

MARC O. EBERHARD
Curriculum Vitæ

Civil and Environmental Engineering
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EDUCATIONAL HISTORY

University of Illinois at Urbana-Champaign
Ph.D. in Civil Engineering
October 1989

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

University of Illinois at Urbana-Champaign
M.S. in Civil Engineering
January 1987

University of California, Berkeley
B.S. in Civil Engineering/Materials Science and Engineering
Double Major, Highest Honors
December 1984

EMPLOYMENT HISTORY

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

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

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

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

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

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

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

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

AWARDS AND HONORS

EERI's 2018 Graduate Student Paper Award (co-author. First author was N. Marafi).

Academic Engineer of the Year. Puget Sound Engineering Council, 2018.

T.Y. Lin Award, American Society of Civil Engineers, 2014.

Charles Z. Zollman Award, 2013. Precast/Prestressed Concrete Institute. (for PCI Journal paper with most "contribution in advancing the state-of-the-art of precast and prestressed concrete.")

Award of Special Recognition and Appreciation, 2010, Earthquake Engineering Research Institute (for leading EERI/USGS advance reconnaissance team to Haiti)

Outstanding Contribution, 2008, Network for Earthquake Engineering Simulation

Fellow of American Concrete Institute (ACI), 2000

Raymond C. Reese Research Prize, 1994, American Society of Civil Engineers

Thomas and Marilyn Nielson Faculty Fellow, 1993-1995, University of Washington

Presidential Young Investigator Award, 1991, National Science Foundation

University of Illinois Fellowship, 1985-1989

Kaiser Aluminum and Chemical Scholarship, 1983

Phi Kappa Phi Honor Society

Tau Beta Pi Engineering Honor Society

Chi Epsilon Civil Engineering Honor Society

AFFILIATIONS AND OTHER APPOINTMENTS

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

PUBLICATIONS

Refereed archival journal publications

1. Marafi, N.A., Grant, A., Maurer, B.W., Rateria, G., Eberhard, M.O., and Berman, J.W. "A Generic Soil Velocity Model that Accounts for Deeper Geologic Structure: Application to the Cascadia Region of North America," Under Review, 3/2020.
2. Carlos Molina Hutt, Shervin Zahedimazandarani, Nasser Marafi, Jeffrey Berman, Marc Eberhard. "Collapse risk of tall steel moment-resisting frames in deep sedimentary basins during large magnitude subduction earthquakes." *Engineering Structures*, Under Review, 12/2019.
3. Yang, T., Marafi, N., Calvi, P., Wieder, R., Eberhard, M., Berman, J. "Accounting for Spectral Shape in a Simplified Method of Analyzing Friction Pendulum Systems." *Engineering Structures*, Accepted for publication. 6/2020.
4. Kourehpaz, Pouria, Molina Hutt, Carlos, Marafi, Berman, Jeffrey, and Eberhard, Marc (2020). "Estimating Economic Losses of Mid-Rise RC Core-Wall Building in Sedimentary Basins by Combining Empirical and Simulated Seismic Hazard Characterizations." Accepted for Publication.
5. Krishnendu Shekhar, Pedro Arduino, Gregory Miller, Andrew Winter, Michael Motley, Marc Eberhard, Mohammad Shafiqul Alam, Pedro Lomonaco, Daniel Cox and Andre Barbosa (2020). "Conceptual Evaluation of Tsunami Debris Damming and Impact Forces," *Journal of Waterway, Port, Coastal, and Ocean Engineering*. Accepted for Publication.
6. Andrew O. Winter, Mohammad S. Alam, Krishnendu Shekhar, Michael R. Motley, Marc O. Eberhard, André R. Barbosa, Pedro Lomónaco, Arduino, P., Daniel T. Cox (2020), "Tsunami-Like Wave Forces on an Elevated Coastal Structure: Effects of Flow Shielding and Channeling," *Journal of Waterway, Port, Coastal, and Ocean Engineering*. ASCE, 146(4), April. DOI: 10.1061/(ASCE)WW.1943-5460.0000581.
7. Mohammad S. Alam, Andrew O. Winter, Glen Galant, Krishnendu Shekhar, Andre R. Barbosa, Michael R. Motley, Marc O. Eberhard, Daniel T. Cox, Pedro Arduino, and Pedro Lomonaco (2020). "Tsunami-like Wave Induced Lateral and Uplift Pressures and Forces on an Elevated Coastal Structure". *Journal of Waterway, Port, Coastal, and Ocean Engineering*. ASCE. 146(4), April, DOI: 10.1061/(ASCE)WW.1943-5460.0000562. (Editor's Choice).
8. Marafi, Nasser*, Makdisi, A.J., Eberhard, Marc O., and Berman, Jeff (2020). "Impacts of M9 Cascadia Subduction Zone Earthquake on Performance of RC Core-Wall Buildings in Seattle Basin." *Journal of Structural Engineering*. ASCE, February. DOI: 10.1061/(ASCE)ST.1943-541X.0002490. (Editor's Choice).

9. Marafi, Nasser*, Makdisi, A.J., Berman, Jeff, and Eberhard, Marc O. (2020). "Design Strategies to Achieve Target Collapse Risks for RC-Wall Buildings in Sedimentary Basins." Earthquake Spectra. DOI: 10.1177/8755293019899965.
10. Hua, J. *, Eberhard, M.O., Lowes L.N., and Gu, Xianglin (2019). "Modes, Mechanisms and Likelihood of Seismic Shear Failure in Rectangular Reinforced Concrete Columns." Journal of Structural Engineering, ASCE. 145(10), October, DOI: 10.1061/(ASCE)ST.1943-541X.0002365.
11. Mantawy, I.M., Sanders, D.H., Eberhard, M.O., and Stanton, J.F. (2019). "Modelling of Debonded Reinforcement in ABC Connections Designed for Seismic Zones," Engineering Structures. 198. DOI: 10.1016/j.engstruct.2019.109351.
12. Marafi, Nasser*, Eberhard, Marc O., Berman, Jeff, Wirth, E.A. and Frankel, A.D. (2019), "Impacts of Simulated M9 Cascadia Subduction Zone Motions on Idealized Systems." Earthquake Spectra. DOI: 10.1193/052418EQS123M.
13. Li, T., Marafi, N. A. *, Sen, A. D., Berman, J. W., Eberhard, M. O., Lehman, D. E., and Roeder C. W. (2019). "Seismic Performance of Special Concentrically Braced Frames in Deep Basins during Subduction-Zone Earthquakes SCBF Frames," Engineering Structures. Volume 188, 1 June, Pages 87-103 DOI: 10.1016/j.engstruct.2019.02.057.
14. Mantawy, I.M., Thonstad, T. *, Sanders, D.H., Stanton, J.F., and Eberhard, M.O. (2019), "Reinforcing Steel Fracture Identification for a High-Performance Bridge System," Istruc, June. DOI:10.1016/j.istruc.2018.11.017.
15. Winter, A.O., Motley, M.R. and Eberhard, M.O. (2018). "Tsunami-Like Loading of Individual Bridge Components". Journal of Bridge Engineering, ASCE, 23(2). February. DOI: 10.1061/(ASCE)BE.1943-5592.0001177.
16. Thonstad, T. *, Kennedy, B.J. *, Schaeffer, J.A. *, Eberhard, M.O. and Stanton, J.F. (2017). "Cyclic Tests of Precast Pretensioned, Rocking Bridge Column Subassemblies," Journal of Structural Engineering, ASCE. 143(9), September. DOI: 10.1061/(ASCE)ST.1943-541X.0001823.
17. Marafi, Nasser*, Eberhard, Marc O., Berman, Jeff, Wirth, E.A. and Frankel, A.D. (2017), "Effects of Deep Basins on Structural Collapse during Large Subduction Earthquakes," Earthquake Spectra. 33(3). 963-997. August. DOI: 10.1193/071916EQS114M. *Received EERI's 2018 Graduate Student Paper Award.*
18. Davis, Phillip M. *, Janes, Todd M. *, Haraldsson, O.S. * Stanton, John F., and Eberhard, Marc O. (2017), "Unbonded Pre-tensioned Columns for Accelerated Bridge Construction in Seismic Regions," Journal of Bridge Engineering, ASCE. 22(5). May. DOI: 10.1061/(ASCE)BE.1943-5592.0000992 .
19. Mantawy, I.M., Thonstad, T. *, Sanders, D.H., Stanton, J.F., Eberhard, M.O. (2016), "Seismic Performance of Precast, Pretensioned and Cast-in-Place Bridges: Shake Table Test Comparison," Journal of Bridge Engineering, ASCE, 21(10). October. DOI: 10.1061/(ASCE)BE.1943-5592.0000934.

