

MARC O. EBERHARD

GENERAL BIOGRAPHICAL INFORMATION

(July 10, 2009)

1. Basic Data

MARC O. EBERHARD

Professor of Civil and Environmental Engineering
University of Washington
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Seattle, Washington 98195-2700
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2. Educational History

Ph.D. in Civil Engineering

University of Illinois, Urbana

Thesis Title: "Experiments and Analyses to Study the Seismic Response of Reinforced Concrete Frame-Wall Structures with Yielding Columns."

October, 1989

M.S. in Civil Engineering

University of Illinois, Urbana

January, 1987

B.S. in Civil Engineering/Materials Science and Engineering

Double Major, Highest Honors

University of California, Berkeley

December, 1984

3. Employment History

Professor of Civil Engineering, University of Washington, Seattle, 2004-present

Associate Professor of Civil Engineering, University of Washington, Seattle, 1996-2004.

Assistant Professor of Civil Engineering, University of Washington, Seattle, 1989-1996.

Research Assistant, University of Illinois at Urbana. 1985-1989.

Assistant Bridge Engineer, California Department of Transportation Bridge Design Division, Sacramento, 1985.

Summer Engineer, Earl and Wright Consulting Engineers, San Francisco, California, Summer, 1984.

Engineering Aide, Materials Science and Engineering, University of California, Berkeley, Summer, 1983.

Summer Engineer, Alameda County Flood Control and Water Conservation District, Hayward, California, Summer, 1982.

4. Awards and Honors

- Presidential Young Investigator Award, 1991-1998
National Science Foundation
- Thomas and Marilyn Nielson Faculty Fellow, 1993-1995
University of Washington
- Raymond C. Reese Research Prize, 1994
American Society of Civil Engineers
- Fellow of American Concrete Institute (ACI) 2000
- Outstanding Contribution 2008
Network for Earthquake Engineering Simulation

Chi Epsilon Civil Engineering Honor Society

Phi Kappa Phi Honor Society

Tau Beta Pi Engineering Honor Society

Kaiser Aluminum and Chemical Scholarship 1983

University of Illinois Fellowship 1985-1989

5. Other Appointments

Visiting Scholar, Earthquake Engineering Research Center, University of California, Berkeley, California, 1997-1998.

PUBLICATIONS

1. Refereed Journal Publications

(* denotes former or current students and post-doctoral associates)

1. Eberhard, M.O. and Sozen, M.A., "A Behavior-Based Method to Determine Design Shear in Earthquake-Resistant Walls," Journal of Structural Engineering, ASCE, February 1993, Vol. 119, No. 2, pp. 619-640. (*Received 1994 ASCE Raymond C. Reese Research Prize*).
2. Eberhard, M.O., Marsh*, M.L., O'Donovan*, T.O. and Hjartarsson, G.*, "Lateral-Load Tests of a Reinforced Concrete Bridge," Transportation Research Record, No. 1371, March 1993, pp. 92-100.
3. Pla, G.*, Eberhard, M.O. and Eberhard, P.H., "Magnetic Imaging of Reinforcement," Journal of Nondestructive Evaluation, March 1994, Vol. 13, No. 1, pp. 23-32.
4. Eberhard, M.O. and Meigs, B.E.*, "Earthquake-Resisting System Selection Statistics for Reinforced Concrete Buildings," Earthquake Spectra, Earthquake Engineering Research Institute, February 1995, Vol. 11, No. 1, pp. 19-36.
5. Pla-Rucki, G.* and Eberhard, M.O., "Imaging of Reinforced Concrete: a State-of-the-Art Review," Journal of Infrastructure Systems, ASCE, June 1995, Vol. 1, No. 2, pp. 134-141.
6. Newtonson, C.M.* and Eberhard, M.O., "Two-Dimensional Magnetic Algorithm to Detect Reinforcing Steel," Journal of Materials in Civil Engineering, ASCE, August 1995, Vol. 7, No. 3, pp. 1-7.
7. De la Colina,* J., Eberhard, M.O., Ryter, S.* and Wood, S.L., "Sensitivity of Seismic Assessment of a Double-Deck, Reinforced Concrete Bridge," Earthquake Spectra, Earthquake Engineering Research Institute, May 1996, Vol. 12, No. 2, pp. 217-244.
8. Eberhard, M.O. and Marsh, M.L.*, "Lateral-Load Response of a Reinforced Concrete Bridge," Journal of Structural Engineering, ASCE, April 1997, Vol. 123, No. 4, pp. 451-460.
9. Eberhard, M.O. and Marsh, M.L.*, "Lateral-Load Response of Two Reinforced Concrete Bents," Journal of Structural Engineering, ASCE, April 1997, Vol. 123, No. 4, pp. 461-468.
10. Trochalakis, P.*, Eberhard, M.O. and Stanton, J.F., "Design of Seismic Restrainers for In-Span Hinges," Journal of Structural Engineering, ASCE, April 1997, Vol. 123, No. 4, pp. 469-478.
11. Price, T.E.* and Eberhard, M.O., "Effects of Spatially Varying Ground Motions on Short Bridges," Journal of Structural Engineering, ASCE, August 1998, Vol. 124, No. 8, pp. 948-955.

12. Newtonson, C.M.* and Eberhard, M.O., "Nondestructive Evaluation Using Numerical Simulation of Impact Response," ACI Materials Journal, May-June 2000, pp. 343-350.
13. Stanton, J.F, Barr, P.* and Eberhard, M.O., "Behavior of High-Strength Bridge Girders," ACI Special Publication, SP-189, American Concrete Institute, 2000, pp. 71-83.
14. Wallace, J.W., Eberhard, M.O., Hwang, S.H., Moehle, J.P., Post, T., Roblee, C., Stewart, J.P. and Yashinsky, M. "Highway Bridges," in "Chi-Chi, Taiwan Earthquake of September, 21, 1999", Eds. Uzarski, J. and Arnold, C., Earthquake Spectra, April 2001, Earthquake Engineering Research Institute, Volume 16, supp. A, pp. 131-152.
15. Barr, P.*, Eberhard, M.O. and Stanton, J.F., "Live-Load Distribution Factors for Prestressed Concrete Bridges," Journal of Bridge Engineering, ASCE, September, 2001, pp. 298-306.
16. Kwak, Y.K, Eberhard, M.O., Kim, W.S., and Kim, J., "Shear Strength of Steel-Fiber Reinforced Concrete Beams Without Stirrups," ACI Structural Journal, July-August 2002, Vol. 99, No. 4, pp. 530-538.
17. Jones, A., Kramer, K., Arduino, P. and Eberhard, M.O., "Uncertainty Analyses for a Seismic Warning System," Transportation Research Record, No. 1808, November 2002, pp 112-121.
18. Stanton, J.F., Eberhard, M.O. and Barr, P.*, "A Weighted-Stretched-Wire System for Monitoring Deflections," Engineering Structures, 2003, Vol. 25, pp. 347-357.
19. Barr, P.*, Stanton, J.F. and Eberhard M.O., "Implications of Temperature Variations on Prestressed Girder Design," Journal of Bridge Engineering, ASCE, March/April 2005, Vol. 10, No. 2, pp 186-194.
20. Berry, M.P.* and Eberhard, M.O., "A Practical Performance Model for Bar Buckling," Journal of Structural Engineering, ASCE, July 2005, Vol. 131, No. 7, pp 1060-1070.
21. Price, T.E.* and Eberhard, M.O., "Factors Contributing to Bridge-Embankment Interaction," Journal of Structural Engineering, ASCE, September 2005, Vol. 131, No. 9, pp 1345-1354.
22. Bechtoula, H., Sakashita, M., Kono, S., Watanabe, F. and Eberhard, M.O., "Seismic Performance of Lower Stories of Mid-Rise RC Frame Building," ACI Structural Journal, July-August, 2006, Vol. 103, No. 4, pp 513-521.
23. Ranf, R.T.*, Eberhard, M.O and Stanton, J.F., "Effects of Displacement History on Lightly Confined, Reinforced Concrete Bridge Columns," ACI Special Publication, SP-236, Eds. A Matamoros and K. Elwood, American Concrete Institute, 2006, pp 23-42.
24. Kono, S., Bechtoula, H., Sakashita, M., Tanakai, H, Watanabe, F. and Eberhard, M.O. "Damage Assessment of Reinforced Concrete Columns Under High Axial Loading," ACI Special Publication, SP-237, Finite-Element Analysis of Reinforced Concrete Structures, American Concrete Institute, 2006, pp. 165-176.

25. Ranf, R.T.*, Eberhard, M. and Malone, S., "Post-Earthquake Prioritization of Bridge Inspections." Earthquake Spectra, Earthquake Engineering Research Institute, February 2007, pp 131-146.
26. Johnson, N., Ranf, R.T.*, Saiidi, S., Sanders, D. and Eberhard, M., "Seismic Testing of a Two-Span Reinforced Concrete Bridge," Journal of Bridge Engineering, ASCE, March-April 2008, pp 173-182.
27. Elwood K.J. and Eberhard, M.O., "Effective Stiffness of Reinforced Concrete Columns," ACI Structural Journal, July-August 2009, pp 476-484.
28. Steuck, K. *, Stanton, J.F. and Eberhard, M.O., "Anchorage of Large-Diameter Reinforcing Bars in Ducts," ACI Structural Journal, July-August 2009, pp 506-513.
29. Ranf, R.T.*, Shin, H.S., Eberhard, M.O., Arduino, P, and Kramer, S., "Modeling Approximations for PBEE of Bridges on Drilled Shafts," Earthquake Spectra, Earthquake Engineering Research Institute (accepted for publication).
30. Pang, B.K., Eberhard, M.O., and Stanton, J.F., "Large-Bar Connection for Precast Bridge Bents in Seismic Regions," Journal of Bridge Engineering, ASCE (accepted for publication).

