

JOSEPH WARTMAN

H. R. Berg Associate Professor of Civil and Environmental Engineering
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University of Washington
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EDUCATION

- Ph.D. University of California, Berkeley, Civil and Environmental Engineering, 1999
Dissertation: "*Physical Model Studies of Seismically Induced Deformations in Slopes*"
- M.Eng. University of California, Berkeley, Civil Engineering, 1996
Minors: Geology and Construction Management
Thesis: "*A Laboratory Study of the Effects of Fly Ash on the Geotechnical Properties of a Soft Clay*"
- M.S. University of California, Berkeley, Civil Engineering, 1996
- B.C.E. Villanova University, Civil Engineering, 1990

PROFESSIONAL POSITIONS

- H. R. Berg Associate Professor of Civil and Environmental Engineering 2010 to current
University of Washington, Seattle, Washington
- Associate Professor of Civil, Architectural and Environmental Engineering 2006 to 2010
- Assistant Professor of Civil, Architectural and Environmental Engineering 2000 to 2006
Drexel University, Philadelphia, Pennsylvania
- Project Manager 1999 to 2000
Golder Associates, Inc., Oakland, California
- Graduate Student Researcher/Graduate Student Instructor 1995 to 1999
University of California, Berkeley, California
- Associate Project Engineer 1990-1994
Roy F. Weston, Inc., West Chester, Pennsylvania

VISITING APPOINTMENTS

- Visiting Scholar 2007-2008
Universidad Politècnica de Catalunya, Barcelona, Spain

AWARDS AND HONORS

- H. R. Berg Endowed Professorship, University of Washington, 2010 to current
- Geotechnical Engineer of the Year, American Society of Civil Engineers, Philadelphia Section, 2007
- John J. Gallen Memorial Award for Technical Advancements, Villanova University, 2005
- National Science Foundation Faculty Early Career Development (CAREER) Award, 2002

Sigma Xi Scientific Research Society, 2002 to current
Outstanding Graduate Student Instructor Award, University of California, Berkeley, 1999
Jane Lewis Fellowship, University of California, Berkeley, 1994
College of Engineering Award for Meritorious Service, Villanova University, 1990
Chi Epsilon Civil Engineering Honor Society, 1989 to current

PROFESSIONAL LICENSURE

Registered Professional Civil Engineer in California, C-56253
Registered Professional Civil Engineer in Pennsylvania, PE-052538-E

PUBLICATIONS

Books (3)

Wartman, J. and Malasavage, N. E. (2010) "Spatial Analysis for Identifying Urban Damage Patterns," Chapter in *Methods and Techniques in Urban Engineering*, I-Tech Publishing, ISBN 9789533070964
Porbaha, A., Shen, S.-L., Wartman, J. and Chai, J.-C., eds. (2006) *Ground Modification and Seismic Mitigation*, ASCE Press, Reston, Virginia, ISBN 0784408645
Aydilek, A. and Wartman, J., eds. (2005) *Recycled Material in Geotechnics*, ASCE Press, Reston, Virginia, ISBN 0784407568

Journals (25)

Urias, D., Wartman, J., and Gallagher, P. (2010) "Critical features and value in assessing a research experience for undergraduates: the case of Engineering Cities," *Journal of STEM Education: Innovations and Research* (in review).
Andrejack, T. and Wartman, J. (2010) "Development and interpretation of a multi-axial tension test for geotextiles," *Geotextiles and Geomembranes* (in press).
Rodríguez-Marek, A., Bay, J., Park, K., Montalva, G., Cortez-Suárez, A., Wartman, J., and R. Boroschek (2010) "Engineering analysis of ground motion records from the Mw 8.4 Southern Peru Earthquake," *Earthquake Spectra*, Vol. 26, No. 2, pp. 499–524.
Mavrouli, O., Corominas, J., and Wartman, J. (2009) " Methodology to evaluate rock slope stability under seismic conditions at Solá de Santa Coloma, Andorra," *Natural Hazards and Earth System Science*, Vol. 9, pp.1763-1773.
Grubb, D. G., Wartman, J., and Malasavage, N. E. (2008) "Aging of Crushed Glass-Dredged Material Blend Embankments," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 134, No. 11, pp. 1676-1684.
Seed, R., Bea, R., Abdelmalak, R., Athanasopoulos-Zekkos, A., Boutwell, G., Briaud, J.-L., Cheung, C., Cobos-Roa, D., L. Ehrensing, L., Govindasamy, A., Harder, L., Inkabi, K., Kammerer, A., Karadeniz, D., Kayen, R., Moss, R., Nicks, J., Pestana, J., Porter, J., Rhee, K., Riemer, M., Rogers, J., Storesund,, Vera-Grunauer, X., and Wartman, J. (2008) "New Orleans and Hurricane Katrina: I - Introduction, Overview,