20. Lattanzi, D.A., Miller, G.R., Eberhard, M.O., and Haraldsson, O.S.* (2016). "Bridge Column Maximum Drift Estimation Via Computer Vision," Journal of Computing in Civil Engineering, ASCE, July, DOI: 10.1061/(ASCE)CP.1943-5487.0000527.
21. Motley, M.R., Wong, H.K.*, Qin, X., Winter, A. and Eberhard, M.O. (2016). "Tsunami-Induced Forces on Skewed Bridges," Journal of Waterway, Port, Coastal and Ocean Engineering, ASCE, May, DOI: 10.1061/(ASCE)WW.1943-5460.0000328.
22. Marafi, Nasser*, Berman, Jeff, and Eberhard, Marc O. (2016), "Ductility Dependent Intensity Measure that Accounts for Ground Motion Spectral Shape and Duration", Journal of Earthquake Engineering and Structural Dynamics. 45(4):653-672. April. DOI: 10.1002/eqe.2678
23. Thonstad, T.* , Mantawy, I., Stanton, J.F., Eberhard, M.O., Sanders, D.H. (2016). "Shaking Table Performance of a New Bridge System with PreTensioned, Rocking Columns," Journal of Bridge Engineering, ASCE, April. DOI: 10.1061/(ASCE)BE.1943-5592.0000867.
24. Nguyen, H., Stanton, J.F., Eberhard, M.O., and Chapman, D. (2015), "The Effects of Temperature Variations on the Camber of Precast, Prestressed Concrete Girders," PCI Journal, September-October, (60)5 pp. 48-64.
25. Khaleghi, B., Schultz, E., Seguirant, Steve, Marsh, M.L., Haraldsson, O.S.*, Eberhard, M.O. and Stanton, J.F. (2013). "Accelerated Bridge Construction in Washington State -- From Research to Practice," translation of 2012 publication, Concrete Journal, Japanese Concrete Institute. In Japanese.
26. Haraldsson, O.S.*, Janes, T.M.*, Eberhard, M.O., and Stanton, J.F. (2013). "Seismic Resistance of Socket Connection between Footing and Precast Column," Journal of Bridge Engineering, ASCE, September, Vol. 18, No. 9, pp. 910-919. DOI: 10.1061/(ASCE)BE.1943-5592.0000413
27. Khaleghi, B., Schultz, E., Seguirant, Steve, Marsh, M.L., Haraldsson, O.S.*, Eberhard, M.O. and Stanton, J.F. (2012). "Accelerated Bridge Construction in Washington State -- From Research to Practice," PCI Journal, Precast/Prestressed Concrete Institute, Fall, pp. 34-49. (*Received 2013 PCI Charles C. Zollman Award*).
28. O'Brien, P., Eberhard, M.O., Haraldsson, O.*, Irfanoglu, A., Lattanzi, D., Lauer, S. and Pujol, S. (2011). "Measures of the Seismic Vulnerability of Reinforced Concrete Buildings in Haiti," Earthquake Spectra, Earthquake Engineering Research Institute, October, pp. 373-386.
29. DesRoches, R., Comerio, M., Eberhard, M.O., Mooney and W., Rix, G. (2011). "Overview of the 2010 Haiti Earthquake," Earthquake Spectra, Earthquake Engineering Research Institute, October, pp. 1-21.
30. Pang, B.K.*, Eberhard, M.O., and Stanton, J.F. (2010), "Large-Bar Connection for Precast Bridge Bents in Seismic Regions," Journal of Bridge Engineering, ASCE, May-June, pp 231-239.

31. Steuck, K.*, Stanton, J.F. and Eberhard, M.O. (2009), "Anchorage of Large-Diameter Reinforcing Bars in Ducts," ACI Structural Journal, July-August, pp 506-513.
32. Elwood K.J. and Eberhard, M.O. (2009), "Effective Stiffness of Reinforced Concrete Columns," ACI Structural Journal, July-August, pp 476-484.
33. Johnson, N., Ranf, R.T.*, Saiidi, S., Sanders, D. and Eberhard, M. (2008), "Seismic Testing of a Two-Span Reinforced Concrete Bridge," Journal of Bridge Engineering, ASCE, March-April, pp 173-182.
34. Ranf, R.T.*, Eberhard, M. and Malone, S. (2007), "Post-Earthquake Prioritization of Bridge Inspections." Earthquake Spectra, Earthquake Engineering Research Institute, February, pp 131-146.
35. Kono, S., Bechtoula, H., Sakashita, M., Tanakai, H, Watanabe, F. and Eberhard, M.O. (2006), "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, pp. 165-176.
36. Ranf, R.T.*, Eberhard, M.O and Stanton, J.F. (2006), "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, pp 23-42.
37. Bechtoula, H., Sakashita, M., Kono, S., Watanabe, F. and Eberhard, M.O. (2006), "Seismic Performance of Lower Stories of Mid-Rise RC Frame Building," ACI Structural Journal, July-August, Vol. 103, No. 4, pp 513-521.
38. Price, T.E.* and Eberhard, M.O. (2005), "Factors Contributing to Bridge-Embankment Interaction," Journal of Structural Engineering, ASCE, September, Vol. 131, No. 9, pp 1345-1354.
39. Berry, M.P.* and Eberhard, M.O. (2005), "A Practical Performance Model for Bar Buckling," Journal of Structural Engineering, ASCE, July, Vol. 131, No. 7, pp 1060-1070.
40. Barr, P.*, Stanton, J.F. and Eberhard M.O. (2005), "Implications of Temperature Variations on Prestressed Girder Design," Journal of Bridge Engineering, ASCE, March/April, Vol. 10, No. 2, pp 186-194.
41. Stanton, J.F., Eberhard, M.O. and Barr, P.* (2003), "A Weighted-Stretched-Wire System for Monitoring Deflections," Engineering Structures, Vol. 25, pp. 347-357.
42. Jones, A., Kramer, K., Arduino, P. and Eberhard, M.O. (2002), "Uncertainty Analyses for a Seismic Warning System," Transportation Research Record, No. 1808, November, pp 112-121.
43. Kwak, Y.K, Eberhard, M.O., Kim, W.S., and Kim, J. (2002), "Shear Strength of Steel-Fiber Reinforced Concrete Beams Without Stirrups," ACI Structural Journal, July-August, Vol. 99, No. 4, pp. 530-538.

44. Barr, P.*, Eberhard, M.O. and Stanton, J.F. (2001), "Live-Load Distribution Factors for Prestressed Concrete Bridges," Journal of Bridge Engineering, ASCE, September, pp. 298-306.
45. Wallace, J.W., Eberhard, M.O., Hwang, S.H., Moehle, J.P., Post, T., Roblee, C., Stewart, J.P. and Yashinsky (2001), M. "Highway Bridges," in "Chi-Chi, Taiwan Earthquake of September, 21, 1999", Eds. Uzarski, J. and Arnold, C., Earthquake Spectra, April, Earthquake Engineering Research Institute, Volume 16, supp. A, pp. 131-152.
46. Stanton, J.F, Barr, P.* and Eberhard, M.O. (2000), "Behavior of High-Strength Strength Bridge Girders," ACI Special Publication, SP-189, American Concrete Institute, pp. 71-83.
47. Newtonson, C.M.* and Eberhard, M.O. (2000), "Nondestructive Evaluation Using Numerical Simulation of Impact Response," ACI Materials Journal, May-June, pp. 343-350.
48. Price, T.E.* and Eberhard, M.O. (1998), "Effects of Spatially Varying Ground Motions on Short Bridges," Journal of Structural Engineering, ASCE, August, Vol. 124, No. 8, pp. 948-955.
49. Trochalakis, P.* , Eberhard, M.O. and Stanton, J.F. (1997), "Design of Seismic Restrainers for In-Span Hinges," Journal of Structural Engineering, ASCE, April, Vol. 123, No. 4, pp. 469-478.
50. Eberhard, M.O. and Marsh, M.L.* (1997), "Lateral-Load Response of Two Reinforced Concrete Bents," Journal of Structural Engineering, ASCE, April, Vol. 123, No. 4, pp. 461-468.
51. Eberhard, M.O. and Marsh, M.L.* (1997), "Lateral-Load Response of a Reinforced Concrete Bridge," Journal of Structural Engineering, ASCE, April, Vol. 123, No. 4, pp. 451-460.
52. De la Colina,* J., Eberhard, M.O., Ryter, S.* and Wood, S.L. (1996), "Sensitivity of Seismic Assessment of a Double-Deck, Reinforced Concrete Bridge," Earthquake Spectra, Earthquake Engineering Research Institute, May, Vol. 12, No. 2, pp. 217-244.
53. Newtonson, C.M.* and Eberhard, M.O. (1995), "Two-Dimensional Magnetic Algorithm to Detect Reinforcing Steel," Journal of Materials in Civil Engineering, ASCE, August, Vol. 7, No. 3, pp. 1-7.
54. Pla-Rucki, G.* and Eberhard, M.O. (1995), "Imaging of Reinforced Concrete: a State-of-the-Art Review," Journal of Infrastructure Systems, ASCE, June, Vol. 1, No. 2, pp. 134-141.
55. Eberhard, M.O. and Meigs, B.E.* (1995), "Earthquake-Resisting System Selection Statistics for Reinforced Concrete Buildings," Earthquake Spectra, Earthquake Engineering Research Institute, February, Vol. 11, No. 1, pp. 19-36.
56. Pla, G.* , Eberhard, M.O. and Eberhard, P.H. (1994), "Magnetic Imaging of Reinforcement," Journal of Nondestructive Evaluation, March, Vol. 13, No. 1, pp. 23-32.