2. Conference Proceedings

Fully-Refereed Conference Proceedings

1. Stanton, J.F., Hawkins, N.M. and Eberhard, M.O., "Seismic Connections for Precast Concrete Structures," Proceedings, 10th World Conference on Earthquake Engineering, Madrid, Spain, July 1992, pp. 4403-4408.
2. Eberhard, M.O., "Modeling Implications of Lateral-Load Tests," Proceedings, Fifth National Conference on Earthquake Engineering, Chicago, Illinois, July 1994, Vol. 1, pp. 399-408.
3. Stanton, J.F., Eberhard, M.O., Barr, P., and Fekete, E., "Evaluation of Long-Term Behavior or High Performance Prestressed Concrete Girders," Proceedings, PCI/FHWA International Symposium on High Performance Concrete, New Orleans, Louisiana, October 1997, 11 pp.
4. American Concrete Institute Committee 341, Earthquake Design of Bridges, Subcommittee on Bridge Systems, "Seismic Analysis and Design of Concrete Bridge Systems," ACI 341.2R-97, January 1998, 25 pp. (Review of report by ACI Technical Activities Committee.)
5. Price, T.E. and Eberhard, M.O., "Efficient Procedure for Modeling the Transverse Seismic Response of Bridge Embankments," Proceedings, Sixth National Conference on Earthquake Engineering, Seattle, Washington, June 1998.

6. Hudgings, T., Eberhard, M.O., and Stanton, J.F., "Design of Seismic Restrainers for In-Span Hinges," Proceedings, Sixth National Conference on Earthquake Engineering, Seattle, Washington, June 1998.
7. Bjornsson, S., Stanton, J.F., and Eberhard, M.O., "Seismic Response of Skew Bridges," Proceedings, Sixth National Conference on Earthquake Engineering, Seattle, Washington, June 1998.
8. Price, T.E. and Eberhard, M.O., "Model for Incorporating Embankment/Superstructure Interaction into Bridge Analysis." Proceedings, Structural Engineering World Congress, San Francisco, California, July 1998.
9. Johnson, J., Ranf, R. Saiidi, S., Sanders, D. and Eberhard, M., "Shake Table Studies of a Large-Scale Two-Span Reinforced Concrete Bridge Frame," Proceedings, 8th U.S. National Conference on Earthquake Engineering, San Francisco, California, April 2006.
10. Ranf, R., Shin H, Eberhard, M., Arduino, P and Kramer, S., "Experimentally Based Evaluation of Soil-Foundation-Structure Interaction for a Reinforced Concrete Bridge," Proceedings, 8th U.S. National Conference on Earthquake Engineering, San Francisco, California, April 2006.
11. Stanton, J., Eberhard, M., Gunnarsson, K., Hieber, D. and Wacker, J., "Rapid Construction Details for Bridges in Seismic Zones," Proceedings, 8th U.S. National Conference on Earthquake Engineering, San Francisco, California, April 2006.
12. Hieber, D.G., Wacker, J., Stanton, J., and Eberhard, M.O, "Seismic Performance of Precast Reinforced Concrete and Hybrid Bridge Piers," Proceedings, 8th U.S. National Conference on Earthquake Engineering, San Francisco, California, April 2006.

Abstract and Non-Refereed Conference Proceedings

1. Stanton, J.F., Hawkins, N.M., Eberhard, M.O. and Hicks, T.R., "Connection Classification and Evaluation," Proceedings, First Meeting of U.S.-Japan Joint Technical Coordinating Committee on Precast Seismic Structural Systems, San Diego, California, November 29 - December 1, 1990, 14 pp.
2. Stanton, J.F., Hawkins, N.M., Eberhard, M.O. and Hicks, T.R., "Selection and Design of Rigid Connections," Proceedings, First Meeting of U.S. - Japan Joint Technical Coordinating Committee on Precast Seismic Structural Systems, San Diego, California, November 29 - December 1, 1990, 17 pp.
3. Hicks, T.R., Stanton, J.F., Hawkins, N.M. and Eberhard, M.O., "Ductile Connections: Selection and Design," Proceedings, First Meeting of U.S. - Japan Joint Technical Coordinating Committee on Precast Seismic Structural Systems, San Diego, California, November 29 - December 1, 1990, 21 pp.

4. Pla, G. and Eberhard, M.O., "Applications of Imaging Technology to the Nondestructive Evaluation of Reinforced Concrete," Proceedings, Conference on Nondestructive Testing of Civil Structures and Materials, Boulder, Colorado., May, 1992, pp. 99-112.
5. Sozen, M.A. and Eberhard, M.O., "Design Shear for Earthquake-Resistant Walls," Proceedings, Nonlinear Seismic Analysis of Reinforced Concrete Structures, Bled, Slovenia, July 1992. Editors: P. Fajfar, University of Ljubljana, Slovenia, H. Krawinkler, Stanford University, December 1992, pp. 57-72.
6. Eberhard, M.O., "Lateral-Load Models of a Reinforced Concrete Bridge," Proceedings, 9th U.S.-Japan Workshop on Bridge Engineering, Tsukuba, Japan, May, 1993, 15 pp.
7. De la Colina, J., Ryter, S., Eberhard, M.O., Wood, S.L., Kramer, S.L. and Nadarajah, N., "Seismic Vulnerability of the Alaskan Way Viaduct," Proceedings, 2nd U.S.-Japan Workshop on Seismic Retrofit of Bridges," Berkeley, California, January 1994, 15 pp.
8. Eberhard, M.O., Stanton, J.F. and Trochalakis, P., "Design of Seismic Restrainers," Proceedings, 4th Workshop on Bridge Research in Progress, Buffalo, New York, June 1996, pp. 281-286.
9. Newtonson, C.M. and Eberhard, M.O., "Influence of Magnetic Properties of Concrete on Magnetostatic Detection of Reinforcing Steel," Proceedings, Third Conference on Nondestructive Testing of Civil Structures and Materials, Boulder, Colorado., September, 1996, pp. 319-333.
10. Eberhard, M.O., "Consequences of Bridge Damage on Functionality," Proceedings, PEER Invitational Workshop on Performance-Based Engineering Concepts for Bridges, Palo Alto, California, March 2000, 4 pp.
11. Tanaka, H., Restrepo, J., Kono, S. and Eberhard, M.O., "Earthquake Investigations in New Zealand and United States," in Goals and Methods of Earthquake Damage Investigation, History and Future, Annual Meeting of Architectural Institute of Japan, October 2000.
12. Parrish, M. and Eberhard, M.O., "Accuracy of Seismic Performance Methodologies for Rectangular Reinforced Concrete Columns," Proceedings, Third US-Japan Workshop on Performance-Based Earthquake Engineering Methodology for Reinforced Concrete Building Structures, Seattle, Washington, August 2001, pp 309-320.
13. Parrish, M. and Eberhard, M.O., "Accuracy of Seismic Performance Estimates for Reinforced Concrete Columns," Proceedings, 5th National Workshop on Bridge Research in Progress, Minneapolis, Minnesota, October 2001, 4 pp.
14. Eberhard, M.O., Parrish, M. and Berry, M., "Deformation Demands at the Onset of Bar Buckling in Reinforced Concrete Columns," PEER Research Digest 2002-11, Proceedings, Pacific Earthquake Engineering Research Annual Meeting, Oakland, California, January 2002, 4 pp.

15. Ranf, R.T. and Eberhard, M.O., "Rapid Identification of Damaged Bridges using ShakeMaps" Proceedings, 55th Annual Meeting, Earthquake Engineering Research Institute, Portland, Oregon, February 2003, 2 pp.
16. Ranf, R.T. and Eberhard, M.O., "Prioritizing Bridge Inspections using ShakeMaps" Proceedings, 7th US-Japan Workshop on Urban Earthquake Hazard Reduction, Wailea, Hawaii, March 23-26, 2003, 5 pp.
17. Berry, M.P. and Eberhard, M.O., "Column Deformation Demands at Bar Buckling," Proceedings, 2003 Structures Congress, American Society of Civil Engineers, Seattle, Washington, May 2003, 3 pp.
18. Eberhard, M.O., Nelson, J.M., Price, Z.M. and Stanton, J.F., "Effects of Long-Duration Earthquakes on Poorly Confined Reinforced Concrete Columns," Proceedings, 2003 Structures Congress, American Society of Civil Engineers, Seattle, Washington, May 2003, 3 pp.
19. Ranf, R.T. and Eberhard, M.O., "Bridge Damage during the 2001 Nisqually Earthquake," Proceedings, 2003 Structures Congress, American Society of Civil Engineers, Seattle, Washington, May 2003, 4 pp.
20. Bechtoula, H., Sakashita, M., Kono, S., Watanabe, F. and Eberhard, M., "Damage Progression in Lower Stories of an 11-Story Building (Part 1). AIJ Transactions, Proceedings of Annual Meeting, Architectural Institute of Japan, September 2003, 2pp.
21. Bechtoula, H., Sakashita, M., Kono, S., Watanabe, F. and Eberhard, M., "Damage Progression in Lower Stories of an 11-Story Building (Part 2). AIJ Transactions, Proceedings of Annual Meeting, Architectural Institute of Japan, September 2003, 2 pp.
22. Eberhard, M.O. and Berry, M.P., "A Simple Performance Model for Bar Buckling," Proceedings, 5th US-Japan Workshop on Performance-Based Seismic Design Methodology for Concrete Buildings, Hakone, Japan, September 2003.
23. Bechtoula, H., Sakashita, M., Kono, S., Watanabe, F. and Eberhard, M.O., "Experimental and Analytical Study of 1/4-Scale Reinforced Concrete Frames," Proceedings, Fourth International Conference on Concrete under Severe Conditions of Environment and Loading (CONSEC04), Seoul, Korea, June 27-30, 2004, 8 pp.
24. Wood, S.L., Anagnos, T., Arduino, A., Eberhard, M.O., Fenves, G.L., Finholt, T.A., Futrelle, J.M., Jeremic, B., Kramer, S.L., Kutter, B.L., Matamoros, A.B., McMullin, K.M., Ramirez, J.A., Rathje, E.M., Saiidi, M., Sanders, D.H., Stokoe, K.H. and Wilson, D.W., "Using NEES to Investigate Soil-Foundation-Structure Interaction," Proceedings, 13th World Conference on Earthquake Engineering, Paper 2344, Vancouver, Canada, August 1-6, 2004.