- and the East Flank," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 134, No. 5, pp. 701-717.
- Seed, R., Bea, R., Athanasopoulos-Zekkos, A., Boutwell, Bray, J. D., Cheung, C., Cobos-Roa, D., Harder, L., Pestana, J., Riemer, M., Rogers, J., Storesund, R., Vera-Grunauer, X., and Wartman, J. (2008) "New Orleans and Hurricane Katrina: II - The Central Region and the Lower Ninth Ward," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 134, No. 5, pp. 718-739.
- Seed, R., Bea, R., Athanasopoulos-Zekkos, A., Boutwell, Bray, J. D., Cheung, C., Cobos-Roa, D., Harder, L., Moss, R., Pestana, J., Riemer, M., Rogers, J., Storesund, R., Vera-Grunauer, X., and Wartman, J. (2008) "New Orleans and Hurricane Katrina: III - The 17th Street Drainage Canal," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 134, No. 5, pp. 740-761.
- Seed, R., Bea, R., Athanasopoulos-Zekkos, A., Boutwell, Bray, J. D., Cheung, C., Cobos-Roa, D., Cohen-Waeber, J., Collings, B., Harder, L., Keyen, R., Pestana, J., Riemer, M., Rogers, J., Storesund, R., Vera-Grunauer, X., and Wartman, J. (2008) "New Orleans and Hurricane Katrina: IV - The Orleans East Bank (Metro) Protected Basin," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 134, No. 5, pp. 762-779.
- Malasavage, N. E., Gallagher, P. M., Grubb, D. G., Wartman, J., and Carnivale, M. (2007) "Modifying a Plastic Clay with Crushed Glass: Implications for Constructed Fills," *Soils and Foundations*, Vol. 47, No. 6, pp. 1017-1028.
- Wartman, J., Natale, M., and Strenk, P. M., (2007) "Immediate and Time Dependent Compression of Tire Derived Aggregate," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 133, No. 3, pp. 245-256.
- Strenk, P. M., Wartman, J., Grubb, D. Humphrey, D., and Natale, M. (2007) "Variability and Scale-Dependency of Tire Derived Aggregate," *Journal of Materials in Civil Engineering*, Vol. 19, No. 3, pp. 233-241.
- Rodríguez-Marek, A., Alva Hurtado, J., Cox, B., Meneses, J., Montalva, G. A., Moreno, V., Olcese, M., Sancio, R., and Wartman, J. (2007) "Geotechnical Aspects of the 15 August 2007 Pisco, Peru Earthquake," *Revista Internacional de Desastres Naturales, Accidentes e Infraestructura Civil*, Vol. 7, No. 2-3, pp. 239-258 (in Spanish).
- Keefer, D., Wartman, J., Navarro-Ochoa, C., Rodriguez-Marek, A., and Wieczorek, G. (2006). "Landslides Caused by the M 7.6 Tecomán, Mexico Earthquake of January 21, 2003," *Engineering Geology*, Vol. 86, nos. 2-3, pp.183-197.
- Grubb, D., Gallagher, P., Wartman, J., Liu, Y., and Carnivale, M. S. (2006) "Laboratory Evaluation of Crushed Glass-Dredged Material Blends," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 132, No. 5, pp. 562-576.
- Grubb, D., Davis, A., Sands, S., Carnivale, M. S., and Wartman, J. (2006) "Field Evaluation of Crushed Glass-Dredged Material Blends," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 132, No. 5, pp. 77-590.
- Wartman, J. (2006). "Geotechnical Physical Modeling for Education: A Learning Theory-Based Approach," *Journal of Professional Issues in Engineering Education and Practice*, Vol. 132, No. 4, pp. 288-296.

Wartman, J., Rondinel-Oviedo, E. A., Rodriguez-Marek, A. M. (2006). "Performance and Analysis of Mechanically Stabilized Earth (MSE) Walls in the Tecomán, Mexico Earthquake," *Journal of Performance of Constructed Facilities*, Vol. 20, No. 3, pp. 287-299.

Wartman, J., Rodriguez-Marek, A., Macari, E. J., Deaton, S., Ramírez-Reynaga, M., Navarro Ochoa, C., Callen, S., Repetto, P., and Ovando Shelley, E. (2005). "Geotechnical Aspects of the January 2003 Tecomán, Mexico Earthquake," *Earthquake Spectra*, Vol. 21, No. 2, pp. 493-538.

Wartman, J. and Riemer, M. (2005). "The Use of Fly Ash to Alter the Engineering Properties of a 'Model' Clay," *International Journal of Physical Modeling in Geotechnics*, Vol. 5, No. 2, pp. 17-29.

Wartman, J., Seed, R. and Bray, J. (2005). "Shaking table modeling of seismically induced deformation in slopes," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 131, No. 5, pp. 610-622.

Wartman, J., Grubb, D., and Nasim, A. (2004). "Select Engineering Characteristics of Crushed Glass," *Journal of Materials in Civil Engineering*, Vol. 16, No. 6, pp. 526-539.

Wartman, J., Rodriguez-Marek, A., Repetto, P. and Keefer, D. (2003). "Ground Failure. Southern Peru Earthquake of June 21, 2001 Reconnaissance Report," *Earthquake Spectra*, Vol. 19(A), No. 1, pp. 35-56.

Repetto, P., Wartman, J., and Rodriguez-Marek, A. (2003) "Mines: Geotechnical Aspects. Southern Peru Earthquake of June 21, 2001 Reconnaissance Report," *Earthquake Spectra*, Vol. 19(A), No. 1, pp. 57-72.

Rodriguez-Marek, A., Williams, J., Wartman, J., and Repetto, P. (2003). "Ground Motion and Site Response. Southern Peru Earthquake of June 21, 2001 Reconnaissance Report," *Earthquake Spectra*, Vol. 19(A), No. 1, pp. 11-34.

Wartman, J. Bray, J.D., Seed, R. B. (2003). "Inclined Plane Studies of the Newmark Sliding Block Procedure," *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 129, No. 8, pp. 673-684.

Conference Publications (33)

Ozkahriman, F. and Wartman, J. (2010) "Reliability of One-g Shaking Table Experiment," 7th International Conference on Physical Modelling in Geotechnics, Zurich, June 28-July 1 (In press)

Cox, B., Cothren, J., Barnes, J., Wartman, J., Meneses, J., Rodriguez-Marek, A. (2010) "Towards Quantifying Movement of a Massive Lateral Spread Using High-Resolution Satellite Image Processing," 2010 U.S.-Canadian Earthquake Conference, (In press).