57. Eberhard, M.O., Marsh*, M.L., O'Donovan*, T.O. and Hjartarsson, G.* (1993), "Lateral-Load Tests of a Reinforced Concrete Bridge," Transportation Research Record, No. 1371, March, pp. 92-100.
58. Eberhard, M.O. and Sozen, M.A. (1993), "A Behavior-Based Method to Determine Design Shear in Earthquake-Resistant Walls," Journal of Structural Engineering, ASCE, February, Vol. 119, No. 2, pp. 619-640. (*Received 1994 ASCE Raymond C. Reese Research Prize*).

Conference proceedings and other non-journal articles

- *Fully refereed publications*

1. Marafi N.A., Eberhard M.O., and Berman, J.W. (2020). "Effects of Simulated M9 Earthquakes on Reinforced Concrete Wall Structures in the US Pacific Northwest." Proceedings of 17th World Conference on Earthquake Engineering, Sendai, Japan, September. Under Review, 2/2010.
2. Marafi N.A., Eberhard M.O., Berman, J.W., Wirth, E.A., and Frankel, A.D. (2020). "Ground Motion Characteristics of Simulated M9 Cascadia Subduction Zone Earthquakes in Deep Basins." Proceedings of 17th World Conference on Earthquake Engineering, Sendai, Japan, September. Under Review, 2/2020.
3. Xiao, Y., Eberhard M.O., Zhou, Y., Stanton, J.F. and Shen, J.H. (2020). "A Self-Centering Energy Dissipative Brace with Low Prestressing." Proceedings of 17th World Conference on Earthquake Engineering, Sendai, Japan, September. Under Review, 2/2020.
4. Molina Hutt C., Kourehpaz, P., Marafi N., Berman J. and Eberhard M. (2020) "Estimating Economic Losses of RC Wall Buildings in Sedimentary Basins by Combining Empirical and Simulated Seismic Hazard Characterizations," Proceedings of 17th World Conference on Earthquake Engineering, Sendai, Japan, September. Under Review, 2/2020.
5. Effects of Basins during Subduction Earthquakes on the Collapse Fragility of Existing Tall Steel Buildings. Proceedings of the 11th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, CA. 2018.
6. Molina Hutt C., Marafi N., Berman J. and Eberhard M. (2018). "Effects of Basins during Subduction Earthquakes on the Collapse Fragility of Existing Tall Steel Buildings. Proceedings of the 11th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, CA.
7. N. Marafi, T. Li, A. Sen, M. Eberhard, J. Berman, D. Lehman, and C. Roeder. Accounting for Demand Variability of Braced Frames with a Combined Intensity Measure. Proceedings of the 11th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, CA. 2018.
8. Michael Motley, Randall LeVeque, Frank Gonzalez, Marc Eberhard, Xinsheng Qin, Andrew Winter, and Cassidy Gills. "Multi-Scale Probabilistic Modeling of Tsunami Forces on Structures." Proceedings of the 11th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, CA. 2018.

9. N. Marafi, M. Eberhard, J. Berman, E. Wirth, A. Frankel, and J. Vidale. "Effects of Simulated Magnitude 9 Earthquake Motions on Structures in the Pacific Northwest." Proceedings of the 11th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, CA. 2018.
10. Thonstad, T., Mantawy, I.M., Eberhard, M.O., Stanton, J.F., and Sanders, D.H. (2017), "Pretensioned, Rocking Bridge Columns for Accelerated Construction and Enhanced Seismic Performance," 39th IABSE Symposium, Vancouver, Canada, September.
11. Mantawy, I.M., Thonstad, T., Sanders, D.H. Stanton, J.F., and Eberhard, M.O. (2017), "Analytical Study Assessment of a Bridge with Pretensioned Rocking Columns for Rapid," 39th IABSE Symposium, Vancouver, Canada, September.
12. Mantawy, I., Thonstad, Sanders, D., Eberhard, M.O. and Stanton, J.F. (2017). "Seismic Assessment for a Pre-Tensioned, Rocking Bridge Design for Rapid Construction", 16th World Conference on Earthquake Engineering, Santiago, Chile, January.
13. Marafi, N.A., Eberhard, M.O. and Berman, J.W. (2017). "Effects of the Yufutsu Basin on Structural Response during Subduction Earthquakes," 16th World Conference on Earthquake Engineering, Santiago, Chile, January.
14. Marafi, N.A., Berman, J.W. and Eberhard, M.O. (2017). "A ductility dependent intensity measure that accounts for ground motion spectral shape and duration to assess structural performance", 16th World Conference on Earthquake Engineering, Santiago, Chile, January.
15. Eberhard, M.O., Stanton, J.F., Haraldsson, O.S., Finnsson, G., Davis, P.M. and Schoettler, M.J. (2014). "Development of a Bridge Bent System for Rapid Construction and Enhanced Seismic Performance", Tenth U.S. National Conference on Earthquake Engineering, Anchorage, Alaska, July.
16. Tran, H.V., Eberhard, M.O., Stanton, J.F. and Marsh, L.M. (2014). "Seismic-Resistant, ABC Connection Between Precast Concrete Columns and Drilled Shafts", Tenth U.S. National Conference on Earthquake Engineering, Anchorage, Alaska, July.
17. Stanton, J.F., Eberhard, M.O., Sanders, D., Thonstad, T. and Mantawy, I.(2014). "A Pre-tensioned, Rocking Bridge Bent for ABC in Seismic Regions", Tenth U.S. National Conference on Earthquake Engineering, Anchorage, Alaska, July.
18. Eberhard, M.O., Stanton, J.F., Haraldsson, O.S., Finnsson, G., Davis, P.M. and Schoettler, M.J. (2014). "Development of a Bridge Bent System for Rapid Construction and Enhanced Seismic Performance.", Tenth U.S. National Conference on Earthquake Engineering, Anchorage, Alaska, July.
19. Haraldsson, O.S., Pang, J.B.K., Stanton, J.F., Eberhard, M.O. (2010), "A Precast Bent System for Seismic Regions," Proceedings, 3rd fib International Congress, Washington DC, June.

20. Hieber, D.G., Wacker, J., Stanton, J., and Eberhard, M.O (2006), "Seismic Performance of Precast Reinforced Concrete and Hybrid Bridge Piers," Proceedings, 8th U.S. National Conference on Earthquake Engineering, San Francisco, California, April.
21. Stanton, J., Eberhard, M., Gunnarsson, K., Hieber, D. and Wacker, J. (2006), "Rapid Construction Details for Bridges in Seismic Zones," Proceedings, 8th U.S. National Conference on Earthquake Engineering, San Francisco, California, April.
22. Ranf, R., Shin H, Eberhard, M., Arduino, P and Kramer, S. (2006), "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.
23. Johnson, J., Ranf, R. Saiidi, S., Sanders, D. and Eberhard, M. (2006), "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.
24. Price, T.E. and Eberhard, M.O. (1998), "Model for Incorporating Embankment/Superstructure Interaction into Bridge Analysis." Proceedings, Structural Engineering World Congress, San Francisco, California, July 1998.
25. Bjornsson, S., Stanton, J.F., and Eberhard, M.O. (1998), "Seismic Response of Skew Bridges," Proceedings, Sixth National Conference on Earthquake Engineering, Seattle, Washington, June.
26. Hudgings, T., Eberhard, M.O., and Stanton, J.F. (1998), "Design of Seismic Restrainers for In-Span Hinges," Proceedings, Sixth National Conference on Earthquake Engineering, Seattle, Washington, June.
27. Price, T.E. and Eberhard, M.O. (1998), "Efficient Procedure for Modeling the Transverse Seismic Response of Bridge Embankments," Proceedings, Sixth National Conference on Earthquake Engineering, Seattle, Washington, June.
28. Stanton, J.F., Eberhard, M.O., Barr, P., and Fekete, E. (1997), "Evaluation of Long-Term Behavior of High Performance Prestressed Concrete Girders," Proceedings, PCI/FHWA International Symposium on High Performance Concrete, New Orleans, Louisiana, October, 11 pp.
29. De la Colina,* J., Eberhard, M.O., Ryter, S.* and Wood, S.L. (1996), "Sensitivity of Seismic Assessment of a Double-Deck, Reinforced Concrete Bridge," Earthquake Spectra, Earthquake Engineering Research Institute, May, Vol. 12, No. 2, pp. 217-244.
30. Eberhard, M.O. (1994), "Modeling Implications of Lateral-Load Tests," Proceedings, Fifth National Conference on Earthquake Engineering, Chicago, Illinois, July, Vol. 1, pp. 399-408.
31. Stanton, J.F., Hawkins, N.M. and Eberhard, M.O. (1992), "Seismic Connections for Precast Concrete Structures," Proceedings, 10th World Conference on Earthquake Engineering, Madrid, Spain, July, pp. 4403-4408.