25. Eberhard, M.O. and Berry, M.P., "A Practical Performance Model for Reinforced Concrete Bridge Columns," Proceedings, Caltrans Bridge Research Conference, Sacramento, California, Oct. 31-Nov. 1, 2005, 6 pp.
26. Kunnath, S., Jeremic, B., Eberhard, M., Der Kiureghian, A., and Miranda, E., "Application of the PEER Performance-Based Methodology for Seismic Assessment of the I-880 Viaduct," Proceedings, Caltrans Bridge Research Conference, Sacramento, California, Oct. 31-Nov. 1, 2005, 8 pp.
27. Stanton, J.F, Eberhard, M.O. and Steuck, K., "Rapid Construction Details for Bridges in Seismic Zones," Proceedings, 22nd US-Japan Workshop on Bridges, Seattle, Oct. 2006.
28. Rosa, M.A., Stanton, J.F., and Eberhard, M.O, "Improving Predictions for Camber in Precast, Prestressed Concrete Bridge Girders," Proceedings, PCI-FHWA National Bridge Concrete, Phoenix, Arizona, October 22-24, 2007.
29. Pang, B.K., Stanton, J.F., Eberhard, M.O., "Precast Bridge Bent Connection for Rapid Construction in Seismic Regions." Proceedings, 2008 FHWA Accelerated Bridge Construction Conference, Baltimore, Maryland, March 20-21, 2008.
30. Pang, B.K., Stanton, J.F., Eberhard, M.O., "Large-Bar Connection for Precast Bridge Bents in Seismic Regions." Proceedings, IABSE Annual Meeting and Congress, Chicago, Illinois, September 14-19, 2008.

3. Books and Editing

Moehle, J.P. and Eberhard, M.O., "Earthquake Damage to Bridges," Chapter 34 in The Handbook of Bridge Engineering, Ed. W.F. Chen and L. Duan, CRC Press, 1999, pp. 34.1-34.33.

4. Project Reports

1. Eberhard, M.O. and Sozen, M.A., "Experiments and Analyses to Study the Seismic Response of Reinforced Concrete Frame-Wall Structures with Yielding Columns," Civil Engineering Studies, Structural Research Series No. 548, University of Illinois, Urbana, September 1989, 424 pp.
2. Brown, C.B., Eberhard, M.O., Kramer, S.L., Roeder, C.W. and Stanton, J.F., "Preliminary Investigation of the Seismic Vulnerability of the Alaskan Way Viaduct," Washington State Department of Transportation Technical Report WA-RD 265.1, Olympia, Washington, April 1992, 84 pp.
3. Pla, G., Eberhard, M.O. and Eberhard, P.H., "Imaging of Reinforced Concrete," University of Washington, Department of Civil Engineering Structural and Geotechnical Engineering and Mechanics Report, SGEM 93-1, June 1993, 74 pp.

4. Eberhard, M.O., MacLardy, J.A., Marsh, M.L. and Hjartarson, G., "Lateral-Load Response of a Reinforced Concrete Bridge," Washington State Department of Transportation Technical Report WA-RD 305.2, Olympia, Washington, August 1993, 170 pp.
5. Meigs, B.E., Eberhard, M.O. and Garcia, L., "Earthquake-Resisting Systems for Reinforced Concrete Buildings: A Survey of Current Practice," University of Washington, Department of Civil Engineering, Structural and Geotechnical Engineering and Mechanics Report, SGEM 93-3, November 1993, 75 pp.
6. O'Donovan, T.O., Eberhard, M.O. and Marsh, M. L., "Lateral-Load Response of Two Reinforced Concrete Piers," Washington Department of Transportation Technical Report WA-RD 305.3, Olympia, Washington, March 1994, 160 pp.
7. Eberhard, M.O., De la Colina, J. and Ryter, S., "Seismic Vulnerability of the Alaskan Way Viaduct: WSDOT Typical Unit," Washington State Department of Transportation Technical Report WA-RD 363.1, Olympia, Washington, June 1995, 181 pp.
8. Knaebel, P., Eberhard, M.O. and De la Colina, J., "Seismic Vulnerability of the Alaskan Way Viaduct: SED Typical Unit," Washington State Department of Transportation Technical Report WA-RD 363.3, Olympia, Washington, July 1995, 144 pp.
9. Kramer, S.L. and Eberhard, "Seismic Vulnerability of the Alaskan Way Viaduct: Summary Report" Washington State Department of Transportation WA-RD 363.4, Olympia, Washington, July 1995, 20 pp.
10. Trochalakis, P., Eberhard, M.O. and Stanton, J.F., "Seismic Restrainers for Bridges with In-Span Hinges," Washington State Department of Transportation WA-RD 387.1, Olympia, Washington, May 1996, 82 pp.
11. Trochalakis, P., Eberhard, M.O. and Stanton, J.F., "Unseating of Simply Supported Spans During Earthquakes," Washington State Department of Transportation WA-RD 387.2, Olympia, Washington, May 1996, 45 pp.
12. Price, T.E. and Eberhard, M.O., "Response of Short Bridges to Spatially Varying Seismic Excitation," Department of Civil Engineering, Structural and Geotechnical Engineering and Mechanics Report SGEM 96-3, University of Washington, Seattle, Washington, November 1996, 116 pp.
13. Bjornssen, S., Stanton, J.F., and Eberhard, M.O., "Seismic Behavior of Skewed Bridges," Department of Civil Engineering, Structural and Geotechnical Engineering and Mechanics Report SGEM 97-1, University of Washington, Seattle, Washington, June 1997, 189 pp.
14. Hudgings, T.R., Eberhard, M.O. and Stanton, J.F., "Design of Seismic Bridge Restrainers Considering Spatial Variation of Ground Motions," Department of Civil Engineering, Structural and Geotechnical Engineering and Mechanics Report SGEM 97-2, University of Washington, Seattle, Washington, June 1997, 119 pp.

15. Eberhard, M.O., Matamoros, A., and Whittaker, A., "Cyclic Testing of Reinforced Concrete Captive Columns," Earthquake Engineering Research Center Report EERCL-STI/97-1, University of California, Berkeley, California, June 1997, 120 pp.
16. Fekete, E., Barr, P., Stanton, J.F., Eberhard, M.O. and Janssen, D., "High Performance Concrete in Washington State SR 18/ SR 516 Overcrossing: Interim Report on Materials Tests," Washington State Department of Transportation, Olympia, Washington, November 1998, 71 pp.
17. Barr, P., Fekete, E., Eberhard, M.O., Stanton, J.F, Khaleghi, B. and Hsieh, J.C., "High Performance Concrete in Washington State SR 18/ SR 516 Overcrossing: Interim Report on Girder Monitoring," Washington State Department of Transportation, Olympia, Washington, November 1998, 131 pp.
18. Barr, P., Eberhard, M.O. and Stanton, J.F., "Live-Load Distribution Factors for Prestressed Concrete Bridges," Washington State Department of Transportation WA-RD, Olympia, Washington, November 1999.
19. Barr, P., Fekete, E., Stanton, J.F., and Eberhard, M.O., "High Performance Concrete in Washington State SR 18/ SR 516 Overcrossing: Final Report on Materials Tests," Washington State Department of Transportation, Olympia, Washington, December 2000, 81 pp.
20. Barr, P., Eberhard, M.O., Stanton, J.F, Khaleghi, B. and Hsieh, J.C., "High Performance Concrete in Washington State SR 18/ SR 516 Overcrossing: Final Report on Girder Monitoring," Washington State Department of Transportation, Olympia, Washington, December 2000, 150 pp.
21. Jones, A., Kramer, S., Arduino, P. and Eberhard, M.O., "Seismic Instrumentation for the Alaskan Way Viaduct," Washington State Department of Transportation Report WA-RD 520.1, Olympia, Washington, September 2001, 118 pp.
22. Ranf, R.T., Eberhard, M.O. and Berry, M.P., "Damage to Bridges during the 2001 Nisqually Earthquake," Pacific Earthquake Engineering Research Center Report PEER-2001-15, University of California, Berkeley, November, 2001.
23. Stanton, J.F., Eberhard, M.O. and Barr, P., "Mechanics and Design of a Weighted-Stretched-Wire System for Deflection Monitoring," Structures and Mechanics Report No. 02-01, Dept. of Civil and Environmental Engineering, University of Washington, Seattle, WA, January 2002, 54 pp.
24. Berry, M.P. and Eberhard, M.O. "Performance Models for Flexural Damage in Reinforced Concrete Columns," Pacific Earthquake Engineering Research Center Report PEER-2003-18, University of California, Berkeley, August 2004, 156 pp.