Wartman, J. and Malasavage, N. (2010) "Where Topographic Effects Responsible for Building Collapses in the 2001 Southern Peru Earthquake?," *Proc. 7th International Conference on Urban Earthquake Engineering and 5th International Conference on Earthquake Engineering*, Tokyo, March 3-5.

Meneses, J. F., Franke, K. W., Cox, B. R., Rodriguez-Marek, A., and Wartman, J. (2009) "Performance-Based Evaluation of a Massive Liquefaction-Induced Lateral Spread in a Subduction Zone," *Proc., International Conference on Performance-Based Design in Earthquake Geotechnical Engineering*, Tokyo, June 15-18.

Strenk, P. M. and Wartman, J. (2008) "Validity of the Pseudostatic Surface Assumption for Evaluating Seismically-Induced Deformation in Slopes," *Proc., First International FLAC/DEM Symposium on Numerical Modeling*, Minneapolis, August 25-27

Mavrouli, O., Corominas, J., and Wartman, J. (2008) "The Seismic Effect on Rockfall Hazards," *Proc., Interdisciplinary Workshop on Rockfall Protection*, Morschach, Switzerland, June 23-25

Malasavage, N. and Wartman, J. (2008) "Spatial Analysis of Damage Distribution in the 2001 Southern Peru Earthquake," *Proc., Geotechnical Earthquake Engineering and Soil Dynamics IV*, Sacramento, Calif., May 18-22

Andrejack, T. L. and Wartman, J. (2008) "Development of a Multi-Axial Test for Geotextiles," *Proc., First Pan American Geosynthetics Conference & Exhibition*, Cancun, Mexico, March 2-5

Silva, W., Rodriguez-Marek, A., and Wartman, J. (2007) "Development of synthetic ground motions for the June 23rd 2001 Southern Peru Earthquake," *Proc., 13th PanAmerican Conference on Soil Mechanics and Geotechnical Engineering*, Isla de Margarita, Venezuela, July 15-19

Rondinel-Oviedo, E., Rodriguez-Marek, A., Wartman, J., Zegarra-Pellanne, J., and Repetto, P. (2007) "Geotechnical Aspects of the June 23rd 2001 (Mw=8.4) Southern Perú earthquake," *Proc., 13th PanAmerican Conference on Soil Mechanics and Geotechnical Engineering*, Isla de Margarita, Venezuela, July 15-19 (in Spanish)

Ozkahriman, F. Nasim, A. and Wartman, J. (2007) "Topographic Effects in a Centrifuge Model Experiment," *Proc., 4th Intl. Conf. on Earthquake Geotechnical Engineering*, Thessaloniki, Greece, June 25-28

Seed, R., Bea, R., Abdelmalak, R., Athanasopoulos, A., Boutwell, G., Bray, J., Briaud, J.-L., Cheung, C., Cohen-Waeber, J., Collins, B., Cobos-Roa, D., Farber, D., Hanenmann, M., Harder, L., Inkabi, K., Kammerer, A., Karadeniz, D., Kayen, R., Moss, R., Nicks, J., Nimala, S., Pestana, J., Porter, J., Rhee, K., Riemer, M., Roberts, K., Rogers, J., Storesund, Govindasamy, A., Vera-Grunauer, X., Wartman, J., Watkins, C., Wenk, E., Yim, S. (2007) "Investigation of Levee Performance in Hurricane Katrina: A Summary of Findings from the Independent Levee Investigation Team (ILIT)." *Proc., Engineering of Geo-Hazards*, ASCE Metropolitan Section Geotechnical Group Specialty Seminar, New York City, May 16-17

Ozkahriman, F. and Wartman, J. (2007) "Investigation of 1-G Similitude Laws by "Modeling-of-Models" Exercise," *Advances in Measurement and Modeling of Soil Behavior*, ASCE Geotechnical Special Publication 173, Part of *Proc., GeoDenver: New Peaks in Geotechnics*, Denver, February 18-21

Grubb, D., Wartman, J., Malasavage, N., and Mibroda, J. (2007) "Turning Mud into Suitable Fill: Amending OH, ML-MH, and CH Soils with Curbside-Collected Crushed Glass," *Geoenvironmental Engineering*, ASCE Geotechnical Special Publication 163, Part of *Proc., GeoDenver: New Peaks in Geotechnics*, Denver, February 18-21

Seed, R., Bea, R., Abdelmalak, R., Athanasopoulos, A., Boutwell, G., Bray, J., Briaud, J.-L., Cheung, C., Cohen-Waeber, J., Collins, B., Cobos-Roa, D., Farber, D., Hanenmann, M., Harder, L., Inkabi, K., Kammerer, A., Karadeniz, D., Kayen, R., Moss, R., Nicks, J., Nimala, S., Pestana, J., Porter, J., Rhee, K., Riemer, M., Roberts, K., Rogers, J., Storesund, Govindasamy, A., Vera-Grunauer, X., Wartman, J., Watkins, C., Wenk, E., Yim, S. (2007) "Investigation of the Performance of the New Orleans Regional Flood Protection Systems During Hurricane Katrina: Lessons Learned," *Embankments, Dams, and Slopes*, ASCE GSP 161, *Proc., GeoDenver: New Peaks in Geotechnics*, Denver, February 18-21