- *Refereed by abstract only*

1. John Stanton, Kristina Tsvetanova, and Marc Eberhard (2019). ‘Connectins for Resisting Longitudinal Seismic Loads in Bridges Made with Pretensioned Concrete Girders,’ The Third International Bridge Seismic Workshop, 3rd IBSW, Seattle, Washington, USA - October, 10 pp.
2. Shervin Zahedimazandarani, Carlos Molina Hutt, Nasser Marafi, Marc Eberhard (2019). “Collapse risk of tall steel moment-resisting frames in deep sedimentary basins during large magnitude subduction earthquakes”, Canadian Conference on Earthquake Engineering, Quebec City, Canada 8 pp.
3. Tianye Yang, Nasser A. Marafi, Paolo M. Calvi, Richard Wiebe, Marc O. Eberhard, Jeffery W. Berman (2019). “Impact of Simulated M9 Cascadia Subduction Zone Motions on Base Isolated Structures”, 12th Canadian Conference on Earthquake Engineering, Quebec City, Canada 8 pp.
4. Mantawy, Islam, Thonstad, Travis, Sanders, David, Stanton, John, and Eberhard, Marc (2015). “Shake Table Experiment of Precast, Pretensioned Bridge,” US-Japan Workshop. 12 pp.
5. Thonstad, T, Haraldsson, O.S., Stanton, J.F. and Eberhard, M.O. (2014) “An ABC Bridge bent that Self-Centers after an Earthquake”. International Conference on Accelerated Bridge Construction, Miami, FL, Dec.
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7. Mantawy, Islam, Thonstad, Travis, Sanders, David, Stanton, John, and Eberhard, Marc (2014). “Earthquake Shake Table Testing of a Self-centering ABC Bridge,” 2014 National ABC Conference, December 4-5, paper 14-253, Miami, Florida.
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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

Invited lectures and seminars.

Presenter	Title	Date	Institution	Location
Eberhard, M.	Effects of M9 Cascadia Earthquakes	9/19	Statewide Catastrophic Incident Planning Team Meeting	Camp Murray, WA
Eberhard, M.	Multi-Mechanism Seismic Shear Strength Model for Reinforced Concrete Columns	9/19	Beijing Institute of Technology	Beijing, China
Eberhard, M.	Seismic Evaluation of California High-Speed Rail System	8/19	PEER	Richmond, CA
Marafi, N.	Impacts of an M9 Cascadia Subduction Zone Earthquake and Deep Sedimentary Basins on Idealized Systems	1/19	PEER	Los Angeles, Ca
Eberhard, M	A Multi-Mechanism Shear Strength Model for Reinforced Concrete Columns	12/18	Kwang-Hua Forum	Shanghai, China
Berman, J.	Impacts of an M9 Cascadia Subduction Zone Earthquake on Structures Located in Deep Sedimentary Basins	11/18	WA State Seismic Safety Committee	Olympia, WA
Eberhard, M.O.	Effects of Cascadia Subduction Zone M9 Earthquakes on Bridges	11/18	Western States Seismic Meeting	Portland, Or
Marafi, N.	Impacts of an M9 Cascadia Subduction Zone Earthquake on RC Core Wall Structures Located in Seattle	11/18	SEAW EEC	Seattle, WA
Berman, J.W.	Impacts of M9 Cascadia Subduction Zone Ground Motions on Tall Buildings in Seattle	10/18	NHERI	webcast
Eberhard, M.O	Impacts of M9 Cascadia Earthquake and Basin Amplification	10/18	WSDOT Resiliency Workgroup	Olympia, WA
Eberhard, M.O.	Modes, Mechanisms and Likelihood of Shear Failure in Rectangular Reinforced Concrete Columns.	7/18	Tokyo Institute of Technology	Tokyo, Japan

Berman, J.W.	Estimating the Impact of Magnitude 9 Cascadia Subduction Zone Earthquakes on Seattle Buildings Using Simulated Ground Motions	1/18	PEER	Berkeley, CA
Eberhard, M.O.	Impact on Bridges of M9 Cascadia Earthquake	12/17	WSDOT	Tumwater, WA
Eberhard, M.O.	Overview of UW Natural Hazards Research	11/17	UW-Tohoku U. AOS	Seattle, WA
Eberhard, M.O.	Reinforced Concrete: Collaboration Ideas	10/17	NSF NHERI	Tokyo, Japan
Eberhard, M.O.	Effects of Long-Duration M9 Motions on Buildings in Deep Sedimentary Basins.	3/17	EERI	Portland, OR
Berman, J.	Effects of Deep Basins on Structural Collapse during Large Subduction Earthquakes	7/16	SEAW	Seattle, WA
Eberhard, M.O.	Impacts on Structures of M9 Cascadia Earthquake	7/16	Tokyo Institute of Technology	Tokyo, Japan
Eberhard, M.O.	Impacts on Bridges of M9 Cascadia Earthquake	6/16	Western State DOTs Seismic Meeting	Portland, OR
Stanton, J.F.	A Pretensioned, Rocking Bridge System for Accelerated Construction and Enhanced Seismic Performance.	6/16	WSDOT/AGC	Seattle, WA
Eberhard, M.O.	Impacts on Structures of M9 Cascadia Earthquake	3/16	WSDOT	Tumwater, WA
Eberhard, M.O.	The M9 Cascadia Earthquake: Should I move?	1/16	UW. CEE 500	Seattle, WA
Berman, J.	The M9 Project: Seismology and Structural Engineering Overview	10/15	SEAOC	Bellevue, Washington
Stanton, J.F. and Thonstad, T.	Research at the UW: Accelerated Bridge Construction in Seismic Regions.	1/15	SEAW	Seattle, Washington
Stanton, J.F. and Thonstad, T.	Options for Rapid Construction and Improved Seismic Performance of Elevated Transportation Structures.	10/14	Sound Transit	Seattle, Washington
Stanton/Thonstad	Seismic ABC Research at University of Washington	9/14	Caltrans	Sacramento, California
Stanton, J.F.	Camber Predictions for Precast, Prestressed Concrete Girders	9/14	PCI Convention	National Harbor, MD

Eberhard, M.O.	Rapid, Resilient Construction	12/13	US-Japan NEES/E-Defense 10 th Planning Meeting	Kyoto, Japan
Sanders, D.	A Precast, Pretensioned, Rocking Bridge Bent for Rapid Construction and High Seismic Performance	11/13	US-Japan Bridge Workshop	Tsukuba, Japan
Eberhard, M.O.	A Precast, Pretensioned Bent System for Seismic Regions	6/13	Tokyo Institute of Technology	Yokohama, Japan
Eberhard, M.O.	Effective Stiffness of Reinforced Concrete Columns	6/13	Tokyo Institute of Technology	Yokohama, Japan
Stanton, J.F.	A Pretensioned Bridge Bent for Accelerated Bridge Construction in Seismic Regions	6/13	WSDOT/PCI NW Meeting	Olympia, WA
Eberhard, M.O.	Transportation System Research Program	10/12	PEER Annual Meeting	Berkeley, CA
Stanton, J.F.	Damage Resistant Re-centering Bridge Column Evaluation by Shake-Table Testing	10/12	PEER Annual Meeting	Berkeley, CA
Haraldsson, O.	Precast, Pre-Tensioned Column using HyFRC in the Plastic Hinge Region	10/12	PEER Annual Meeting	Berkeley, CA
Stanton, J.F.	HFL Connection Validation Testing	4/12	NCHRP Scanning Tour	Seattle, WA
Eberhard, M.O.	Precast, Pretensioned Columns for Accelerated Construction	4/12	NCHRP Scanning Tour	UW
Stanton, J.F.	How to construct a bridge - Fast	11/11	27th US-Japan Bridge Engineering Workshop	Tsukuba, Japan
Eberhard, M.O.	Precast Substructure Systems for Bridges in Seismically Active Regions	9/11	PEER Annual Meeting	Berkeley, CA
Eberhard, M.O.	Bridge PBEE and Resilience	9/11	PEER Annual Meeting	Berkeley, CA
Stanton, J.F.	A Precast System for Seismic Regions.	8/11	FHWA HFL	Seattle, WA
Eberhard, M.O.	The 2010 Haiti Earthquake	4/11	PROBUS	Seattle, WA
Eberhard, M.	Precast Bridge Bents for Seismic Regions	5/09	Caltrans Workshop on Next-Generation Bridge Systems for California	Sacramento, CA