25. Berry, M. P., Parrish, M. and Eberhard, M.O., "PEER Structural Performance Database User's Manual," Pacific Earthquake Engineering Research Center report, University of California, Berkeley, 2004.
26. Malone, S., Eberhard, M.O., LaBelle, J. and Ranf, T., "Information Tools to Improve Post-Earthquake Prioritization of WSDOT Bridge Inspections," Washington State Department of Transportation Report WA-RD 602.1, Olympia, Washington, June 2005, 50 pp.
27. Hieber, D.G., Wacker, J.M., Eberhard, M.O. and Stanton, J.F., "State-of-the-Art Report on Precast Concrete Systems for Rapid Construction of Bridges," Washington State Department of Transportation Report WA-RD 594.1, Olympia, Washington, March 2005, 112 pp.
28. Hieber, D.G., Wacker, J.M., Eberhard, M.O. and Stanton, J.F., "Precast Concrete Pier Systems for Rapid Construction of Bridges in Seismic Regions," Washington State Department of Transportation Report WA-RD 611.1, Olympia, Washington, March 2005, 312 pp.
29. Wacker, J.M, Hieber, D.G., Eberhard, M.O. and Stanton, J.F., "Design of Precast Concrete Piers for Rapid Construction in Seismic Regions," Washington State Department of Transportation Report, WA-RD 629., Olympia, Washington, 2005.
30. Ranf, R.T., Nelson, J., Price, Z., Eberhard, M.O. and Stanton, J.F., "Damage Accumulation in Lightly Reinforced Concrete Columns," Pacific Earthquake Engineering Research Center Report PEER-2005/08, University of California, Berkeley, April 2006.
31. Berry, M.P. and Eberhard, M.O. "Damage Analysis," Chapter 4 in "Application of the PEER PBEE Methodology to the I-880 Viaduct," Ed. S.K. Kunnath, Pacific Earthquake Engineering Research Center Report PEER-2006-10, University of California, Berkeley, Feb. 2007, pp 45-54.
32. Rosa, M.A., Stanton, J.F. and Eberhard, M.O., "Improving Predictions for Camber in Precast, Prestressed Concrete Bridge Girders," Washington State Department of Transportation Report, WA-RD 669.1, Olympia, Washington, March 2007, 342 pp.
33. Berry, M.P. and Eberhard, M.O. "Performance Modeling Strategies for Modern Reinforced Concrete Columns," Pacific Earthquake Engineering Research Center Report, PEER 2007/7, University of California, Berkeley, July 2007, 206 pp.
34. Steuck, K.P., Pang, J.B.K., Eberhard, M.O. and Stanton, J.F., "Anchorage of Large-Diameter Reinforcing Bars Grouted into Ducts," Washington State Department of Transportation Report, WA-RD 684.1, Olympia, Washington, July 2008, 148 pp.
35. Pang, J.B.K., Steuck, K.P., Cohagen, L.S., Eberhard, M.O. and Stanton, J.F., "Rapidly Constructible Large-Bar Precast Bridge-Bent Connection," Washington State Department of Transportation Draft Report, WA-RD 684.2, Olympia, Washington, October 2008, 184 pp.

36. Cohagen, L.S. Pang, J.B.K., Steuck, K.P., Eberhard, M.O. and Stanton, J.F., "A Precast Concrete Bridge Bent Designed to Re-center after an Earthquake," Washington State Department of Transportation Report, WA-RD 684.3, Olympia, Washington, October 2008, 184 pp.

5. Miscellaneous

Other Publications

1. Eberhard, M.O., Discussion of "Strength of Slab-Column Connections," by J.P. Moehle, ACI Structural Journal, November-December 1988, Vol. 85, No. 6, pp. 703-704.
2. O'Donovan, T.O. and Eberhard, M.O., "Full-Scale Bridge Test Under Lateral Loads," Military Engineer, November-December 1992, pp. 64-66.
3. Eberhard, M.O. and Stanton, J.F., "Proportioning Abutment Seats to Prevent Span Unseating," Earthquake Engineering Research Center News, University of California, Berkeley, Vol. 18, No. 4, October 1997.
4. Hose, Y., Eberhard, M. and Seible, F., "Development of PEER Performance Database," PEER Center News, Pacific Earthquake Engineering Research Center, Berkeley, California, Vol. 3, No. 1, January 2000.
5. Eberhard, M.O., Lowes, L and Stanton, J.F., "Bridges," Chapter 5 in The Nisqually, Washington Earthquake, February 28, 2001, EERI Preliminary Reconnaissance Report, Earthquake Engineering Research Institute, March 2001.
6. Elwood, K.J. and Eberhard, M.O., "Effective Stiffness of Reinforced Concrete Columns," PEER Research Digest 2006-1, March 2006, 4 pp.

Websites

PEER Structural Performance Database. Describes cyclic tests of over 400 reinforced concrete columns (<http://nisee.berkeley.edu/spd/>).

Nisqually Earthquake Information Clearinghouse. Initially, this site was used to help organize post-earthquake reconnaissance. It now provides a summary the earthquake and its effects (<http://maximus.ce.washington.edu/~nisqually/>).

OTHER SCHOLARLY ACTIVITY

1. Invited Lectures and Seminars

Presenter	Title	Date	Institution	Location
Eberhard, M. Okamura	The 1989 Loma Prieta Earthquake	11/89	UW Department of Civil Engineering	Seattle, WA
Eberhard, M.	Full-Scale Seismic Testing of a Reinforced Concrete Bridge (planned tests)	5/91	ASCE Lifeline Committee	Seattle, WA
Eberhard, M.	Lateral-Load Tests of a Reinforced Concrete Bridge (preliminary results)	2/92	Structural Engineers Association of Washington (SEAW)	Olympia, WA
Eberhard, M.	Lateral-Load Tests of a Reinforced Concrete Bridge (Preliminary Results)	2/92	EERI	San Francisco, CA
Eberhard, M.	Lateral-Load Tests and Analyses of a Reinforced Concrete Bridge	9/92	WSDOT	Wenatchee, WA
Eberhard, M.	Lateral-Load Tests and Analyses of a Reinforced Concrete Bridge	11/92	WSDOT	Port Angeles, WA
Eberhard, M.	Lateral-Load Tests of a Reinforced Concrete Bridge (Preliminary Results)	2/92	EERI	San Francisco, CA
Eberhard, M, Wood, S. Stanton, J.	The January 17th Los Angeles Earthquake	1/94	UW	Seattle, WA
Eberhard, M.	The Northridge Earthquake of Jan. 17, 1994	3/94	WSDOT	Olympia, WA
Miller, R. Eberhard, M.	The Northridge Earthquake of Jan. 17, 1994	3/94	ASCE Lifeline Committee	Seattle, WA
Eberhard, M.	Earthquake Design in the Northwest	5/96	PROBUS	Bellevue, WA
Price, P	Influence of Embankments on the Response of Short Bridges	11/97	WSDOT	Olympia, WA
Eberhard, M.	Earthquake Damage to Bridges	3/00	Indiana DOT	Jasper, IN
Eberhard, M.	Consequences of Bridge Damage on Functionality	3/00	PEER	Palo Alto, CA
Eberhard, M,	The Nisqually Earthquake	3/01	Concrete Reinforcing Steel Institute (CRSI)	Seattle, WA
MacRae, G.	Structural Damage; The Nisqually Earthquake	4/01	EERI	San Francisco, CA
MacRae, G.	Structural Damage; The Nisqually Earthquake	4/01	EERI	Los Angeles, CA
Eberhard, M.	Vulnerabilities of Structures to Earthquakes in the Pacific Northwest	4/01	U.S. Congress (Rep. Baird, House and Senate Aides)	Washington, DC

Eberhard, M.	Structural Damage During The Nisqually Earthquake	4/01	CPARM	Seattle, WA
Eberhard, M.	Earthquake Damage to Bridges	6/01	Central U.S. Earthquake Consortium (CUSEC)	Vincennes, IN
*Eberhard, M.	Accuracy of Seismic Performance Methodologies for Rectangular Reinforced Concrete Columns	8/01	3 rd US-Japan Workshop on PBEE on RC (NSF)	Seattle, WA
Eberhard, M.	Deformation Demands at the Onset of Bar Buckling in Reinforced Concrete Columns	1/02	PEER	Oakland, CA
Eberhard, M.	Earthquake 101	3/02	Burke Museum, UW	Seattle, WA
Eberhard, M.	Seattle Fault Scenario: Bridge Considerations	6/02	EERI	Seattle, WA
Eberhard, M.	A Simple Method to Estimate Column Deformation at Bar Buckling	4/03	U. of British Columbia CE Dept.	Vancouver, B.C.
Eberhard, M.	Practical Models for Predicting Flexural Damage in Reinforced Concrete Columns	9/03	5 th US-Japan Workshop on PBEE on RC (NSF)	Hakone, Japan
Eberhard, M.	Practical Performance Modeling Strategies for Bridge Columns	8/05	Caltrans General Earthquake Committee Meeting	Sacramento, CA
Berry, M.P.	Performance Modeling Strategies for Modern Reinforced Concrete Bridge Columns.	8/06	OpenSEES Modeling Workshop	Berkeley, CA
Stanton, J.F.	Accelerated Bridge Construction in Seismic Regions	12/07	AASHTO Seismic Committee (T-3)	Seattle, WA
Stanton, J.F.	Precast Bridge Bent Connection for Rapid Construction in Seismic Regions	10/08	FHWA/WSDOT Accelerated Bridge Construction Workshop	Tumwater, WA
Stanton, J.F.	Fully Precast Bents for Seismic Regions	1/09	Transportation Research Board	Washington, D.C.
Eberhard, M.	Precast Bridge Bents for Seismic Regions	5/09	Caltrans Workshop on Next-Generation Bridge Systems for California	Sacramento, CA
Eberhard, M.	Accelerating Bridge Construction in Regions of High Seismicity	6/09	International Bridge Conference Workshop on Accelerated Bridge Construction	Pittsburgh, PA
Stanton, J.F.	A Precast Concrete Bridge Bent for Seismic Regions: Achieving both Performance and Constructability	9/09	2009 PCI Convention	San Antonio, TX