- Seed, R., Bea, R., Athanasopoulos, A., Boutwell, G., Bray, Cheung, C., Collins, B., Cobos-Roa, D., Harder, L., Kayen, R., Pestana, J., Porter, J., Riemer, M., Rogers, J., Storesund, R., Vera-Grunauer, X., and Wartman, J. (2007) "Investigation of Levee Performance in Hurricane Katrina: The Inner Harbor Navigation Channel," Embankments, Dams, and Slopes, ASCE GSP 161, Part of *Proc., GeoDenver: New Peaks in Geotechnics*, Denver, February 18-21
- Seed, R., Bea, R., Athanasopoulos, A., Boutwell, G., Bray, Cheung, C., Collins, B., Cobos-Roa, D., Cohen-Waeber, L., Harder, L., Kayen, R., Moss, R., Pestana, J., Porter, J., Riemer, M., Rogers, J., Storesund, R., Vera-Grunauer, X., and Wartman, J. (2007) "Investigation of Levee Performance in Hurricane Katrina: The New Orleans Drainage Canals," Embankments, Dams, and Slopes, ASCE GSP 161, Part of *Proc., GeoDenver: New Peaks in Geotechnics*, Denver, February 18-21
- Cleveland, L. and Wartman, J. (2006) "Principles and Application of Digital Photogrammetry for Geotechnical Engineering," *Proc., GeoShanghai International Conference*, Shanghai, China, June 6-8
- Nasim, A. S. M. and Wartman, J. (2006) "Fully Coupled Modeling of Seismic Compression," *Proc., Fourth International FLAC Symposium*, Madrid, May 29-31
- Grubb, D. G., Carnivale, M. Wartman, J., and Gallagher, P. (2006) "Select Engineering Properties of Crushed Glass-Dredged Material (CG-DM) Blends," *Proc., ISSMGE: 5th International Congress on Environmental Geotechnics*, Cardiff, Wales, UK, June 26-30
- Cortez-Flores, A., Rodriguez-Marek, A., and Wartman, J. (2005). "Failure Mechanisms Observed in Highway Infrastructure During the 2001 Southern Peru Earthquake." *Proc., Second Pan-American Congress on Integrated Transportation*, Tarija, Bolivia (In Spanish)
- Wartman, J., Harmanos, D., and Ibanez, P. (2005) "Development of a Versatile Device for Measuring the Tensile Properties of Geosynthetics," in *Proc., 18th Geosynthetic Research Institute Conference*, Austin, Texas, January
- Wartman, J., Grubb, D. G., and Strenk, P. (2004) "Engineering Properties of Crushed Glass-Soil Blends," *Geotechnical Engineering for Transportation Projects: Proceedings of Geo-Trans 2004*, July 27-31.
- Wartman, J., Rodriguez-Marek, A., Keefer, D., Deaton, S., Repetto, P. and Macari, E. (2004) "Preliminary Geotechnical Engineering Observations of the Tecoman, Mexico Earthquake of January 21, 2003," *Proc. of Fifth Intl. Conf. on Case Histories in Geotechnical Engineering*, New York, April 13-17
- Rodriguez-Marek, A., Wartman, J., Repetto, P. and Williams, J. (2004) "Observations of Site Amplification and Liquefaction in the June 23, 2001, Southern Peru Earthquake," *Proc. of Fifth Intl. Conf. on Case Histories in Geotechnical Engineering*, New York, April 13-17
- Rodriguez-Marek, A. and Wartman, J. (2004) "Characteristics of Strong Ground Motion Recorded During the 2003 Tecomán, Mexico, Earthquake," *Proc., 11th Intl. Conf. on Soil Dyn. and Earthquake Engineering*, Berkeley, Calif., January 7-9
- Wartman, J. and Reimer, M. F., (2002) "The Use of Fly Ash to Alter the Geotechnical Properties of Artificial "Model" Clay," *Proc., International Conference on Physical Modeling in Geotechnics*, St. John's, Canada, July 10-12

- Wartman, J., Bray, J.D. and Seed, R. B. (2001) "Shaking Table Experiment of a Slope Subjected to Two Ground Motions," *Proc, Forth Intl. Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, San Diego, California, March 14-16
- Wartman, J., Vahdani, S., and Liang, H. S. (2001) "Seismic Soil Structure Interaction Analyses for an Office Building in Oakland, California," *Proc, Forth Intl. Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, San Diego, California, March 14-16
- Wartman, J., Seed, R. B., Bray, J. D., Riemer, M. F., and Rathje, E. M. (1999) "Laboratory Evaluation of the Newmark Method for Assessing Seismically-Induced Slope Deformations," *Proc., Second International Conference on Earthquake Geotechnical Engineering*, Lisbon, Portugal, June 21-25
- Wartman, J., Riemer, M. F., Bray, J. D., and Seed, R. B. (1998) "Newmark Analyses of a Shaking Table Slope Stability Experiment," *Proc., Geotechnical Earthquake Engineering and Soil Dynamics III*, Seattle, August 3-6
- Riemer, M. F., Gookin, W. B., Bray, J. D., and Wartman, J. (1998) "Using Reflected Shear Waves to Measure Small Strain Dynamic Properties," *Proc., Fifth Caltrans Seismic Research Workshop*, California Dept of Transportation, Sacramento, Calif., June 16-18
- Wartman, J., Rathje, E. M., Bray, J. D., Riemer, M. F. and Seed, R. B. (1998) "Shaking Table-Based Evaluation of the Newmark Procedure for Estimating Seismically Induced Slope Deformations," *Proc., Fifth Caltrans Seismic Research Workshop*, California Dept of Transportation, Sacramento, Calif., June 16-18

