H. BENJAMIN MASON

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EDUCATION AND EMPLOYMENT INFORMATION

Education

2011	Ph.D., Civil & Environmental Engineering University of California, Berkeley
2007	M.S., Civil & Environmental Engineering University of California, Berkeley
2006	B.S., Civil & Environmental Engineering Georgia Institute of Technology

Academic Experience

Sept 2011–present	Assistant Professor School of Civil and Construction Engineering Oregon State University
Aug 2006–Jul 2011	Graduate Student Researcher, Graduate Student Instructor and Teaching Assistant Department of Civil & Environmental Engineering University of California, Berkeley

TEACHING, ADVISING, AND OTHER ASSIGNMENTS

Instructional Summary

Number	Course Title	Term/Year	Credits	Enrollment
CE572	Advanced Geotechnical Laboratory	Fall 2011	4	9
CE578	Geotechnical Earthquake Engineering	Winter 2012	4	20
CE577	Shear Strength and Slope Stability	Fall 2012	4	17
CE578	Geotechnical Earthquake Engineering	Winter 2013	4	14
CE373	Geotechnical Engineering II	Spring 2013	4	105
CE577	Shear Strength and Slope Stability	Fall 2013	4	9

Student and Participant Evaluations

Course No.	Term	Enroll-ment	# Re-spond-ing	Student Evaluation (#1/#2)	College Medians (#1/#2)	Δ	Required /Elective
CE572	Fall 2011	9	7	5.0/5.3	4.6/4.8	+0.4/+0.5	Required
CE578	Winter 2012	20	19	4.7/5.0	4.6/4.8	+0.1/+0.2	Required
CE577	Fall 2012	17	10	5.5/5.7	4.6/4.8	+0.9/+0.9	Required
CE578	Winter 2013	14	10	5.2/5.0	4.5/4.6	+0.7/+0.4	Required
CE373	Spring 2013	105	88	4.9/5.1	4.6/4.8	+0.3/+0.3	Required

Question 1: The course as a whole was?
Question 2: The instructor's contribution to the course was?
Scale: 1.0 Very Poor to 6.0 Excellent

Advising

Graduate Advisees or Co-Advisees – Completed

Student	Degree	Thesis	Graduated
1. William White	MS	*Adjacent structure response sensitivity to seismic events using the direct differentiation method*	Spring 2013
2. Kyle Romney	MS	*Soil-bridge interaction during long-duration earthquake motions*	Spring 2013

Graduate Advisees or Co-Advisees – Current

Student	Degree	Expected Graduation
1. Abbas Abdollahi	PhD	Spring 2015
2. Kengo Kato	PhD	Spring 2016
3. Travis Kraupa	MS	Fall 2013
4. Trevor Carey	MS	Summer 2014
5. Kim Kilroy	MS	Spring 2015
6. Teresa Morales	MS	Spring 2014

B4.3. Graduate Thesis or Project Committees

Minor Professor or Committee Member:
Graduated

1. Tadesse Meskele, PhD, 2013
2. Paul Barker, MS, 2012
3. Anthony Sorentino, MS, 2012
4. Andrew Strahler, MS, 2012
5. Jessica Young, MS, 2012
6. Quadri Owokoniran, MS, 2012
7. Mahyar Sharifi-Mood, MS, 2013
8. Yicheng Long, MS, 2013
9. Thomas Keatts, MEng, 2011
10. Calvert Jones, MEng, 2012
11. Robert Kruse, MEng, 2012
12. Camille Wilson, MEng, 2012
13. Stephan Stys, MEng, 2013
14. Gregory Thibeaux, MEng, 2013

Current

1. Deepak Rayamajhi, PhD
2. Seth Reddy, PhD

3. Nasim Adami, MS
4. Christopher Newton, MS
5. John Raugust, MS
6. Jordan Melby, MEng
7. Christy Knierim, Undergraduate

B4.4. Undergraduate Research Assistants

1. Robert Leaf (Winter 2014)
2. Travis Kraupa (Summer 2012)

Other Advising

Faculty Adviser, Li Zheng, Visiting Scholar from Nanjing Hydraulic Research Institute, Nanjing, China (March 2012 – March 2013).