2. Presentations Given at Conferences

* indicates that a paper appeared in the conference proceedings

Presenter	Title	Date	Institution	Location
Eberhard, M.	Estimating Maximum Dynamic Base Shear Response in Frame-Wall Structures	10/89	American Concrete Institute (ACI)	San Diego, Ca
* Eberhard, M.	Selection and Design of Rigid Connections	12/90	NSF/PRESSS	San Diego, CA
Eberhard, M.	Full-Scale Seismic Testing of a Reinforced Concrete Bridge (Planned Tests)	3/91	ACI Comm 341	Boston, MA
* O'Donovan, T.	Lateral-Load Tests of a Reinforced Concrete Bridge (Preliminary Results)	1/92	TRB Comm. A2C03	Washington D.C.
Eberhard, M.	Lateral-Load Tests of a Reinforced Concrete Bridge (Preliminary Results)	2/92	Earthquake Engineering Research Institute (EERI)	San Francisco, CA
* Pla, G.	Applications of Imaging Technology to the Nondestructive Evaluation of Reinforced Concrete	5/92	NSF Conference on NDE	Boulder, CO
MacLardy, J.	Modeling Implications of Lateral-Load Tests	4/93	ACI	Vancouver, B.C.
* Eberhard, M.	Lateral-Load Models of a Reinforced Concrete Bridge	5/93	USJNR	Tsukuba, Japan
Eberhard, M.	Lateral-Load-Resisting System Statistics	11/93	ACI	Minneapolis, MN
* De la Colina, J.	Seismic Vulnerability of the Alaskan Way Viaduct	1/94	USJNR	Berkeley, CA
Eberhard, M.	Seismic Vulnerability of the Alaskan Way Viaduct	3/94	ACI	San Francisco, CA
Eberhard, M.	Design of Seismic Restrainers for In-Span Hinges	3/96	ACI	Denver, CO
* Newtonson, C.	Magnetostatic Detection of Reinforcing Steel	9/96	NSF Conference on NDE	Boulder, CO
* Eberhard M. and Stanton, J.	Instrumentation, Monitoring and Evaluation of HPC Girders	8/97	WSDOT/FHWA	Bellevue, WA
* Stanton, J.	Evaluation of Long-Term Behavior of High Performance Prestressed Concrete Girders	10/97	PCI/FHWA	New Orleans, LA
Stanton, J.	Behavior of Skew Bridges During Earthquakes	11/97	ACI	Atlanta, GA
* Price, T.	Effects of Embankments on the Seismic Response of Short Bridges	6/98	6 th NCEE/ EERI	Seattle, WA

* Hudgings, T.	Design of Seismic Restrainers for In-Span Hinges	6/98	6 th NCEE/ EERI	Seattle, WA
* Bjornsen, S	Seismic Response of Skew Bridges	6/98	6 th NCEE/ EERI	Seattle, WA
* Barr, B.	Behavior of High-Strength HPC Bridge Girders	3/99	ACI	Chicago, IL
*Eberhard, M.	Accuracy of Performance Assessments for Reinforced Concrete Columns	3/01	ACI	Philadelphia, PA
*Eberhard, M.	Accuracy of Seismic Performance Estimates for Reinforced Concrete Columns	10/01	5 th Workshop on Bridge Research in Progress (NSF)	Minneapolis, MN
Stanton, J.F.	Unseating of Skewed Bridges during Earthquakes	10/01	ACI Fall Conference	Dallas, TX
Eberhard, M.	Deformation Demands at the Onset of Bar Buckling in Reinforced Concrete Columns	1/02	PEER Annual Meeting	Oakland, CA
Eberhard, M.	Evaluating Column Shear Design/Evaluation Procedures with Column Database	4/02	ACI Spring Conference, ACI Committee 445-3	Detroit, MI
Eberhard, M.	A Simple Method to Estimate Column Deformation at Bar Buckling	10/02	Us-Japan Cooperative Program, Kyoto Grantees Meeting	Kyoto, Japan
Berry, M. and Eberhard, M.	Accuracy of Seismic Performance Estimates for Bridge Columns	3/03	ACI Spring Conference	Vancouver, Canada
*Ranf., R.T.	Bridge Damage During the Nisqually Earthquake	5/03	ASCE Structures Congress	Seattle, WA
*Berry, M.	Column Deformation Demands at Bark Buckling	5/03	ASCE Structures Congress	Seattle, WA
*Eberhard, M.	Effects of Long-Duration Earthquakes on Poorly Reinforced Concrete Columns	5/03	ASCE Structures Congress	Seattle, WA
Eberhard, M.O.	Damage Fragility Functions for the I-880 Bridge	2/04	PEER Annual Meeting	Palm Springs, CA
Eberhard, M.O.	Flexural Damage Accumulation in Lightly Confined Bridge Columns	3/04	ACI Spring Conference	Washington, D.C
Eberhard, M.O.	Effect of Cyclic Loading on Shear Strength of Reinforced Concrete Columns	10/04	ACI Fall Conference	San Francisco, CA
Eberhard, M.O.	Calibration of Distributed Plasticity Element	9/05	PEER OpenSEES Column Modeling Workshop	Richmond, CA
Eberhard, M.O.	A Practical Performance Model for Reinforced Concrete Bridge Columns	10/05	Caltrans Bridge Research Conference	Sacramento, CA

*Stanton, J.F.	Rapid Construction Details for bridges in Seismic Zones	4/06	8 th Nat. Conference on Earthquake Engin.	San Francisco, CA
*Johnson, N.	Shake-Table Studies of a Two-Span Reinforced Concrete Bridge	4/06	8 th Nat. Conference on Earthquake Engin.	San Francisco, CA
*Ranf, R. T.	Experimentally based Evaluation of Soil-Foundation-Structure Interaction for a Reinforced Concrete Bridge	4/06	8 th Nat. Conference on Earthquake Engin.	San Francisco, CA
Eberhard, M.O.	Model Development for a Reinforced Concrete Bridge Using Shake Table and Centrifuge Data	6/06	4 th Annual NEES Meeting	Washington, D.C.
Stanton, J.F.	Rapid Construction Details for Bridges in Seismic Zones	10/06	22 nd US-Japan Workshop on Bridges	Seattle, WA
Eberhard, M.O.	Model Selection for Performance-Based Earthquake Engineering of Bridges	6/07	NEES 5 th Annual Meeting	Snowbird, Utah
Rosa, M.P.	Improving Predictions for Camber in Precast, Prestressed Concrete Bridge Girders.	9/07	Western Bridge Engineer's Seminar	Boise, ID
*Pang, J.	Precast Bridge Bent Connection for Rapid Construction in Seismic Regions.	3/08	FHWA Accelerated Bridge Construction Conference	Baltimore, MD
Elwood, K.	Performance Characteristics of Concrete Columns	4/08	ACI Spring Convention	Los Angeles, CA
Eberhard, M.O.	Fixed-Base Approximation for PBEE of Bridges on Drilled Shafts	6/08	6 th Annual NEES Meeting	Portland, OR
*Stanton, J.F.	Large-Bar Connection for Precast Bridge Bents in Seismic Regions	9/08	IABSE Annual Meeting and Congress	Chicago, IL
Eberhard, M.O.	Effective Stiffness of Reinforced Concrete Columns	3/09	ACI 2009 Spring Conference	San Antonio, TX
Stanton, J.F.	Anchorage of Large Bars Grouted in Ducts in Precast Concrete Members	3/09	ACI 2009 Spring Conference	San Antonio, TX
Stanton, J.F.	Seismic Connections between Precast Concrete Columns and Cap Beams using Very Large Bars	4/09	SEI 2009 Structures Congress	Austin, TX
Stanton, J.F.	A Precast Concrete Bridge Bent System for Seismic Regions	6/10	2010 PCI Annual Convention and 3 rd International FIB Congress	Washington, DC

3. Professional Society Memberships

American Society of Civil Engineers, 1983-present
American Concrete Institute, 1989 - present
Earthquake Engineering Research Institute, 1989-present
Consortium of Universities for Research in Earthquake Engineering, 2000-present
Network for Earthquake Engineering Simulation, Inc., 2003-present

4. Other

Manuscript Referee for:

ACI Structural Journal
ACI Technical Activity Committee (TAC)
Journal of Advanced Concrete Technology (JCI)
ASCE Journal of Structural Engineering
Canadian Journal of Civil Engineering
EERI Spectra
ACI Journal Oversight Team
Earthquake Engineering and Structural Dynamics
Engineering Structures
ISET Journal of Earthquake Technology
Structural Engineering and Mechanics

Book Reviews:

Engineering Mechanics, Boresi and Schmidt

GRADUATE STUDENTS

1. Chaired Doctoral Degrees

Name of Student	Degree Date	Support	Current Position/Employer
Newtson, Craig	Sum 97	NSF	Associate Professor, New Mexico State University
Price, Tom	Aut 97	NSF	Assistant Professor, City University of New York
Barr, Paul*	Aut 00	WSDOT/FHWA	Associate Professor, Utah State University
Berry, Michael	Aut 06	NSF/PEER	Assistant Professor Montana State University
Ranf, Tyler	Wi 07	NSF	MKA Engineers, Seattle
Haraldsson, Olafur	In progress	Valle/FHWA	UW

* Jointly advised with Prof. John Stanton

2. Chaired Master Degrees

Degree	Name of Student	Degree Date	Support	Degree Option
MSCE	Einarsson, Eysteinn	Aut 90	Valle Foundation	Thesis
MSCE	Kim, Kevin	Aut 90		Project
MSCE	Hjartarson, Gaukur	Aut 91	Valle Foundation	Thesis
MSCE	O'Donovan, Thomas	Spr 92	U.S. Army	Thesis
MSCE	Pla, Genevieve	Sum 92	NSF	Thesis
MSE	MacLardy, Jeff	Win 93	WSDOT	Thesis
MSCE	Rodehaver, Scott	Win 93	WSDOT	Thesis
MSCE	Cone, William	Sum 93	SGEM lab (welder)	Thesis
MSCE	Meigs, Blythe	Aut 93		Thesis
MSCE	Ryter, Stanley	Win 94	WSDOT	Thesis
MSCE	Knaebel, Paul	Sum 95	WSDOT	Thesis
MSCE	Trochalakis, Panos*	Sum 95	WSDOT	Thesis
MSCE	Bjornsson, Sveinn*	Win 96	Valle	Thesis