Published Abstracts

- Wartman, J. and Strenk, P. (2009) "Uncertainty in Earthquake-Induced Deformations: History of the Calabasas Landslide," *The Next Generation of Research on Earthquake-induced Landslides: An International Conference in Commemoration of the 10th Anniversary of the Chi-Chi Earthquake*, Taipei, Taiwan, September 21-24.
- Wartman, J. (2009) "Earthquake-Induced Rockfall Hazard Assessment," *National Science Foundation Engineering Education Programs Awardees Conference*, Reston, VA, February 2-3.
- Urias, D., Wartman, J., Gallagher, P., and Morrison, K. (2009) "Assessment of the Engineering Cities REU Program," *National Science Foundation Engineering Education Programs Awardees Conference*, Reston, VA, February 2-3.
- Wartman, J., Cox, B., Meneses, J., Moreno, V., Olcese, M., Rodriguez-Marek, A, and Sancio, R. (2008) "Landslides Triggered by the 15 August 2007 M8.0 Pisco, Peru Earthquake," *Geophysical Research Abstracts*, Vol. 10, European Geophysical Union General Assembly, Vienna, April 13-18
- Mavrouli, O., Wartman, J., and Corominas, J. (2008) "Assessment of Earthquake-Induced Rockfall Hazards," *Geophysical Research Abstracts*, Vol. 10, European Geophysical Union General Assembly, Vienna, April 13-18
- Wartman, J., Rodriguez-Marek, A., Macari, E. J., Deaton, S., Ramirez-Reynaga, M., Navarro Ochoa, C., Callen, S., Repetto, P., and Ovando Shelley, E. (2006) "Ground Failure in the January 2003 Tecoman, Mexico, Earthquake," *Seismological Research Letters*, 77(2), pp. 321-322, Annual meeting, Seismological Society of America, San Francisco, April 18-22

Wartman, J., Bray, J. D., and Seed, R. B., (2001) "Inclined Plane Studies of Seismically Induced Displacements in Slopes," Extended Abstract with Presentation, *Proc., Tenth International Conference on Soil Dynamics and Earthquake Engineering*, Philadelphia

Vahdani, S., Povone, M., Benson, S., Osmun, D., Ehasz, J. and Wartman, J., (2001) "Static and Dynamic Stability and Soil Liquefaction Analyses of the 200-Meter-High Rockfill San Roque Dam, Extended Abstract with Presentation, *Proc., Tenth International Conference on Soil Dynamics and Earthquake Engineering*, Philadelphia

Rodriguez-Marek, A., Repetto, P., Wartman, J., Zegarra-Pellanne, J., (2001) "Preliminary Observations of The Geotechnical Aspects of the June 23, 2001 Southern Peru Earthquake," Extended Abstract with Presentation, *Proc., Tenth International Conference on Soil Dynamics and Earthquake Engineering*, Philadelphia

Grubb, D. and Wartman, J., (2001) "Geotechnical Evaluation of Glass Cullet for Transportation Applications," *Proc. of Beneficial Use of Recycled Materials in Transportation Applications*, Washington, D.C., June 1

Major Reports

Schwartz, H., Corley, W., Desormeaux, E., Edge, B., Edwards, C., and Wartman, J. (2009) ASCE Post-Disaster Assessment Manual, American Society of Civil Engineers.

Seed, R., Bea, R., Abdelmalak, R., Athanasopoulos, A., Boutwell, G., Bray, J., Briaud, J.-L., Cheung, C., Cohen-Waeber, J., Collins, B., Cobos-Roa, D., Farber, D., Hanenmann, M., Harder, L., Inkabi, K., Kammerer, A., Karadeniz, D., Kayen, R., Moss, R., Nicks, J., Nimala, S., Pestana, J., Porter, J., Rhee, K., Riemer, M., Roberts, K., Rogers, J., Storesund, Govindasamy, A., Vera-Grunauer, X., Wartman, J., Watkins, C., Wenk, E., Yim, S. (2006) "*Investigation of the Performance of the New Orleans Flood Protection Systems in Hurricane Katrina on August 29, 2005, Volume I: Main Text and Executive Summary, Final Report July 31, 2006*," Independent Levee Investigation Team, Center for Information Technology Research in the Interests of Society (CITRIS), University of California, Berkeley

Seed, R., Nicholson, P., Dalrymple, R., Battjes, J., Bea, R., Boutwell, G., Bray, J., Collins, B., Harder, L., Headland, J., Inamine, M., Kayen, R., Kuhr, R., Pestana, J., Silva-Tulla, F., Storesund, R., Tanaka, S., Wartman, J., Wolff, T., Wooten, L., Zimmie, T. (2005) "*Preliminary Report on the Performance of the New Orleans Levee Systems in Hurricane Katrina on August 29, 2005*," Report No. UCB/CITRIS – 05/01, Center for Information Technology Research in the Interests of Society (CITRIS), University of California, Berkeley

Wartman, J., Seed, R. B., and Bray J.D. (2001) "*Physical Model Studies of Seismically Induced Deformations in Slopes*," Geo-Engineering Report No. UCB/GT/01-01, Department of Civil and Environmental Engineering, University of California, Berkeley

Wartman, J., Seed, R. B., and Bray J.D., (2001) "*Physical Model Studies of Seismically Induced Deformations in Slopes: Experimental Data*," Geo-Engineering Report No. UCB/GT/01-02, Department of Civil and Environmental Engineering, University of California, Berkeley