Pujol, S.	Seismic Vulnerability Indices	4/11	2011 Structures Congress	Las Vegas, NV
Eberhard, M.O.	Precast Bent System for Bridges in Seismic Regions	10/10	NEES/PEER Annual Meeting	San Francisco, CA
Janes, J.	Rapid Construction of Bridges Using Precast Concrete	10/10	SEAW Dinner Meeting	Seattle, WA
Eberhard, M.O.	Lessons from Haiti	6/10	SEAW Technical Briefing on 2010 Chile	Seattle, WA
Eberhard, M.O.	Engineering and Society Sustainability Lessons from Haiti	5/10	National Academy of Engineering, SW Regional Meeting	Boulder, Colorado
Eberhard, M.O.	Haiti Earthquake of January 12, 2010	4/10	University of Costa Rica	San Jose, Costa Rica
Eberhard, M.O.	Haiti Earthquake of January 12, 2010	4/10	UW Architecture Seminar	Seattle, WA
Eberhard, M.O.	Haiti Earthquake of January 12, 2010	4/10	UW Seismology Seminar	Seattle, WA
Stanton, J.F.	Use of Precast Concrete for Rapid Construction of Bridges	3/10	Iowa State University	Ames, Iowa
Stanton, J.F.	Accelerating Bridge Construction in Regions of High Seismicity	2/10	Association of General Contractors	Seattle, WA
Eberhard, M.O.	The Mw 7.0 Haiti Earthquake of January 12, 2010: USGS/EERI Field Report	2/10	UW Seismology Seminar	Seattle, WA
Stanton, J.F.	A Precast Concrete Bridge Bent for Seismic Regions: Achieving both Performance and Constructability	9/09	2009 PCI Convention	San Antonio, TX
Stanton, J.F.	A Precast Concrete Bridge Bent for Seismic Regions	7/09	International Specialty Workshop on Seismic Connection Details for Segmental Bridge Construction.	Seattle, WA

Eberhard, M.	Accelerating Bridge Construction in Regions of High Seismicity	6/09	FHWA Workshop on Accelerated Bridge Construction in Seismic Regions.	Pittsburgh, PA
Stanton, J.F.	Fully Precast Bents for Seismic Regions	1/09	Transportation Research Board	Washington, D.C.
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.	Accelerated Bridge Construction in Seismic Regions	12/07	AASHTO Seismic Committee (T-3)	Seattle, WA
Berry, M.P.	Performance Modeling Strategies for Modern Reinforced Concrete Bridge Columns.	8/06	OpenSEES Modeling Workshop	Berkeley, CA
Eberhard, M.	Practical Performance Modeling Strategies for Bridge Columns	8/05	Caltrans General Earthquake Committee Meeting	Sacramento, CA
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.	A Simple Method to Estimate Column Deformation at Bar Buckling	4/03	U. of British Columbia CE Dept.	Vancouver, B.C.
Eberhard, M.	Seattle Fault Scenario: Bridge Considerations	6/02	EERI	Seattle, WA
Eberhard, M.	Earthquake 101	3/02	Burke Museum, UW	Seattle, WA
Eberhard, M.	Deformation Demands at the Onset of Bar Buckling in Reinforced Concrete Columns	1/02	PEER	Oakland, CA
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.	Earthquake Damage to Bridges	6/01	Central U.S. Earthquake Consortium (CUSEC)	Vincennes, IN

Eberhard, M.	Structural Damage During The Nisqually Earthquake	4/01	CPARM	Seattle, WA
Eberhard, M.	Vulnerabilities of Structures to Earthquakes in the Pacific Northwest	4/01	U.S. Congress (Rep. Baird, House and Senate Aides)	Washington, DC
MacRae, G.	Structural Damage; The Nisqually Earthquake	4/01	EERI	Los Angeles, CA
MacRae, G.	Structural Damage; The Nisqually Earthquake	4/01	EERI	San Francisco, CA
Eberhard, M.	The Nisqually Earthquake	3/01	Concrete Reinforcing Steel Institute (CRSI)	Seattle, WA
Eberhard, M.	Consequences of Bridge Damage on Functionality	3/00	PEER, Stanford University	Palo Alto, CA
Eberhard, M.	Earthquake Damage to Bridges	3/00	Indiana DOT	Jasper, IN
Price, P	Influence of Embankments on the Response of Short Bridges	11/97	WSDOT	Olympia, WA
Eberhard, M.	Earthquake Design in the Northwest	5/96	PROBUS	Bellevue, WA
Miller, R. Eberhard, M.	The Northridge Earthquake of Jan. 17, 1994	3/94	ASCE Lifeline Committee	Seattle, WA
Eberhard, M.	The Northridge Earthquake of Jan. 17, 1994	3/94	WSDOT	Olympia, WA
Eberhard, M., Wood, S., Stanton, J.	The January 17th Los Angeles Earthquake	1/94	UW	Seattle, 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.	Lateral-Load Tests of a Reinforced Concrete Bridge (preliminary results)	2/92	Structural Engineers Association of Washington (SEAW)	Olympia, WA

Eberhard, M.	Full-Scale Seismic Testing of a Reinforced Concrete Bridge (planned tests)	5/91	ASCE Lifeline Committee	Seattle, WA
Eberhard, M. Okamura	The 1989 Loma Prieta Earthquake	11/89	UW Department of Civil Engineering	Seattle, WA

Presentations given at conferences.

* indicates that a paper appeared in the conference proceedings

Presenter(s)	Title	Date	Institution	Location
Eberhard, M.	Application of Accelerated Bridge Construction Strategies and Innovative Structural Systems to High-Speed Rail	12/19	2019 International Accelerated Bridge Construction Conference	Miami, Florida
Eberhard, M.	Effects of Cascadia Subduction Zone M9 Earthquakes on Bridges	10/19	3 rd International Bridge Seismic Workshop	Seattle, WA
Stanton, J.	Connections for Resisting Longitudinal Seismic Loads in Bridges made with Pretensioned Concrete Girders	10/19	3 rd International Bridge Seismic Workshop	Seattle, WA
Berman, J.	Effects of Simulated Magnitude 9 Earthquake Motions on RC Wall Structures in the Pacific Northwest	6/19	Engineering Mechanics Institute Conference 2019	Pasadena, CA
Winter, A.	Channeling and shielding effects on wave loading of structures	6/19	Engineering Mechanics Institute Conference 2019	Pasadena, CA
Wiebe, R.	Impact of Simulated M9 Cascadia Subduction Zone Motions on Base Isolated Structures	6/19	2019 Canadian Conference on Earthquake Eng.	Quebec City, Canada
Motley, M.	Tsunami Impact Loading of Coastal Structures: Experimental and Numerical Studies	4/19	Structures Congress 2019	Orlando, FL
Berman, J.	Accounting for Demand Variability of Steel Braced Frames with a Combined Intensity Measure	6/18	11th US National Conference on Earthquake Engineering.	Los Angeles, CA