MSCE	Hudgings, Thomas*	Win 96	Valle/WSDOT	Thesis
MSCE	Ng, Sharon	Sum 96		Project
MSCE	Barr, Paul*	Win 98	FHWA/WSDOT	Thesis
MSCE	Fekete, Elizabeth*	Win 97	FHWA/WSDOT	Thesis
MSCE	Nobuto, Jun*	Sum 98	PCB Corporation	Thesis
MSCE	Ogetsu, Taerao	Spr 99		Course only
MSCE	Blank, Michael	Spr 99		Course only
MSCE	Mookerjee, Amit	Sum 99	NSF/PEER	Thesis
MSCE	Damianick, Karen	Sum 00		Course only
MSCE	Nelson, Jared*	Aut 00	NSF/Valle	Thesis
MSCE	Price, Zachary*	Aut 00	NSF/PEER/WSDOT	Thesis
MSCE	Lints, Kiva	Win 01		Course only
MSCE	Kikuta, Jason	Spr 01		Course only
MSCE	Parrish, Myles	Sum 01	NSF/PEER/WSDOT	Thesis
MSCE	Hesford, Peter	Spr 02		Course only
MSCE	Tomasson, Tomas	Aut 02	Valle Foundation	Thesis
MSCE	Young, Stephen	Aut 02		Course only
MSCE	Camarillo, Haili	Spr 03	NSF/PEER	Thesis
MSCE	Berry, Michael	Sum 03	NSF/PEER	Thesis
MSCE	Ranf, R. Tyler	Aut 03	NSF Graduate Fellowship	Project
MSCE	Andrews, Frederick L	Aut 03		Project
MSCE	Gimas, George	Sum 04		Course only
MSCE	Prindle, Douglas	Spr 04		Course only
MSCE	Hieber, David*	Win 05	WSDOT	Thesis
MSCE	Wacker, Jonathan*	Spr 05	Valle Foundation/ WSDOT	Thesis
MSCE	Holder, Michele	Aut 05	Tau Beta Pi	Course only
MSCE	Fletcher, Erin	Win 06		Course Only
MSCE	Rosa, Michael*	Win 06	WSDOT	Thesis
MSCE	Gunnarsson. Kari*	Win 06	VALLE	Course only
MSCE	Steuck, Kyle*	Sum 07	Valle/WSDOT	Thesis
MSCE	Pang, Jason*	Spr 08	WSDOT/PEER	Thesis

MSCE	Wenger, Barry	in progress		Course only
MSCE	Cohagen, Laila*	Sum 08	Valle/WSDOT	Thesis
MSCE	Haraldsson, Olafur*	In progress	Valle/FHWA	Thesis

* Jointly advised with Prof. John Stanton

3. Other Significant Student Supervision

Degree	Name of Student	Degree Date	Degree Option
MSCE	Oyawoye, Siyanade	Sum 90	Project
MSCE	Grauers, Katarina	Aut 90	Thesis
MSCE	Rooker, John	Aut 90	Thesis
MSCE	Hicks, Thomas	Spr 91	Thesis
Ph.D.	Boothby, Thomas	Sum 91	Dissertation
Ph.D.	Marsh, M. Lee	Sum 91	Dissertation
MSCE	Shinagawa, Kiyokazu	Aut 91	Project
MSCE	Swanson, Dave	Aut 91	Thesis
MSCE	Knechtel, Brett	Wtr 92	Thesis
Ph.D.	Castaneda, Duane	Spr 92	Dissertation
MSCE	Rucki, Michael	Spr 92	Thesis
MSCE	Vokes, Elizabeth	Spr 92	Thesis
MSCE	Wipplinger, Lisa	Spr 92	Thesis
MS	Harrison, Tom	Aut 92	Thesis
MSCE	Doggett, Timothy	Spr 93	Project
MSCE	Liu, Yan	Spr 93	Thesis
MSCE	Curtis, Jeff	Spr 93	Project
MSCE	Barkenae, Jan Erik	Sum 93	Project
MSCE	Mole, Andrew	Aut 93	Thesis
MSCE	Shaffer, Desiree	Wtr 94	Project
MSCE	Ting, Stephen	Aut 94	Project
MSCE	DeMars, Mary	Aut 94	Thesis

MSCE	Ewing, Andrew	Wtr 95	Thesis
MSCE	Berninghaus, Garth	Wtr 95	Thesis
MSCE	Debbie Jung	Spr 95	Thesis
MSCE	Mitch Tallman	Spr 95	Thesis
MSCE	Tim Maund	Sum 95	Thesis
MSCE	Shila Kappayil	Sum 95	Thesis
MSCE	Peter Lee	Sum 95	Thesis
MSCE	Kim Long	Sum 95	Thesis
MSCE	Tim Maund	Aut 95	Thesis
MSCE	Paul Walker	Aut 95	Thesis
MSCE	Byron Miranda	Aut 95	Thesis
MSCE	Xenia Rofes	Spr 96	Thesis
MSCE	Jason Emoto	Spr 96	Thesis
MSCE	Santos, Peter	Win 97	Thesis
MSCE	Gopalakrishnan, Balaji	Win 97	Thesis
MSCE	Hoit, Matthew	Win 97	Thesis
Ph.D.	Dauids, William	Spr 97	Dissertation
Ph.D.	Chen, Yih-Lan (Educ.)	Spr 99	Dissertation
Ph.D.	Lertpiriyasuwat, V. (M.E.)	Spr 00	Dissertation
MSCE	Hakun Bardarson	Aut 00	Thesis
MSCE	Pederson, Jim	Win 01	Thesis
MSCE	Ogurinde, Ayokunle	Win 01	Thesis
MSCE	Taflin, Joe	Win 01	Thesis
MSCE	Soderstrom, Jennifer	Spr 01	Thesis
MSCE	Graff, Robert	Spr 01	Thesis
MSCE	Gunderson, Chad	Win 02	Thesis
MSCE	Johnson, Ragnar	Win 02	Thesis
MSCE	McHenry, Melissa	Win 02	Thesis
Ph.D.	Kim, Jubum	Sum 02	Dissertation
Ph.D.	Amtman, Dagmar (Educ.)	Aut 02	Dissertation
MSCE	Unocic, Frank	Aut 02	Thesis
MSCE	Pagni, Catherine	Sum 03	Thesis

Ph.D.	Park, Jaewook	Spr 05	Dissertation
MSCE	Williams, Travis	Sum 06	Thesis
MSCE	Freytag, Dillan	Sum 06	Thesis
Ph.D.	Trudeau, Michelle (Educ.)	in progress	Dissertation
Ph.D.	Roy Mayfield	Win 2007	Dissertation
Ph.D.	Jungkeun Yoon (M. E.)	Sp 2007	Dissertation
Ph.D	Yi-Min Huang	Sum 07	Dissertation
Ph.D.	Tsung-Liang Wu (M.E.)	Aut 08	Dissertation
Ph. D.	Anne Lemnitzer (UCLA)	Spr 09	Dissertation
MSCE	Justin Clark	Spr 09	Thesis
Ph.D.	Hyungsuk Shin	In progress	Dissertation
MSCE	Justin Clark	Spr 09	Thesis

RESEARCH ACTIVITIES

1. Sponsored Research

Role	Title	Supporting Agency	Amount	Period of Award	
PI	Investigation of the Application of Imaging Technology to the Nondestructive Evaluation of Civil Structures	UW GSRF	\$8,000	1989	
PI	Transverse Stiffness, Strength, and Ductility of Older Reinforced Concrete Bridges	WSDOT	\$210,000	1991-1992	
PI	Application of Imaging Technology to the Nondestructive Evaluation of Civil Structures Presidential Young Investigator's Award	NSF	\$312,500	1991-1998	
PI	Research Experience for Undergraduates Program	NSF	\$10,000	1991	
PI (4 co-PIs)	Seismic Vulnerability of the Alaskan Way Viaduct, Phase I (preliminary evaluation)	WSDOT	Phase I	\$60,000	1991-1992
1 of 9 co-PIs (Stanton was PI)	Equipment for Dynamic Experiments	NSF	\$85,000	1991-1994	
Joint PI With Kramer	Seismic Vulnerability of the Alaskan Way Viaduct, Phase II (detailed evaluation)	WSDOT	Phase II	\$337,000	1992-1995
Joint PI With Stanton	Seismic Restrainers for Bridges	WSDOT	\$58,000	1994-1995	
1 of 6 co-PIs (Stanton was PI)	Major Research Instrumentation Grant	NSF/UW	\$928,381	1997-1999	

Joint PI With Stanton	High Performance Concrete in Bridge Girders	FHWA/ WSDOT	EPP Initial Prop. Supplement Supplement Supplement	\$46,504 \$77,630 \$110,850 \$40,000 <u>\$55,000</u> \$329,984	1997-2000
PI	Accuracy of Seismic Performance Estimates for Reinforced Concrete Columns	NSF/PEER (Pacific Earthquake Engineering Center)		\$140,000	1998-2001
Joint PI With Stanton (and Arduino in Years 2-3)	Effects of Long-Duration, Long- Period Ground Motions on Bridge System Performance	NSF/PEER/W SDOT		\$225,000	1998-2001
co-PI (Kramer was PI)	Seismic Warning System for the Alaskan Way Viaduct	WSDOT		\$75,000	1999-2000
PI	Nisqually Earthquake Reconnaissance and Analysis	NSF/PEER		\$8,000	2001
PI	Structural Performance Database	NSF/PEER		\$30,000	2001-2003
PI	Column Database and Performance/Acceptance Criteria	NSF/PEER	Year 5 Year 6 UG suppl. Year 7	\$70,000 \$70,000 \$ 5,000 <u>\$ 70,000</u> \$215,000	2001-2005
PI	Post-Earthquake Prioritization of Bridge Inspections	WSDOT		\$45,000	2003-2004
Joint PI with Stanton	Precast Systems for Rapid Construction	WSDOT		\$145,000	2003-2005
Joint PI with Kramer (Arduino is co- PI)	Collaborative Research: Demonstration of NEES for Studying Soil-Foundation- Structure Interaction	NSF		\$255,610	2003-2007

Joint PI with Stanton	Camber Estimates for Precast, Pre-tensioned Concrete Bridge Girders	WSDOT	Initial Prop. Supplement	\$31,400 <u>\$11,500</u> \$42,900	2004-2007
PI	Relating EDPs in RC Bridges to Damage and Decision Metrics	NSF/PEER	Year 8 Year 9 Year 10	\$85,000 \$85,000 <u>24,057</u> \$194,057	2004-2007
Joint PI with Stanton	Precast Systems for Rapid Construction – Phase II	WSDOT		\$200,000	2006-2008
Joint PI with Stanton	Rapid Construction of Earthquake-Resistant Bridges	TRANSNOW	Year 1 Year 2	\$56,143 <u>\$16,116</u> \$72,259	2007-2009
Joint PI with Stanton	Fully Precast Bridge Bents for use in Seismic Regions	FHWA (Berger-ABAM)	Subcontract Materials	\$190,649 <u>\$25,000</u> \$215,649	2009-2011
Joint PI with Stanton	Rapid Construction of Self-Centering Precast Bridge Bents	State of California (PEER)		\$134,500	2009-2011
Joint PI with Stanton	Accelerating Bridge Construction to Reduce Congestion	TRANSNOW		\$33,035	2009-2010
PI	NEES Operations: FY2010-FY2014	NSF (Purdue U.) (under review)		\$175,000	2009-2014

2. Un-sponsored Research

Selection and Performance of Earthquake-Resisting Systems. (Blythe Meigs, MSCE)

As Chairman of the Subcommittee on Building Systems for ACI Committee 368, I conducted an extensive survey of current practice in selecting lateral-force-resisting systems. The survey was sent to firms throughout the United States, Canada and Latin America. Ms. Meigs analyzed the survey results for 4700 buildings. The analyses were published in *Earthquake Spectra*.