Travasarou, T., Bray, J., Wartman, J., Seed, R. and Riemer, M. (2001) "*Evaluation of Seismic Slope Displacement Procedures through Back-Analysis of Physical Models Tests*," Geo-Engineering Report No. UCB/GT/01-04, Department of Civil and Environmental Engineering, University of California, Berkeley

INVITED LECTURES, PANEL DISCUSSIONS, and CONFERENCE PRESENTATIONS

Invited Lectures

Delaware Valley Geo-Institute Seminar, April 2010
Geotechnical Extreme Event Reconnaissance (GEER) Association Workshop, May 2009
Drexel University, Homeland Security, Philadelphia Student Chapter Seminar, January 2009
Columbia University, Civil Engineering and Engineering Mechanics Seminar, October 2008
Rensselaer Polytechnic Institute, NEES Centrifuge Research and Training Workshop, September 2008
Imperial College London, Geotechnics Seminar, June 2008
Universitat Politècnica de Catalunya, Civil Engineering Seminar, May 2008
Universitat Politècnica de Catalunya, Landslide Research Group Seminar, November 2007
Centre for Post-Graduate Training and Research in Earthquake Eng. (ROSE School), Seminar, May 2008
ETH Zurich, Engineering Geology Seminar, April 2008
Drexel University, Order of the Engineer Induction Ceremony, Lecture, May 2007
Delaware Valley Geo-Institute, Annual Student Meeting, Lecture, February 2007
University of Pennsylvania, Environmental Science Seminar, March 2007
Drexel University, Great Works Symposium, Lecture, May 2006
American Society of Highway Engineers, Earthquake Engineering Short Course, April 2006
American Society of Highway Engineers, Dinner Meeting, Lecture, April 2006
Clemson University, Civil Engineering Seminar, April 2006
Virginia Polytechnic Institute, Civil and Environmental Engineering Seminar, April 2006
University of Pennsylvania, Environmental Science Seminar, February 2006
American Water Resources Association, Philadelphia Section, Seminar, November 2005
Valley Geo-Institute and ASCE Philadelphia Section, Special Presentation, November 2005
Villanova University, Civil and Environmental Engineering Seminar, October 2005
University of Pennsylvania, Environmental Science Seminar, February 2005
University of Delaware, Dept. of Civil and Environmental Engineering Seminar, April 2003
Delaware Valley Geo-Institute, Monthly Meeting, Lecture, September 2003
Drexel University, Graduate Student Association, Seminar, May 2003
Columbia University, Civil Eng. and Engineering Mechanics Seminar, November 2002
University of Pennsylvania, Earth and Environmental Science Seminar, February 2002
National Science Foundation Workshop on Use of Physical Modeling for Eng. Education, 2002
URS Corporation, Plymouth Meeting, Pennsylvania, Seminar, November 2001
Delaware Valley Geo-Institute, Monthly Meeting, Lecture, October 2001
Delaware Valley Port Authority, Seminar, December 2001
Berkeley Geotechnical Society, Research Seminar, May 1999

Association of Engineering Geologists, San Francisco Section, Monthly Meeting, Lecture, March 1999

Conference Presentations

The 7th International Conference on Urban Earthquake Engineering and 5th International Conference on Earthquake Engineering, *"Where Topographic Effects Responsible for Building Collapses in the 2001 Southern Peru Earthquake?"*, Tokyo, 2010, (Invited Talk)

The Next Generation of Research on Earthquake-Induced Landslides: An International Conference in Commemoration of the 10th Anniversary of the Chi-Chi Earthquake, *"Uncertainty in Earthquake-Induced Deformations: History of the Calabasas Landslide,"* Taipei, 2009 (Invited Talk)

European Geophysical Union, Annual Meeting, *"Landslides triggered by the 5 August 2007 M_w 8.0 Pisco, Peru earthquake,"* Vienna, 2008

Woman Engineers: Bridging the Past, Present, and Future, Society of Women Engineering Conference, *"Engineering for the Community,"* Philadelphia, 2006

Transportation Research Board, 85th Annual Meeting, *"Levee System Performance in Hurricane Katrina,"* Washington, D.C., 2006

Transportation Research Board, 84th Annual Meeting, *"Performance and Analysis of Mechanically Stabilized Earth (MSE) Walls in the Tecomán, Mexico Earthquake,"* Washington, D.C., 2006

GeoFrontiers/18th Geosynthetic Research Institute Conference *"Development of a Versatile Device for Measuring the Tensile Properties of Geosynthetics,"* Austin, Texas, 2005

Geotrans 2004, *"Engineering Properties of Crushed Glass-Soil Blends,"* Los Angeles, 2004

Eleventh International Conference on Soil Dyn. and Earthquake Engineering, *"Characteristics of Strong Ground Motion Recorded During the 2003 Tecomán, Mexico, Earthquake,"* Berkeley, Calif., 2004

International Conference on Physical Modeling in Geotechnics, *"The Use of Fly Ash to Alter the Geotechnical Properties of Artificial "Model" Clay,"* St. John's, Canada, 2002

Tenth International Conference on Soil Dynamics and Earthquake Engineering, *"Inclined Plane Studies of Seismically Induced Displacements in Slopes,"* Philadelphia, 2001

Tenth International Conference on Soil Dynamics and Earthquake Engineering, *"Geotechnical Aspects of the June 23, 2001 Southern Peru Earthquake: Preliminary Observations,"* Philadelphia, 2001

Geotechnical Earthquake Engineering and Soil Dynamics. *Newmark Analyses of a Shaking Table Slope Stability Experiment,"* Seattle, 1998