Co-adviser, Luís Carlos Rodrigues de Sousa Miranda, Doctoral Student, Laboratório Nacional de Engenharia Civil (LNEC), Lisbon, Portugal (April 2013 – present)

SCHOLARSHIP AND CREATIVE ACTIVITY

Publications

Underline denotes advised graduate student researcher

Refereed Journal Publications

1. Yeh, H. and **Mason, H. B.** Sediment response to tsunami loading: Mechanisms and estimates, *Geotechnique*. Submitted for possible publication 02/20/2013. Resubmitted with revisions 08/14/2013. Accepted for publication 10/01/2013.
2. Chen, Z., Trombetta, N. W., Hutchinson, T. C., **Mason, H. B.**, Bray, J. D., and Kutter, B. L. (2013). Seismic system identification for centrifuge-based nonlinear building models, *Journal of Earthquake Engineering* 17(4), 469-496. 10.1080/13632469.2012.762956.
3. Cox, B. R., Boulanger, R. W., Tokimatsu, K., Wood, C., Abe, A., Ashford, S., Donahue, J., Ishihara, K., Kayen, R., Katsumata, K., Kishida, T., Kokusho, T., **Mason, H. B.**, Moss, R., Stewart, J. P., Tohyama, K., and Zekkos, D. (2013). Liquefaction at strong motion stations and in Urayasu City during the 2011 Great East Japan Earthquake, *Earthquake Spectra* 29(S1), 55-80. 10.1193/1.4000110.
4. Trombetta, N. W., **Mason, H. B.**, Chen, Z., Hutchinson, T. C., Bray, J. D., and Kutter, B. L. (2013). Nonlinear dynamic foundation and frame structure response observed in geotechnical centrifuge experiments, *Soil Dynamics and Earthquake Engineering* 50, 117-133. 10.1016/j.soildyn.2013.02.010.
5. **Mason, H. B.**, Trombetta, N. W., Bray, J. D., Chen, Z., Hutchinson, T. C., and Kutter, B. L. (2013). Soil-foundation-structure interaction of shallowly embedded footings supporting inelastic frame structures, *Soil Dynamics and Earthquake Engineering* 48, 162-174. 10.1016/j.soildyn.2013.01.014.

Peer-Reviewed Archival Conference Publications

6. Kraupa, T. J., **Mason, H. B.**, Stuedlein, A. W., and Higgins, C. (2014). Characterization of ecoroofs and ecoroof soils. In *Proceedings of GeoCongress 2014*. Atlanta, Georgia. Accepted for publication.
7. Puangnak, H., Kutter, B. L., **Mason, H. B.**, Choy, B. Y., and Bray, J. D. (2012). Constructive and destructive footing-soil-footing interaction for vertically vibrating footings. In *Proceedings of Geocongress 2012*. Oakland, California. 1849-1858. 10.1061/9780784412121.190.

8. **Mason, H. B.**, Bray, J. D., Kutter, B. L., Wilson, D. W., and Choy, B. C. (2010). Earthquake motion selection and calibration for use in a geotechnical centrifuge, In *Proceedings of the Seventh International Conference of Physical Modelling in Geotechnics*, Zurich, Switzerland. 361-366.

Other Peer-Reviewed Publications

9. Trombetta, N. W., Fiegel, G. L., and **Mason, H. B.** (2012). Learning through doing: Using geotechnical research to prepare undergraduates for graduate school. In *Proceedings of Shaking the Foundations of Geo-engineering Educations 2012*. Galway, Ireland.
10. **Mason, H. B.** and Chen, Z. (2012). Progressive mainshock-aftershock damage in Christchurch, New Zealand. In *Proceedings of the 2012 NZSEE Conference*. Christchurch, New Zealand.
11. Fiegel, G. L., **Mason, H. B.**, and Trombetta, N. W. (2011). Graduate students mentoring undergraduate researchers on a large-scale experimental research project – A case study. In *Proceedings of the 118th ASEE Annual Conference & Exposition*. Vancouver, Canada.
12. **Mason, H. B.**, Chen, Z., Jones, K. C., Trombetta, N. W., Bray, J. D., Hutchinson, T. C., Bolisetti, C., Whittaker, A. S., Choy, B. Y., Kutter, B. L. and Fiegel, G. L. (2010). Soil-foundation-structure interaction effects on model buildings within a geotechnical centrifuge. In *Proceedings of the 9th US National and 10th Canadian Conference on Earthquake Engineering*. Toronto, Canada.