Stanton, J.	Pretensioned, Rocking Columns for Accelerated Bridge Construction in Seismic Regions	12/17	2017 National Accelerated Bridge Construction Conference	Miami, Florida
Hua, J.	A Multi-Mechanism Shear Strength Model for Reinforced Concrete Columns	10/17	EASEC-15	Xi'an, China
Thonstad, T.	Pre-Tensioned, Rocking Bridge Columns for Accelerated Construction and Enhanced Seismic Performance	10/17	IABSE	Vancouver, Canada
Eberhard, M.	Design Strategy to Minimize Seismic Residual Displacements and Damage in a new ABC Bridge Bent	9/17	Western Bridge Engineers Seminar	Portland, Oregon
Mantawy, I.	Precast, ROCKING COLUMNS FOR Resilient bridge system and rapid construction	6/17	Engineering Mechanics Institute	San Diego, California
Thonstad, T.	A Bridge Bent System with Pre-Tensioned, Rocking Columns for Accelerated Construction and Enhanced Seismic Performance	4/17	ASCE Structures Congress,	Denver, Colorado
Marafi, N.	Effects of Simulated Magnitude 9 Earthquake Motions on Structures in the Pacific Northwest	4/17	Seismological Society of America	Denver, Colorado
Marafi, N.	A New Intensity Measure that Accounts for the Effects of Spectral Acceleration, Duration, and Spectral Shape	1/17	17 th World Conf. on Earthquake Eng.	Santiago, Chile
Marafi, N.	Effects of Yufutsu Basin on Structural Response During Subduction Earthquakes	1/17	17 th World Conf. on Earthquake Eng.	Santiago, Chile
Thonstad, T.		12/15	2015 National Accelerated Bridge Construction Conference	Miami, Florida
Mantawy, I.	A Precast Concrete Bridge Bent System for ABC in High Seismic Regions.	12/15	2015 National Accelerated Bridge Construction Conference	Miami, Florida
Eberhard, M.O.	Accelerated Construction and Improved Seismic Performance: You Can Have Both.	9/15	2015 Western Bridge Engineers Seminar	Reno, Nevada

Haraldsson, O.	A Precast Concrete Bridge Bent System for ABC in High Seismic Regions.	12/14	2014 National Accelerated Bridge Construction Conference	Miami, Florida
Thonstad, T.	An ABC Bridge Bent That Self-Centers After an Earthquake.	12/14	2014 National Accelerated Bridge Construction Conference	Miami, Florida
Mantawy, I.	Earthquake Shake Table Testing of a Self-centering ABC Bridge	12/14	2014 National Accelerated Bridge Construction Conference	Miami, Florida
Stanton, J.	Camber and Prestress Loss in Prestressed Concrete Girders	9.14	2014 PCI Fall Convention	Washington, DC
Eberhard, M.O.	Development of a Bridge Bent System for Rapid Construction and Enhanced Seismic Performance	7/14	10 th National Conference on Earthquake Engineering	Anchorage, Alaska
Haraldsson, O	Evaluation of Residual Displacements in Bridge Columns	7/14	10 th National Conference on Earthquake Engineering	Anchorage, Alaska
Stanton, J.F.	Shaking Table Tests on a New Bridge System Designed to Re-center	7/14	10 th National Conference on Earthquake Engineering	Anchorage, Alaska
Tran Viet, H.	Design of Precast-Column-to-Footing Connections.	7/14	10 th National Conference on Earthquake Engineering	Anchorage, Alaska
Stanton, J.F.	A New Bridge System Designed for Rapid Construction and Low Residual Displacements	3/14	ACI Spring Convention	Reno, NV
Haraldsson, O.	Socket Connections for Rapid Construction of Bridge Bents with Spread Footings	9/13	Western Bridge Engineers Seminar	Bellevue, WA
Stanton, J.F.	A Constructible Bridge Bent Designed to Recenter after an Earthquake	9/13	Western Bridge Engineers Seminar	Bellevue, WA
Eberhard, M.O.	Seismic Resilience of Pre-Tensioned Bridge Bents	8/13	Quake Summit 2013	Reno, NV

Haraldsson, O.	Precast Concrete Bridge Columns Made with Unbonded Pre-Tensioning and Hybrid Fiber Reinforced Concrete for Improved Seismic Resistance	3/13	10th International Conference on Urban Earthquake Engineering	Tokyo, Japan
Stanton, J.F.	A Precast Concrete Bridge Bent System for Seismic Regions	10/11	2011 PCI Annual Convention	Salt Lake City, UT
Stanton, J.F.	Precast Bridge Bents for Seismic Regions	5/11	PEER Transportation Group Meeting.	Richmond, CA
Pujol, Santiago	Seismic Vulnerability Indices	4/11	2011 Structures Congress	Las Vegas, NV
Stanton, J.F.	A Precast Concrete Bridge Bent System for Seismic Regions	7/10	PEER Transportation Group Meeting	Berkeley, CA
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
Stanton, J.F.	A Precast Concrete Bridge Bent System for Seismic Regions	4/10	FHWA Highways for Life and Accelerated bridge Construction Conference	Orlando, FL
Stanton, J.F.	A Precast Column-Beam System for Bridges in Seismic Regions	3/10	2010 CUEE/ICEE meeting	Tokyo, Japan
Eberhard, M.O.	A Precast Bent System for Seismic Regions	8/09	PEER Workshop on Next-Generation Bridges	Berkeley CA
Eberhard, M.O.	Accelerating Bridge Construction in Regions of High Seismicity	6/09	FHWA Seismic ABC Workshop	Pittsburgh, PA
Eberhard, M.O.	Precast Bents for Seismic Regions	5/09	Caltrans Workshop on Next-Generation Bridges	Sacramento, CA
Stanton, J.F.	Anchorage of Large Bars Grouted in Ducts in Precast Concrete Members	3/09	ACI 2009 Spring Conference	San Antonio, TX
Eberhard, M.O.	Effective Stiffness of Reinforced Concrete Columns	3/09	ACI 2009 Spring Conference	San Antonio, TX
*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.	Fixed-Base Approximation for PBEE of Bridges on Drilled Shafts	6/08	6 th Annual NEES Meeting	Portland, OR
Elwood, K.	Performance Characteristics of Concrete Columns	4/08	ACI Spring Convention	Los Angeles, CA

*Pang, J.	Precast Bridge Bent Connection for Rapid Construction in Seismic Regions.	3/08	FHWA Accelerated Bridge Construction Conference	Baltimore, MD
Rosa, M.P.	Improving Predictions for Camber in Precast, Prestressed Concrete Bridge Girders.	9/07	Western Bridge Engineer's Seminar	Boise, ID
Eberhard, M.O.	Model Selection for Performance-Based Earthquake Engineering of Bridges	6/07	NEES 5 th Annual Meeting	Snowbird, Utah
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 Development for a Reinforced Concrete Bridge Using Shake Table and Centrifuge Data	6/06	4 th Annual NEES Meeting	Washington, D.C.
*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
*Johnson, N.	Shake-Table Studies of a Two-Span Reinforced Concrete Bridge	4/06	8 th Nat. Conference on Earthquake Engin.	San Francisco, CA
*Stanton, J.F.	Rapid Construction Details for bridges in Seismic Zones	4/06	8 th Nat. Conference on Earthquake Engin.	San Francisco, CA
Eberhard, M.O.	A Practical Performance Model for Reinforced Concrete Bridge Columns	10/05	Caltrans Bridge Research Conference	Sacramento, CA
Eberhard, M.O.	Calibration of Distributed Plasticity Element	9/05	PEER OpenSEES Column Modeling Workshop	Richmond, CA
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.	Flexural Damage Accumulation in Lightly Confined Bridge Columns	3/04	ACI Spring Conference	Washington, D.C
*Eberhard, M.	Effects of Long-Duration Earthquakes on Poorly Reinforced Concrete Columns	5/03	ASCE Structures Congress	Seattle, WA
*Berry, M.	Column Deformation Demands at Bark Buckling	5/03	ASCE Structures Congress	Seattle, WA
*Ranf., R.T.	Bridge Damage During the Nisqually Earthquake	5/03	ASCE Structures Congress	Seattle, WA

Berry, M. and Eberhard, M.	Accuracy of Seismic Performance Estimates for Bridge Columns	3/03	ACI Spring Conference	Vancouver, Canada
Eberhard, M.	A Simple Method to Estimate Column Deformation at Bar Buckling	10/02	Us-Japan Cooperative Program, Kyoto Grantees Meeting	Kyoto, Japan
Eberhard, M.	Evaluating Column Shear Design/Evaluation Procedures with Column Database	4/02	ACI Spring Conference, ACI Committee 445-3	Detroit, MI
Eberhard, M.	Deformation Demands at the Onset of Bar Buckling in Reinforced Concrete Columns	1/02	PEER Annual Meeting	Oakland, CA
Stanton, J.F.	Unseating of Skewed Bridges during Earthquakes	10/01	ACI Fall Conference	Dallas, TX
*Eberhard, M.	Accuracy of Seismic Performance Estimates for Reinforced Concrete Columns	10/01	5 th Workshop on Bridge Research in Progress (NSF)	Minneapolis, MN
*Eberhard, M.	Accuracy of Performance Assessments for Reinforced Concrete Columns	3/01	ACI	Philadelphia, PA
* Barr, B.	Behavior of High-Strength HPC Bridge Girders	3/99	ACI	Chicago, IL
* Bjornsen, S	Seismic Response of Skew Bridges	6/98	6 th NCEE/ EERI	Seattle, WA
* 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
Stanton, J.	Behavior of Skew Bridges During Earthquakes	11/97	ACI	Atlanta, GA
* Stanton, J.	Evaluation of Long-Term Behavior of High Performance Prestressed Concrete Girders	10/97	PCI/FHWA	New Orleans, LA
* Eberhard M. and Stanton, J.	Instrumentation, Monitoring and Evaluation of HPC Girders	8/97	WSDOT/FHWA	Bellevue, WA
* Newtonson, C.	Magnetostatic Detection of Reinforcing Steel	9/96	NSF Conference on NDE	Boulder, CO
Eberhard, M.	Design of Seismic Restrainers for In-Span Hinges	3/96	ACI	Denver, CO