Fifth Caltrans Seismic Research Workshop, California Dept of Transportation *"Shaking Table-Based Evaluation of the Newmark Procedure for Estimating Seismically Induced Slope Deformations,"* Sacramento, Calif., 1998

Panel Discussions

Transportation Research Board, 85th Annual Meeting, "*Katrina: Infrastructure Damage and Rehabilitation*,"
January 23, 2006
Drexel University, Pennoni Honors College Special Meeting "*The Politics of Disaster*," October 2005

PROFESSIONAL ACTIVITIES

Editor and Editorial Board Service

Editor, *Journal of Geotechnical and Geoenvironmental Engineering*, 2010-present
Member, Editorial Board, *Journal of Geotechnical and Geoenvironmental Engineering*, 2005-2010

Committee Service

Member, ASCE Task Committee on Engineering Review Procedures, 2008-2009
Member, *International Advisory Committee*, GeoShanghai 2010, 2008-2010
Member, *Scientific Committee*, First International FLAC/DEM symposium on Numerical Modeling, 2008
Chair, *ASCE Geo-Institute Committee on Embankments, Dams and Slopes*, 2007-present
Member, *ASCE Inter-Institute Committee on Levees*, 2007-present
Member, *Site Operations Comm.*, George E. Brown Network for Earthquake Eng. Simulation, 2007-2009
Member, *Advisory Committee*, Civil and Environmental Eng. Dept., Villanova University, 2007-2010
Member, *Technical Committee*, GeoShanghai International Conference, 2005-2006
Member, *Managing Board*, ASCE Delaware Valley Geo-Institute, 2001-2004
Member, *ASCE Geo-Institute Committee on Embankments, Dams and Slopes*, 2002-2006
Member, *ASCE Geo-Institute Committee on Earthquake Engineering and Soil Dynamics*, 2004-present
Member, *Research Committee*, U.S. University Council of Geotechnical Engineering, 2004-2006
Member, *Scientific Committee*, 11th Intl. Conf. on Soil Dyn. and Earthquake Engineering, 2004
Member, *NEHRU Graduate Fellowship Committee*, Earthquake Engineering Research Institute, 2003

Organization and Chairmanship of Professional Meetings

Co-organizer and Co-Moderator, *Sessions of the Geotechnical Aspects of Hurricane Katrina*, Geo-Denver
Conference, 2007
Organizer, Moderator and Presenter, *Workshop on the Application of Advanced Technologies for Post-
Earthquake Geotechnical Engineering Reconnaissance*, Geo-Congress, Atlanta, 2006
Organizer and Chair, *Sessions on the Mitigation of Seismically Induced Ground Failure*, GeoShanghai
International Conference, Shanghai, 2006
Chair, *Session on Dynamic Characterization and Modeling of Soils*, 11th Intl. Conf. on Soil Dyn. and
Earthquake Engineering, Berkeley, 2004
Official Discussor, *Session on Recent Seismic Events*, 5th Intl. Conf. on Case Histories in Geotechnical
Engineering, New York, 2004

Co-Organizer and Co-Chair, *Session on Beneficial Reuse of Recycled Materials in Transportation and Geotechnical Applications*, ASCE National Conference, Baltimore, 2004

Co-Organizer and Summary Presenter, *Session on Recycled Materials in Transportation Geotechnics*, Geo-Trans, 2004

Co-Organizer and Moderator, *Symposium to Honor the Research Achievements of Robert Koerner*, Philadelphia, 2004

Member, Local Organizing Committee, *10th Intl. Conf. on Soil Dyn. and Earthquake Engineering*, Philadelphia, 2002

Chair, Session on Soil-Structure Interaction, *10th Intl. Conf. on Soil Dyn. and Earthquake Engineering*, Philadelphia, 2002

Moderator, *Session on Environmental Geotechnique*, 4th Intl. Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, 2001

Invited Participation in Workshops

Cyberinfrastructure Summer Institute for Geoscientists, San Diego, 2009

Geotechnical Extreme Event Reconnaissance, Richmond, California, 2009

Workshop on Project "Big Risk," Barcelona, Spain, 2009

NEES Centrifuge Research and Training Workshop, Troy, New York, 2008

Reforming Civil and Environmental Education, Istanbul, 2007

NEES Centrifuge Research and Training Workshop, Davis, California, 2004

National Science Foundation CAREER Awardees Workshop, Arlington, Virginia, 2004

National Science Foundation Workshop on Use of Physical Modeling for Eng. Edu., St. Johns, Canada, 2002

Workshop on Seismic Response of Reinforced Soil Structures, New York, 2002

Geo-Institute/ISSMGE International Research Workshop, Istanbul, 2001

Army Research office Centrifuge Modeling Workshop, Vicksburg, Mississippi, 2001

Professional Reviews

Journals

- *Journal of Geotechnical and Geoenvironmental Engineering*
- *Engineering Geology*
- *Geotechnique*
- *Canadian Geotechnical Journal*
- *Soil Dynamics and Earthquake Engineering*
- *Earthquake Spectra*
- *Geotechnical Testing Journal*
- *Geosynthetics International*
- *Journal of Environmental Engineering*
- *Journal of Materials in Civil Engineering*
- *Journal of Professional Issues in Engineering Education and Practice*