Journal Papers Currently under Review

13. Bolisetti, C., Whittaker, A. S., **Mason, H. B.**, Almufti, I., and Willford, M. Linear and nonlinear site response analysis for design and risk assessment of safety-related nuclear structures, *Nuclear Engineering and Design*. Submitted for possible publication on 10/18/2013.
14. Kraupa, T. J., Stuedlein, A. W., **Mason, H. B.**, and Higgins, C. C. Geotechnical characterization and drained shear strength of ecoroof soil, *Journal of Geotechnical and Geoenvironmental Engineering*. Submitted for possible publication on 10/09/2013.
15. Trombetta, N. W., **Mason, H. B.**, Zupan, J. D., Hutchinson, T. C., Bray, J. D., and Kutter, B. L. Nonlinear soil-foundation-structure and structure-soil-structure interaction: Engineering demands, *Journal of Structural Engineering*. Submitted for possible publication on 07/17/2013.
16. Trombetta, N. W., **Mason, H. B.**, Zupan, J. D., Hutchinson, T. C., Bray, J. D., and Kutter, B. L. Nonlinear soil-foundation-structure interaction: Centrifuge observations, *Journal of Geotechnical and Geoenvironmental Engineering*. Submitted for possible publication 03/28/2013. Resubmitted with revisions 09/08/2013.

Professional Meetings, Symposia, and Conferences

Presentations to Professional Groups

- Invited talk, Oregon-specific earthquake engineering issues, Construction Specification Institute (CSI): Willamette Valley Chapter Dinner Meeting, Eugene, Oregon, 25 April 2013
- Invited talk, Tsunami geotechnical engineering and advances in ecoroof design, Geotechnical Graduate Student Society of UC Davis Seminar, Davis, California, 14 March 2013
- Invited conference talk, Urban seismic response sensitivity of adjacent buildings, 10th International Conference on Urban Earthquake Engineering, Tokyo, Japan, 2 March 2013
- Conference talk, Understanding structure-soil-structure interaction using the direct differentiation method, 2012 Joint Conference of the Engineering Mechanics Institute and the 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, South Bend, Indiana, 18 June 2012
- Conference talk, Progressive mainshock-aftershock damage in Christchurch, New Zealand, 2012 New Zealand Society of Earthquake Engineering (NZSEE) Conference, University of Canterbury, Christchurch, New Zealand, 14 April 2012

- Exit seminar, Seismic performance assessment in dense urban environments, UC Berkeley Geoengineering Seminar, Berkeley, California, 20 April 2011
- Invited talk, Seismic performance assessment in dense urban environments, Tufts University, Department of Civil & Environmental Engineering, Medford, Massachusetts, 14 March 2011
- Invited talk, Seismic performance assessment in dense urban environments, Oregon State University, School of Civil & Construction Engineering, Corvallis, Oregon, 1 March 2011
- Invited talk, Soil-structure interaction and SSI of closely-spaced buildings, UC Berkeley Geoengineering Seminar, Berkeley, California, 3 November 2010
- Conference talk, Seismic performance assessment in dense urban environments, PEER Annual Meeting, Quake Summit, San Francisco, California, 9 October 2010
- Invited talk, Soil-structure interaction procedures and SSI effects of closely-spaced buildings, UC Berkeley Geoengineering Seminar, Berkeley, California, 28 April 2010
- Invited talk, Performing complex centrifuge tests while remaining sane and quelling staff revolts: A cautionary tale, Geotechnical Graduate Student Society of UC Davis Seminar, Davis, California, 7 January 2010

Participation at Invitational Workshops

- Workshop talk, Overview of geotechnical earthquake engineering at OSU, Advances in Geotechnical Earthquake Engineering Seminar, Oregon State University, Corvallis, Oregon, 23 March 2013
- Workshop talk, Seismic performance assessment in dense urban environments, San Francisco Geo-Institute Chapter Workshop, Oakland, California, 15 February 2011
- Workshop talk, Soil-foundation-structure interaction in dense urban environments: Preliminary results from two SFSI centrifuge tests, San Francisco Geo-Institute Chapter Workshop, Oakland, California, 16 February 2010
- Workshop talk, Centrifuge testing with a large team, 5th Annual UCD/RPI Centrifuge Research and Training Workshop, Davis, California, 11 September 2009

Grant and Contract Support

Agency & Dates	PI (and coPIs)	Title	Total Budget
PacTrans: Region 10 UTC 10/13-09/14	H.B. Mason and A. Barbosa	SSI Bridge 2: Evaluation of soil-structure interaction effects on PNW bridges	$20,000
Cascadia Lifelines Program 04/13-09/14	H.B. Mason	Comprehensive seismic analysis of Willamette Valley Silts	$66,986
PacTrans: Region 10 UTC 07/12-06/13	A. Barbosa and H.B. Mason	SSI Bridge: Evaluation of soil-structure interaction effects on PNW bridges	$40,000
NSF 07/12-06/15	C. Higgins, H.B. Mason and A.W. Stuedlein	Multihazard performance and design of ecoroofs	$335,000
Caltrans 07/12-06/13	S. Ashford and H.B. Mason	Benchmarking recently developed procedures for designing pile foundations in laterally spreading ground	$89,914
		Totals	$551,900