Eberhard, M.	Seismic Vulnerability of the Alaskan Way Viaduct	3/94	ACI	San Francisco, CA
* De la Colina, J.	Seismic Vulnerability of the Alaskan Way Viaduct	1/94	USJNR	Berkeley, CA
Eberhard, M.	Lateral-Load-Resisting System Statistics	11/93	ACI	Minneapolis, MN
* Eberhard, M.	Lateral-Load Models of a Reinforced Concrete Bridge	5/93	USJNR	Tsukuba, Japan
MacLardy, J.	Modeling Implications of Lateral-Load Tests	4/93	ACI	Vancouver, B.C.
* Pla, G.	Applications of Imaging Technology to the Nondestructive Evaluation of Reinforced Concrete	5/92	NSF Conference on NDE	Boulder, CO
Eberhard, M.	Lateral-Load Tests of a Reinforced Concrete Bridge (Preliminary Results)	2/92	Earthquake Engineering Research Institute (EERI)	San Francisco, CA
* O'Donovan, T.	Lateral-Load Tests of a Reinforced Concrete Bridge (Preliminary Results)	1/92	TRB Comm. A2C03	Washington D.C.
Eberhard, M.	Full-Scale Seismic Testing of a Reinforced Concrete Bridge (Planned Tests)	3/91	ACI Comm 341	Boston, MA
* Eberhard, M.	Selection and Design of Rigid Connections	12/90	NSF/PRESSS	San Diego, CA
Eberhard, M.	Estimating Maximum Dynamic Base Shear Response in Frame-Wall Structures	10/89	American Concrete Institute (ACI)	San Diego, Ca

Professional society memberships.

Earthquake Engineering Research Institute, 1989-present
 American Society of Civil Engineers, 1983-2010
 American Concrete Institute, 1989 - 2010
 Consortium of Universities for Research in Earthquake Engineering, 2000-present
 Network for Earthquake Engineering Simulation, Inc., 2003-2009

Other

Manuscript Referee for:

ACI Structural Journal
 ACI Technical Activity Committee (TAC)
 Journal of Advanced Concrete Technology (JCT)

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

CHAired DOCTORAL DEGREES

Name of Student	Degree Date	Support	Current Position/Employer
Nicolette Lewis ^{&}	2023 (exp)	NSF	Research Assistant, UW
Andrew Winter ^{&}	Sum 2019	NSF	Post-Doctoral Assistant University of Washington
Marafi, Nasser [#]	Sum 2018	NSF	Risk Management Solutions. Affiliate Assistant Professor, University of Washington
Thonstad, Travis [*]	Aut 2016	NSF	National Institute of Standards and Technology (NIST)
Haraldsson, Olafur [*]	Spr 2015	Valle/FHWA/PEER	Head of Research at Vegagerðin, Icelandic Road and Coastal Administration
Tran Viet, Hung [*]	Win 2015	FHWA/Pactrans	Assistant Professor National University of Civil Engineering, Hanoi, Vietnam
Ranf, R. Tyler	2007	NSF	MKA Engineers
Berry, Michael	Aut 2006	NSF/PEER	Associate Professor Montana State University
Barr, Paul [*]	Aut 2000	WSDOT/FHWA	Professor CEE Department Head, Utah State University
Price, Thomas	Aut 1997	NSF	Brooklyn Technical High School
Newtonson, Craig	Sum 1997	NSF	Professor, New Mexico State University

* Jointly advised with Prof. John Stanton

Jointly advised with Prof. Jeff Berman

& Jointly advised with Prof. Mike Motley

CHAired MASTER DEGREES

Degree	Name of Student	Degree Date	Support	Degree Option
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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 Lee	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			Course only
MSCE	Cohagen, Laila*	Sum 08	Valle/WSDOT	Thesis
MSCE	Janes, Todd*	Win 11	FHWA	Thesis
MSCE	Haraldsson, Olafur*	Win 11	Valle/FHWA	Thesis
MSCE	Weinert, Michael*	Win 11	NCHRP	Thesis
MSCE	Davis, Philip*	Aut 11	Valle/PEER	Thesis
MSCE	Hung, Tran Viet*	Win 12	VEF/Transnow	Thesis
MSCE	Lebsock, Amber*	Spr 12		Course only
MSCE	Finnsson, Gunnsteinn*	Win 13	Valle	Thesis
MSCE	Meader, Jake (Joint with Janssen)	Win 13	WSDOT	Thesis
MSCE	Schaefer, Jeff*	Aut 13	USAF, NSF	Thesis
MSCE	Davison, Bill*	Aut 13	PCI	Thesis
MSCE	Hang, Nguyet*	Win 14	VEF	Thesis
MSCE	Livermore, Spencer (Joint with Motley)	Spr 14	NSF	Thesis
MSCE	Kennedy, Bryan*	Spr 15	NSF	Thesis
MSCE	Magnusson, Kristjan	Aut 16	Valle	Thesis
MSCE	Tsestanova, Kristina	Win 17	WSDOT	Thesis
MSCE	Johnannsson, Ingimar*	Win 18	Valle	Thesis

MSCE	Gills, Cassie (joint with Motley)	Win 18	Valle	Thesis
MSCE	Gloria Cervantes (joint with Berman)	Sum 19	NSF	Thesis
MSCE	Michelle Chang (joint with Stanton)	Fall 2020 (exp)	ABC-UTC/ PEER	Thesis
MSCE	Zack Kortum (joint with Berman)	Winter 2021 (exp)	WSDOT	Thesis

* Jointly advised with Prof. John Stanton

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	Barkenaes, 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.	Davids, 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.	Roy Mayfield	Win 07	Dissertation
Ph.D.	Jungkeun Yoon (M. E.)	Spr 07	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		Dissertation
MSCE	Justin Clark	Spr 09	Thesis
PhD.	Andrew Delorey (Earth Sc.)	Aut 2010	Dissertation
PhD	Pugh, Josh	Spr 12	Dissertation
MSCE	Bearman, Cal	Spr 12	Thesis
PhD	Anna Birely	Dec 12	Dissertation
PhD	Lattanzi, David	Spr 13	Dissertation
Ph.D.	Trudeau, Michelle (Educ.)	A14	Dissertation
Ph.D.	Islam Mantawy (U. of Nevada, Reno)		Dissertation
MSCE	Abby Christman	Spr 17	Thesis
PhD	Spencer Williams (MSCE)	Su 17	Dissertation
MSCE	Tasha Tardieu	Win19	Thesis
Ph.D.	Rouzbeh Davoudi	Sp 19	Dissertation
Ph.D.	Tianye Wang	Sp 20	Dissertation
MSCE	Stephen Ahn	Sp 20	Thesis

RESEARCH ACTIVITIES

Funded 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 (<i>Stanton was PI</i>)	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 (<i>Kramer was PI</i>)	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 (<i>Arduino is co-PI</i>)	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	Accelerating Bridge Construction to Reduce Congestion	TRANSNOW		\$33,035	2009-2010
Co-PI (Lowe is PI)	RAPID: Urgent Collection of Perishable Condition Data from Structures Affected by the Haiti Earthquake	NSF		\$40,000	2010-2011
Co-PI (S. Pujol, Purdue, is PI)	RAPID: Collection of Field Data from Haiti for Calibration of Seismic Vulnerability Indices	NSF		\$40,000 (all at Purdue)	2010-2011

