- Journal of Geotechnical and Geological Engineering
- Acta Geotechnica

#### *Proposal Reviewer and Panelist*

- NSF's Graduate Research Fellowship Program (GRFP) panel
- NSF's Network for Earthquake Engineering Simulation (NEES)
- NSF's Geotechnical Engineering and Geomechanics unsolicited proposal panel
- US Geological Survey (USGS) Earthquake Engineering (EE) panel