Other Scholarship and Creative Activities

Non-refereed Conference Proceedings

- Bolisetti, C., Whittaker, A. S., Almufti, I., **Mason, H. B.**, and Wilford, M. (2013). Numerical methods in site response analysis for nuclear applications, In *Transactions of SMiRT-22*, San Francisco, California.
- **Mason, H. B.**, White, W. S., and Scott, M. H. (2013). Urban seismic response sensitivity of adjacent buildings, In *Proceedings of the Tenth International Conference on Urban Earthquake Engineering*. Tokyo, Japan.
- Trombetta, N. W., Hutchinson, T. C., **Mason, H. B.**, Zupan, J. D., Bray, J. D., Bolisetti, C., Whittaker, A. S., Chen, Z., and Kutter, B. L. (2012). Centrifuge modeling of structure-soil-structure interaction: Seismic performance of inelastic building models. In *Proceedings of the 15th World Conference on Earthquake Engineering*. Lisbon, Portugal.
- Kayen, R. E., Ishihara, K., Stewart, J. P., Tokimatsu, K., Cox, B. Tanaka, Y., Kokusho, T., **Mason, H. B.**, Moss, R. E. S., Zekkos, D., Wood, C. M., Katsumata, K., Estevez, I. A. Cullenward, S. S., Tanaka, H., Harder, L. F., Kelson, K. I., and Kishida, T. (2012) Geotechnical deformations at ground failure sites from the March 11, 2011 Great Tohoku Earthquake, Japan: Field mapping, lidar modeling, and surface wave investigation. In *Proceedings of the 9th CUEE and 4th ACEE Joint Conference*. Tokyo, Japan.
- **Mason, H. B.**, Jones, K. C., Zupan, J. D., Bray, J. D., Trombetta, N. W., Hutchinson, T. C., Chen, Z., Choy, B. Y., Puagnak, H., Kutter, B. L., Montgomery, J., Patel, R. J., Proto, C., Gille, S., Lund, J., Fiegel, G. L., Bolisetti, C., Whittaker, A. S., and Reitherman, R. (2011). Examining structure-soil-structure interaction using dynamic centrifuge testing, In *Proceedings of the NSF CMMI Research and Innovation Conference*. Atlanta, Georgia.
- Chen, Z., Hutchinson, T. C., Trombetta, N. W., **Mason, H. B.**, Bray, J. D., Jones, K. C., Bolisetti, C., Whittaker, A. S., Choy, B. Y., Kutter, B. L., Fiegel, G. L., Montgomery, J., Patel, R. J., and Reitherman, R. D. (2010). Seismic performance assessment in dense urban environments: Evaluation of nonlinear building-foundation systems using centrifuge tests. In *Proceedings of the Fifth*

International Conference on Recent Advances in Geotechnical Engineering and Soil Dynamics. San Diego, California.

- **Mason, H. B.**, Bray, J. D., Jones, K. C., Chen, Z., Hutchinson, T. C., Trombetta, N. W., Choy, B. C., Kutter, B. L., Fiegel, G. L., Montgomery, J., Patel, R. J., Reitherman, R. D., Bolisetti, C. and Whittaker, A. S. (2010). Earthquake input motions and seismic site response in a centrifuge test examining SFSI effects. In *Proceedings of the Fifth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*. San Diego, California.

Other Publications

- Kengo, K., **Mason, H. B.**, and Ashford, S. A. (2013). *Benchmarking Recently Developed Procedures for Designing Pile Foundations in Laterally Spreading Ground*. Draft Technical Report. California Department of Transportation, Sacramento, California.
- **Mason, H. B.** (2011). *Seismic Performance Assessment in Dense Urban Environments*. PhD Dissertation. Department of Civil & Environmental Engineering, University of California, Berkeley.

Conference Abstracts

- White, W. S., Scott, M. H., and **Mason, H. B.** (2012). Probabilistic analysis of structure-soil-structure interaction in dense urban environments. In *Proceedings of the 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability*, Sound Bend, Indiana.