Modal Damping in Non-Proportionally Damped Structures.
(Anna Svanborg and Lena Roos)

Supervised the thesis research of Anna Svanborg and Lena Roos, students at the Royal Institute in Stockholm, Sweden. They studied the errors associated with using modal analysis to estimate the dynamic response of structures with non-proportional damping. This issue was studied, because modal analysis was being used to evaluate the Alaskan Way Viaduct, yet the errors associated with this approximation had not been investigated.

TEACHING EFFECTIVENESS

1. Courses Taught

Qtr.	Course, Title & Credit	Student Enrollment	Evaluation	Comment
Fall 89	CESM 486, Design of Timber Structures, 3 cr.	23	Yes	
Wtr 90	CESM 474, Advanced Structural Analysis I, 3 cr.	16	Yes	
Wtr 90	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	19	Yes	
Fall 90	CESM 474, Advanced Structural Analysis I, 3 cr.	16	Yes	
Fall 90	CESM 486, Design of Timber Structures, 3 cr.	23	Yes	
Wtr 91	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	16	Yes	
Spr 91	CESM 599, Special Topics: Structures and Mechanics, 3 cr.	5	No	Team taught with U. Dorka
Spr 91	CESM 481, Design of Reinforced Concrete Structures, 3 cr.	41	No	Team taught with J. Stanton
Fall 91	CESM 474, Advanced Structural Analysis I, 3 cr.	26	Yes	
Fall 91	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	17	Yes	
Wtr 92	CESM 481, Design of Reinforced Concrete Structures, 3 cr.	30	Yes	
Wtr 92	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	21	Yes	
Fall 92	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	25	Yes	
Wtr 93	CIVE 441, Advanced Structural Analysis I, 3 cr.	19	Yes	
Wtr 93	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	25	Yes	
Spr 93	CIVE 363, Construction Materials, 3 cr.	61	Yes	

Fall 93	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	11	Yes	
Wtr 94	CIVE 441, Advanced Structural Analysis I, 3 cr.	5	Yes	
Spr 94	CIVE 363, Construction Materials, 3 cr.	75	Yes	
Fall 94	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	24	Yes	
Wtr 95	CIVE 454, Design of Timber Structures, 3 cr.	42	Yes	
Spr 95	CIVE 441, Advanced Structural Analysis I, 3 cr.	15	Yes	
Spr 95	CIVE 452, Design of Reinforced Concrete Structures, 3 cr.	48	Yes	
Fall 95	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	17	Yes	
Wtr 96	CIVE 454, Design of Timber Structures, 3 cr.	48	Yes	
Wtr 96	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	17	Yes	
Spr 96	ENGR 210, Statics, 3 cr.	95	No	Laboratory Instructor and Curriculum Developer
Aut. 97	ENGR 210, Statics, 3 cr.	98	Yes	
Aut. 97	CIVE 520, SGEM Graduate Seminar, 1 cr.		No	Graduate Seminar
Wi 98	CIVE 457, Advanced Structural Analysis I, 3 cr.	12	Yes	
Wi 98	CIVE 453, Design of Prestressed Concrete Structures, 3 cr.	23	Yes	
Sp 98	CIVE 452, Design of Reinforced Concrete Structures, 3 cr.	36	Yes	
Aut. 98	CIVE 379, Structural Engineering I, 3 cr.	48	Yes	
Aut. 98	CIVE 520, SGEM Graduate Seminar, 1 cr.	26	No	Graduate Seminar

Wi 99	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	45	Yes	
Aut. 99	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	26	Yes	
Wi 00	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	34	Yes	
Wi 01	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	20	Yes	
Wi 02	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	18	Yes	
Sp 02	CEE 380, Structural Design, 3 cr.	61	Yes	
Wi 03	CEE 500, Structures Graduate Seminar, 1 cr.	9	No	Graduate Seminar
Wi 03	CEE 453, Design of Prestressed Concrete Structures, 3 cr	19	Yes	
Sp 03	CEE 500, Structures Graduate Seminar, 1 cr	9	No	Graduate Seminar
Aut 03	CEE 379, Introduction to Structural Engineering I, 4 cr	40	Yes	
Wi 04	CEE 500, Structures Graduate Seminar, 1 cr.	25	No	Graduate Seminar
Sp 04	CEE 380, Structural Design, 3 cr.	68	Yes	
Aut 04	CEE 379, Introduction to Structural Engineering I, 4 cr.	61	Yes	
Wi 05	CEE 379, Introduction to Structural Engineering I, 4 cr.	59	Yes	
Wi 06	CEE 431, Seismology and Earthquake Engineering, joint with ESS 465, 3 cr.	51	Yes	
Sp 06	CEE 442, Structural Geotechnical Design Project, 4 cr.	37	Yes	Team taught with Roeder and Holtz
Au 06	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	21	Yes	Replaced Prof. Lehman, week #3.
Sp 07	CEE 442, Structural Geotechnical Design Project, 4 cr.	30	No	Team taught with Holtz
Aut 07	CEE 379, Introduction to Structural Engineering I, 4 cr.	60	Yes	

W 08	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	19	Yes	
Sp 08	CEE 442, Structural Geotechnical Design Project, 4 cr.	50	No	Team taught with Roeder and Holtz
Aut 08	CEE 500, Structures Graduate Seminar, 1 cr.	34	No	
Sp 09	CEE 220, Mechanics of Materials	163	Yes	

2. Summary of Student Teaching Evaluations

Student teaching ratings are on a scale of 0.0 to 5.0. Prior to A98, the mean is reported. Subsequently, the adjusted median is reported.

Qtr.	Course, Title & Credit	Number of Responses	Course as a Whole (Item 1)	Student Evaluations		Mean Items 1-4
				Instructor's Contribution (Item 3)	Instructor's Effectiveness (Item 4)	
Fall 89	CESM 486, Design of Timber Structures, 3 cr.	20/23	4.00	4.10	3.75	3.90
Wtr 90	CESM 474, Advanced Structural Analysis I, 3 cr.	13/16	3.85	4.15	4.15	3.96
Wtr 90	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	19/19	3.79	3.84	3.63	3.70
Fall 90	CESM 474, Advanced Structural Analysis I, 3 cr.	13/16	3.77	4.00	3.62	3.75
Fall 90	CESM 486, Design of Timber Structures, 3 cr.	20/23	3.50	3.50	3.05	3.45
Wtr 91	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	16/16	3.67	3.80	3.47	3.62
Fall 91	CESM 474, Advanced Structural Analysis I, 3 cr.	21/26	3.95	4.33	4.10	4.10
Fall 91	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	13/17	4.23	4.54	4.08	4.23
Wi 92	CESM 481, Design of Reinforced Concrete Structures, 3 cr.	25/30	3.84	4.12	4.00	3.97

Wi 92	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	20/21	4.30	4.30	4.30	4.30
Fall 92	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	23/25	3.87	4.00	3.87	3.87
Wi 93	CIVE 441, Advanced Structural Analysis I, 3 cr.	19/19	4.16	4.37	4.21	4.21
Wi 93	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	22/25	3.91	4.09	4.14	3.99
Spr 93	CIVE 363, Construction Materials, 3 cr.	30/61	3.07	2.70	2.40	2.84
Fall 93	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	9/11	3.44	3.44	3.22	3.36
Wi 94	CIVE 441, Advanced Structural Analysis I, 3 cr.	5/5	4.60	4.40	4.40	4.45
Spr 94	CIVE 363, Construction Materials, 3 cr.	47/75	4.00	4.36	4.29	4.17
Fall 94	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	20/24	4.25	4.30	4.20	4.23
Wtr 95	CIVE 454, Design of Timber Structures, 3 cr.	17/42	3.94	3.65	3.65	3.76
Spr 95	CIVE 441, Advanced Structural Analysis I, 3 cr.	15/15	4.27	4.47	4.27	4.30
Spr 95	CIVE 452, Design of Reinforced Concrete Structures, 3 cr.	28/48	3.82	4.32	4.07	3.98
Fall 95	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	15/17	4.1	4.2	4.0	4.1
Wtr 96	CIVE 454, Design of Timber Structures, 3 cr.	37/48	4.2	4.4	4.3	4.2
Wtr 96	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	14/17	4.2	4.3	4.2	4.1
Aut. 97	ENGR 210, Statics, 3 cr.	64/98	3.97	4.16	4.24	4.05
Wi 98	CIVE 457, Advanced Structural Analysis I, 3 cr.	13/13	4.25	4.57	4.40	4.32
Wi 98	CIVE 453, Design of Prestressed Concrete Structures, 3 cr.	20/23	4.05	4.04	3.95	4.03