Conferences

- GeoFlorida-2010, 2009
- International Foundation Congress and Equipment Expo, 2009
- 11th Multidisciplinary Conf. on Sinkholes and the Eng. and Env. Impacts, 2008
- First International FLAC/DEM symposium on Numerical Modeling, 2008
- Geotechnical Engineering and Soil Dynamics, 2008
- GeoShanghai International Conference, 2006
- ASCE Geo-Institute Geo-Frontiers Conference, 2005
- ASCE Geo-Institute Geo-Trans Conference, 2004
- 11th Intl. Conf. on Soil Dyn. and Earthquake Engineering, 2004
- International Conf. on Physical Modeling in Geotechnics, 2002
- 10th Intl. Conf. on Soil Dyn. and Earthquake Engineering, 2002

Books

- Wiley Publishing
- American Geophysical Union

Proposals

- National Science Foundation
- United States Geologic Survey
- Qatar National Research Fund

GRANTS AWARDED

As Principal Investigator

Regional-Scale Statistical Modeling of the Northridge Earthquake Landslide Database, United States Geological Survey, PI: J. Wartman, \$165,205, 2010-2012

NEESR-CR: Seismically Induced Rock-Slope Failure: Mechanisms and Prediction, National Science Foundation, PI: J. Wartman with co-PI Mary MacLaughlin, \$934,112, 2010-2012

Collaborative Research: The M8.0 Pisco Peru Earthquake - A Benchmark Ground Failure Event for Remote Sensing and Data Archiving, National Science Foundation, \$119,297, 2009-2010

IREE: Research and Educational Collaboration with the Polytechnic University of Catalonia, National Science Foundation, \$52,000, 2007-2008

Tarrtown Bridge Scrap Tire Embankment, APEX Environmental, Inc., Pennsylvania Dept. of Transportation Partnership, \$87,581, 2003-2005

Collaborative Research: Investigation of Site Effects, Seismic Compression, and Liquefaction in the June 23, 2001 Southern Peru Earthquake, National Science Foundation, \$131,474, 2002-2005

Development of a Multiaxial Geosynthetics and Fibrous Material Test Device, National Science Foundation, PI: J. Wartman with co-PIs F. Ko, Y. G. Hsuan, R. M. Koerner, \$202,731, 2002- 2005

CAREER: Physical Modeling for Geotechnical Engineering Research and Education, National Science Foundation, \$375,000, 2002-2007

Laboratory Evaluation of REU Site: Engineering Cities, National Science Foundation, PI: J. Wartman with co-PI P. Gallagher, \$394,905, 2006-2008

Evaluation of Analytical Procedures for Estimating Seismically Induced Permanent Deformations in Slopes, United States Geological Survey, \$64,276, 2006-2007

Tire Derived Aggregate: Hybrid Experimental/Computational Simulations, Pennsylvania Dept. of Transportation, \$61,148, 2006-2007

Evaluation of Analytical Procedures for Estimating Seismically Induced Permanent Deformations in Slopes, United States Geological Survey, \$64,090, 2004-2005

Development of Innovative Construction Materials, APEX Environmental, Inc./Army Corps of Engineers Partnership, PI: J. Wartman with co-PI P. Gallagher, \$71,205, 2003-2006

Geotechnical Earthquake Engineering Reconnaissance of the January 21, 2003, Colima, Mexico Earthquake, National Science Foundation, PI: J. Wartman with co-PI A. Rodriguez-Marek (Washington State Univ.), \$29,850, 2003-2004

Modeling and Analyses of the Select Engineering-Related Properties of Glass Cullet, Pennsylvania Dept of Transportation with matching funds from D. M. Stoltzfus Co. and Todd Heller Recycling Co., \$8,700, 2001

As Co-Principal or Senior Investigator

NEESR-CR: Topographic Effects in Strong Ground Motion - From Physical and Numerical Modeling to Design, PI: A. Rodriguez-Marek, with Co- and Senior Investigators D. Assimaki, B. Cox, M. Pando and J. Wartman, \$1,200,000, 2009-2011

MRI: Acquisition of a High Resolution X-ray Tomography Unit, National Science Foundation, PI: Antonios Zavalangos with co-PIs Joseph Wartman, Haviva M. Goldman, Surya R. Kalidindi, Wei Sun, \$349,267, 2005-2006

Geotechnical Earthquake Engineering Reconnaissance of the June 23, 2001 Arequipa Earthquake, National Science Foundation, PI: A. Rodriguez-Marek (Washington State Univ.) with co-PIs Joseph Wartman and P. Repetto (URS Corp.), \$29,671, 2001-2002

Equipment and Software Grants (As Principal Investigator)

Google Earth Pro Licensing, Google, \$12,000 (Software), 2007

GIS for Civil Engineering Education at Drexel University, International Federation of Surveyors and ESRI, Inc., \$211,120 (Software and GIS library), 2003

INTERVIEWS PUBLISHED IN THE POPULAR PRESS

"*City Adrift: New Orleans Before & After Katrina*," Louisiana State University Press, 2007

"Texas City's levees contain faults cited in New Orleans," *Houston Chronicle*, July 23, 2006

"Shaky ground," *Prism Magazine*, April 2006

"Investigators gain access to levee for soil test," *New York Times*, February 1, 2006

"Evidence points to man-made disaster," *New Orleans Times Picayune*, December 8, 2005

"Floodwall anchors and soil gain new focus as suspects," *New York Times*, October 27, 2005

"Engineers point to flaws in flood walls' design as probable cause of collapse," *NY Times*, Oct. 24, 2005

"Tilt!" *Discover Magazine*, July 2005

"Latin America's tallest 'sails' through Mexico quake," *Engineering News Record*, February 3, 2003

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

American Society of Civil Engineers (ASCE), Geo-Institute (GI)

Earthquake Engineering Research Institute (EERI)

American Geophysical Union (AGU)

Seismological Society of America (SSA)

Geological Society of America (GSA)