Press

- Terra, "Oregon 9.0: When the next big one comes, will we be ready?" Spring 2013. http://oregonstate.edu/terra/2013/05/oregon-9-0/
- Associated Press, "Northwest dams not built to withstand big quake." 1 April 2013. KTVB.com, Seattle Post-Intelligencer, Statesman Journal. http://www.statesmanjournal.com/viewart/20130402/NEWS/304020016/Corps-assesses-quake-threat-20-dams
- Life@OSU, "Engineer looks forward to making Oregon a safer state." 12 April 2012. http://oregonstate.edu/dept/ncs/lifeatosu/2012/engineer-looks-forward-to-making-oregon-a-safer-state/

Guest Lectures and Other Presentations

- Seismic site response, Guest Lecture, GEO 380: Earthquakes in the Pacific Northwest, Oregon State University, 10 February 2012
- NSF site visit presentation: NEES city block project, UC Davis Center for Geotechnical Modeling, Davis, California, 24 May 2011

SERVICE

University Service

- Faculty Search Committee Member, Geotechnical Engineering, School of Civil & Construction Engineering, 2011-2012
- Fundamentals of Engineering, Geotechnical Engineering Review, Chi Epsilon, 2012
- Geotechnical Engineering Group Coordinator, School of Civil & Construction Engineering, 2011-2013
- Graduate Assessment Committee, Chair, School of Civil & Construction Engineering, 2012-present
- Graduate Committee, School of Civil & Construction Engineering, 2011- present
- Strategic Planning Committee, School of Civil & Construction Engineering, 2012-present

Service to the Profession

Conference and Workshop Organization

- Short Course on Seismic Site Response Analysis and Seminar on Advances in Geotechnical Earthquake Engineering, March 22-23, 2013, Corvallis, Oregon. Co-organized with Prof. Armin Stuedlein.

Conference Program Committees

- Session Chair, Computational Mechanics I: 2012 Joint Conference of the Engineering Mechanics Institute and the 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, South Bend, Indiana, 18 June 2012
- Session Chair, Session S6-4 – Structural Engineering – Others: 10th International Conference on Urban Earthquake Engineering, Tokyo, Japan, 2 March 2013

Reviewing

- Proposals
    - Icelandic Research Fund, 2013 (1 proposal)
    - Icelandic Research Fund, 2012 (1 proposal)
- Referred Journal Articles
    - *ASTM Journal of Testing and Evaluation* (1 paper)
    - *ASCE Journal of Geotechnical and Geoenvironmental Engineering* (1 paper)
    - *Canadian Geotechnical Journal* (1 paper)
    - *Geotechnical and Geological Engineering* (1 paper)
    - *Soil Dynamics and Earthquake Engineering* (1 paper)
- Refereed Conference Proceedings
    - ASCE *GeoCongress 2012* Proceedings (2 papers)
    - *Sound Geotechnical Research to Practice*, ASCE Geotechnical Special Publication (2 papers)

Other

- American Society of Civil Engineers (ASCE), Member, 2008 – present
    - Geo-Institute
    - Engineering Mechanics Institute
    - San Francisco Section, Geotechnical Group, 2008 – 2011
    - Portland Section, Geotechnical Group, 2012 – present
- American Society of Engineering Education (ASEE), Member, 2011 – present
- Consortium of Universities for Research of Earthquake Engineering (CUREE), Member, 2012 – present
- Earthquake Engineering Research Institute (EERI), Member, 2008 – present
    - Student Activities Committee, Member, 2013 – present
- Geotechnical Extreme Events Reconnaissance (GEER), Member, 2007 – present
    - Recorder, March 2007 – May 2009
- Seismological Society of America, Member, 2008 – present
- United States Universities Council on Geotechnical Education and Research (USUCGER), Member, 2011 – present

AWARDS

National and International Awards

Virginia Tech Future Faculty Workshop Participant, 2011
National Science Foundation Graduate Fellowship Honorable Mention, 2006
Tau Beta Pi (Engineering Honor Society), 2004

Chi Epsilon (Civil Engineering Honor Society), 2004

University or Community Awards

Outstanding Graduate Student Instructor Award, UC Berkeley, 2008
William T. and Helen S. Halstead Scholarship, UC Berkeley, 2007-2008
H. Bolton Seed Fellowship, UC Berkeley, 2006-2007
William V. Power Graduate Award, UC Berkeley, 2006
Outstanding Sophomore in Civil Engineering Award, Georgia Tech, 2004
President's Undergraduate Research Award, Georgia Tech, 2004