Sp 98	CIVE 452, Design of Reinforced Concrete Structures, 3 cr.	29/36	3.87	4.04	4.00	3.93
Aut. 98	CIVE 379, Structural Engineering I, 3 cr.	32/48	3.95	3.89	4.61	3.87
Wi 99	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	34/45	4.11	4.25	4.09	4.13
Aut. 99	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	23/26	3.98	4.07	3.92	3.95
Wi 00	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	28/34	4.17	4.52	4.53	4.29
Wi 01	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	16/20	4.04	4.17	4.42	4.12
Wi 02	CEE 453, Design of Prestressed Concrete Structures, 3 cr.	15/18	4.16	4.68	4.36	4.40
Sp 02	CEE 380, Structural Design, 4 cr.	49/61	3.9	4.2	3.9	4.0
Wi 03	CEE 453, Design of Prestressed Concrete Structures, 3 cr	18/19	4.1	4.1	4.2	4.0
Aut 03	CEE 379, Introduction to Structural Engineering I, 4 cr	/40	4.4	4.6	4.5	4.4
Sp 04	CEE 380, Structural Design, 3 cr.	46/67	3.6	3.7	3.4	3.5
Aut 04	CEE 379, Introduction to Structural Engineering I, 4 cr.	47/61	4.2	4.7	4.6	4.4
Wi 05	CEE 379, Introduction to Structural Engineering I, 4 cr.	43/59	4.3	4.5	4.6	4.3
Wi 06	CEE 431, Seismology and Earthquake Engineering, joint with ESS 465, 3 cr.	38/51	3.9	4.1	3.9	3.8
Sp 06	CEE 442, Structural Geotechnical Design Project, 4 cr.	23/??	3.4	3.3	2.8	3.2
Au 06	CESM 511, Advanced Reinforced Concrete Design, 3 cr.	21/21	3.5	3.6	3.6	3.6
Sp 07	CEE 442, Structural Geotechnical Design Project, 4 cr.	18/30	3.5	3.2	3.1	3.4
Aut 07	CEE 379, Introduction to Structural Engineering I, 4 cr.	38/60	4.1	4.4	4.1	4.1

W 08	CESM 502, Structural Mechanics II – Dynamics, 3 cr.	19/19	3.8	3.9	3.9	3.9
Sp 08	CEE 442, Structural Geotechnical Design Project, 4 cr.	35/50	3.6	3.5	3.4	3.5
Sp 09	CEE 220, Mechanics of Materials	99/163	4.3	4.3	4.2	4.2
Sp 10	CEE 220, Mechanics of Materials					

3. Supervision of Undergraduate Independent Study

Name of Student	Quarter	Program	Credits
Mason, Todd	Spr 90	CESM 499	3
Wang, C.	Spr 91	CESM 499	3
Clark, Shelley	Spr 91	NSF-REU	
Mah, Robin	Spr 91	NSF-REU	
Svanborg, Anna	Sum 93	Swedish Royal Institute of Technology (KTH)	
Roos, Lena	Sum 93	KTH	
Strandin, Johanna	Sum 98	KTH	
Ohlson, Nina	Sum 98	KTH	
Berry, Michael	Sum 00	NSF-REU	
Griffith, Zachary	Sum 00	NSF-REU	
Ranf, R. Tyler	Sum 01	NSF-REU	
Hjert-Bernardi, Maritzah	Win 02	CESM 499	2
Gimas, George	Sum 02	NSF-REU	
Zimmer, Kylee	Sum 03	NSF-REU	
Wong, Grace	Spr 06	CEE 499	3
Karalic, Ina	Spr 06	CEE 499	1
Leonard, Andrea (w. Lowes)	Sum 07	NSF- REU	

4. Short Courses, Workshops, and Other Educational Programs

Professional Engineering Practice Liaison (PEPL) Course, "Introduction to Earthquake Engineering," 4 hours, Seattle, Washington, 1992.

American Concrete Institute Short Course, "Reinforced Concrete Design," 2 days (with M. Saatcioglu), Bellevue, Washington, March 1999.

Indiana Department of Transportation. Training workshop on earthquake response. 1 day (with three Purdue faculty members), Jasper, Indiana, March 2000.

PEER Undergraduate Scholars Course, "Earthquake Engineering and the Alaskan Way Viaduct", part of program on "Public Policy Perspectives on Earthquake Risks," One of 8-10 instructors, November 2001.

PEER Undergraduate Scholars Course, "Lessons from Earthquakes", part of program on Structural Earthquake Engineering, One of 8-10 instructors, October 2003.

SERVICE

1. Departmental Service

Structural Laboratory Executive Committee, 1990-1995
SGEM Ph.D. Preliminary Exam Committee, 1990
Departmental Committee on Laboratory Management, 1991
Environmental Engineering Search Subcommittee, 1992
Structural Engineering Search Committee, 1994
SGEM Ph.D. Preliminary Exam Committee, 1992
Scholarship Committee, 1992-2002
Graduate Advisor, Structural and Geotechnical Engineering and Mechanics 1997-1999
Graduate Advisor, Structural Engineering and Mechanics, 1999-2006
UW-PEER Matching Funds Coordinator, 1997-2000
Chair, Osberg Fellowship Selection Committee, 2000
Member, Search Committee for Assistant to Chair, 2000
Chair, Committee on Undergraduate Education, Admission and Scholarships, 2002-2005
Program Leader, Structural Engineering and Mechanics Program, 2002-2004
Member, CEE Faculty Search Committee, Structural Engineering, 2006
Advisor, PEER Student Balsawood Shaking Table Competition, 2006 (UW placed first)
Member, Mentor Committee for Asst. Prof. Jeff Berman, 2006-present
Chair, Mentor Committee for Research Asst. Prof. Andrew Wood, 2007-2008
Program Director, Structural and Geotechnical Engineering and Mechanics Program, 2007-present.
Member, CEE Executive Committee, 2008-present
Member, Structural and Geotechnical Search Committee, 2008-present
Member, Mentor Committee for Asst. Prof. Alan Hamlet, 2009-present

2. College Service

Engineering Open House Coordinator for Department of Civil Engineering, 1992
(Received award for best exhibit)
Member, Committee on Student Affairs, 1991-1993
Member, Ad-Hoc Committee on Engineering Writing, 1994-1995
Member, ENGR Courses Restructuring Team, 1997-1998

Member, Search Committee for CEE Dept. Chair, 2001

3. University Service

None

4. Professional Society and Other Service

American Concrete Institute (ACI)

Member, ACI Committee 368, Earthquake Resistance of Concrete Structural Elements and Systems 1990-1999

- Chair, Subcommittee on Building Systems, 1991-1993

Member, Committee 341, Earthquake-Resistant Concrete Bridges, 1992-2000

Associate Member, Committee 228, Nondestructive Testing of Concrete, 1990-2000

Session Moderator, ACI Fall Convention, Atlanta, 1997

ACI Journals Oversight Team, 1998-2001

Member, ACI-ASCE Committee 445, Shear and Torsion, 2000-present

- Member, 445-B subcommittee on seismic shear, 2000-present

- Chair, 445-B subcommittee on seismic shear, 2004-2007

- Member, subcommittee 445-A on strut-and-tie methods, 2003-2007

- Chair, 445-B subcommittee on seismic shear, 2008-present

American Road & Transportation Builders Association

- Member

American Society of Civil Engineers

Session Moderator, ASCE Structures Congress, Seattle, June 2003

Earthquake Engineering Research Institute (EERI)

Chair, Graduate Fellowship Review Committee, 1998

Member, Graduate Fellowship Review Committee, 2007

Network for Earthquake Engineering Simulation (NEES)

Member, Task Group on Sharing of Facilities, 2002-2003

Member, Task Group on Data Sharing, 2002-2003

Member, NEES Consortium, Inc., 2003-present

Member, Committee on User Sharing and Site Operations, 2003-2005 (elected)

Chair, Site Operations Committee, 2005-2007.

Member, Technical Policy Coordination Council, 2005-2007

Chair, Task Group on Shared-Use Partnering Policy, 2005-2006

Consulting expert, Task Group on Success, 2006-2007
Session Moderator, NEES Fifth Annual Meeting, 6/2008
Member, Board of Directors, 2007-present (elected by membership)
- Member Governance Committee
Vice President, 2008-present (elected by Board of Directors)

Other

Co-Coordinator, Nisqually Earthquake Clearinghouse Group, 2001 (with Prof. S.L. Kramer)

5. Community Service

Volunteer

Special Olympics Assistant Coach (basketball, track, cross-country, softball) 1992-1996

Consulting

Seattle Engineering Department Peer-Review Committee, 1993-1994

The City of Seattle contracted with consulting firms to design retrofit measures to improve the seismic resistance of its bridges. The peer review committee reviewed proposed retrofit measures, suggested alternate evaluation procedures, and proposed alternate retrofit strategies. The committee also helped the city managers develop funding priorities, because the funds appropriated were insufficient to address all needs.

Royal Palms Resort Failure Investigation, 1997-1999

The Royal Palms Resort main building partially collapsed during the 1995 Guam earthquake. As part of the resulting \$150M litigation, I conducted tests whose goal was to establish the likelihood that particular building columns failed in shear. Presented results in a technical report and in deposition.

Alaskan Way Viaduct Safety Evaluation, 2001

Consultant to blue-ribbon commission on the seismic vulnerability of the Alaskan Way Viaduct. The blue-ribbon commission confirmed that the Alaskan Way Viaduct is indeed extremely vulnerable to collapse during a strong earthquake.

6. National or Governmental Service

Member, National Science Foundation (NSF) NDE Proposal Review Panel, May 1998

Member, National Science Foundation (NSF) Career Proposal Review Panel, Nov. 1999

Member, Steering Committee for 5th NSF Workshop on Bridge Research, Oct. 2001

Member, Advanced National Seismic System, Pacific Northwest Advisory Committee, 2001-present

- Member, subcommittee on structures

Member, State of Washington Seismic Safety Committee, Subcommittee on Lifelines, 2002

7. All Other Service

None