Joint PI with Stanton	Rapid Construction of Self-Centering Precast Bridge Bents	State of California (PEER)		\$134,500	2009-2011
Joint PI with Stanton	Fully Precast Bridge Bents for use in Seismic Regions	FHWA (Berger-ABAM)	UW Subcontract Materials	\$190,469 <u>\$25,000</u> \$215,469	2009-2012
PI	NEES Operations: FY2010-FY2014	NSF (Purdue U.)	Year 1 Year 2 Year 3 Year 4 Year 5 Year 6	\$66,865 \$65,000 \$65,000 \$65,000 \$65,000 <u>\$24,709</u> \$351,574	2009-2015
Joint PI with Stanton	Rapid Construction of Bridges with Deep Foundations	TRANSNOW		\$79,568	2010-2012
Joint UW PI with Stanton	System Performance of Accelerated Bridge Connections in Regions of Moderate-to-High Seismicity	NCHRP		\$75,000 (\$31,425 at UW)	2010-2011
Joint Pi with Stanton	Resilient Pre-tensioned Bridge Columns with High-Performance Composite Materials	State of California (PEER)	Supplement	\$125,880 <u>\$46,297</u> \$172,177	2011-2013
Co-Pi (Janssen is PI)	Structural Design Parameters of Current WSDOT Mixtures	WSDOT	Supplement	\$140,000 <u>\$8,000</u> \$148,000	2011-2013
PI with Lehman, Stanton, and Roeder	Risk Assessment and Renewal Strategies for Structures on Critical Lifeline Corridors	PacTrans		\$90,000	2012-2013
Joint PI with Stanton	NEESR: Seismic Resilience of Pre-Tensioned Bridge Bents	NSF		\$1,000,000	2012-2015
Joint PI with Stanton	Camber Prediction in Long-Span, Prestressed Concrete Bridges	Precast Concrete Institute		\$20,000	2012-2013

PI with Lehman, Stanton, and Roeder	High Performance Bridge Systems for lifeline corridors in the Pacific NW	PacTrans		\$200,000 (\$100,000 at UW)	2013- 2014
Co-PI with Motley (PI) and Arduino	Simulation and Design Tools for Tsunami Bridge Engineering	NSF		\$450,000 (300,000 at UW)	2013- 2016
Senior personnel	Hazards SEES Type 2: Magnitude 9 Earthquake Scenarios – Probabilistic Modeling, Warnings, Response and Resilience in the Pacific Northwest	NSF		\$2,999,278	2013- 2019
Co-Pi with Stanton	Developing Girder Strands into the Cap Beam for a Positive Moment Connection	WSDOT		\$185,000	2015- 2016
PI	Resilience Against Infrequent but Severe Earthquake	UW COE Strategic Research Initiative		\$36,905 (COE) \$10,000 (CEE)	2016- 2017
Co-PI with Stanton	Accelerated Bridge Construction University Transportation Center	FHWA/FIU	Year 1 Year 2 Year 3	\$120,000 \$140,000 \$140,000	2018- 2022
PI	Demonstration of Tsunami- Simulation Capability for New UW Wave Flume	UW RRF		\$39,530	2018- 2020
PI	Implications of Simulated Motions for M9 Cascadia Subduction Zone Earthquake: Collaborative Research with University of Washington and USGS	USGS		\$73,273	2019- 2020
Co-PI with Stanton	Seismic Evaluation of the California High Speed Rail System	PEER		\$117,615	2019- 2021
Co-PI. with Motley PI	Understanding and Quantifying Structural Loading from Tsunami-Induced Debris Fields	NSF		\$692,331	2019- 2022
PI	Effects of Cascadia Subduction Zone M9 Earthquakes on Bridges in Washington State	WSDOT		\$180,000	2020- 2021

PI	Data-Driven Assessment of Post-Earthquake Bridge Functionality and Regional Mobility	Pactrans	\$90,000	2020-2021
Senior Personnel (Abramson is PI)	CoPe EAGER: Coastal Hazard Planning in Time	NSF	\$297,285	2020-2022
Senior Personnel (Schmidt is PI)	CoPe RCN: Cascadia Coastal Hazards Research Coordination Network	NSF	\$486,207	2020-2023

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.

DOCUMENTATION OF TEACHING EFFECTIVENESS

Courses Taught & Student 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
Spr 91	CESM 599, Special Topics: Structures and Mechanics, 3 cr.	0/5	team taught w. U. Dorka			

Spr 91	CESM 481, Design of Reinforced Concrete Structures, 3 cr.	0/41	team taught with J. Stanton				
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

Spr 96	ENGR 210, Statics, 3 cr. (Laboratory Instructor and Curriculum Developer)	0/95				
Aut. 97	CIVE 520, SGEM Graduate Seminar, 1 cr.		Graduate Seminar			
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
Aut. 98	CIVE 520, SGEM Graduate Seminar, 1 cr.	0/26	Graduate Seminar			
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 500, Structures Graduate Seminar, 1 cr.	0/9	Graduate Seminar			
Wi 03	CEE 453, Design of Prestressed Concrete Structures, 3 cr	18/19	4.1	4.1	4.2	4.0
Sp 03	CEE 500, Structures Graduate Seminar, 1 cr	0/9	Graduate Seminar			
Aut 03	CEE 379, Introduction to Structural Engineering I, 4 cr	/40	4.4	4.6	4.5	4.4
Wi 04	CEE 500, Structures Graduate Seminar, 1 cr.	25	Graduate Seminar			
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. (team taught with Roeder and Holtz)	23/37	3.4	3.3	2.8	3.2
Au 06	CESM 511, Advanced Reinforced Concrete Design, 3 cr. (Replaced Lehman after week #3)	21/21	3.5	3.6	3.6	3.6
Sp 07	CEE 442, Structural Geotechnical Design Project, 4 cr. (team taught with Holtz)	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. (team taught with Roeder and Holtz)	35/50	3.6	3.5	3.4	3.5
Aut 08	CEE 500, Structures Graduate Seminar, 1 cr.	0/34	Graduate Seminar			
Sp 09	CEE 220, Mechanics of Materials	99/163	4.3	4.3	4.2	4.2
Aut 09	CEE 500, Structures Graduate Seminar, 1 cr.	37	Graduate Seminar			
Aut 10	CEE 500, Structures Graduate Seminar, 1 cr.	45	Graduate Seminar			
Wi 11	CEE 220, Mechanics of Materials	114	4.1	4.3	4.3	4.2
Wi 12	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	24/28	4.3	4.3	4.2	4.1
Aut 12	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	33	3.9	4.0	4.0	3.9

Wi 13	CEE 500, Structures Graduate Seminar, 1 cr.	45	Graduate Seminar				
Aut 13	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	36		3.7	4.1	4.1	3.9
Wi 14	CEE 500, Structures Graduate Seminar, 1 cr.		Graduate Seminar				
Sp 14	CEE 442, Structural Geotechnical Design Project, 4 cr. (co-taught with Lehman)	38/46		4.3	4.0	3.7	4.1
Aut 14	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	37/39		3.7	3.9	3.9	3.8
Wi 15	CEE 453, Design of Prestressed Concrete Structures, 3 cr	41		4.2	4.5	4.6	
Wi 15	CEE 500, Structures Graduate Seminar, 1 cr.	32	Graduate Seminar				
Aut 15	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	32		3.7	4.0	4.1	3.8
Wi 16	CEE 452, Design of Reinforced Concrete Structures, 3 cr	10/14		4.3	4.7	4.5	4.5

Wi 16	CEE 100. 21 st Century Civil and Environmental Engineering, 1 cr (joint with G. Miller)	77	4.4	4.6	4.5	4.5
Aut 16	CEE 511, Advanced Reinforced Concrete Design, 3 cr.	20/26	4.3	4.7	4.9	4.6
Wi 17	CEE 100. 21 st Century Civil and Environmental Engineering, 1 cr		Undergraduate Seminar			
Aut 17	CESG 521, Advanced Reinforced Concrete Design, 3 cr.	22/26	4.0	4.6	4.6	4.3
Aut 18	CESG 521, Advanced Reinforced Concrete Design, 3 cr.	/47	3.9	4.3	4.3	4.1
Wi 19	CEE 103. Engineering for Natural and mand- Made Hazards	21/41	Median. 4.5 Adj. 3.9	Median. 4.1 Adj. 3.7	Median. 4.3 Adj. 3.8	Median. 4.3 Adj. 3.8
Aut 19	CESG 521, Advanced Reinforced Concrete Design, 3 cr.	9/37	3.7	3.8	3.9	4.1
Sp 20	CESG 526, Earthquake Engineering I	37				

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	
Ohlsonn, 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	
Jimenez, Jose	Sum 12	PEER intern	
Esparza, Carlos	Sum 12	PEER intern	
David Lam	Sum 13	PEER intern	
Mathew Brosman	Sum 13	PEER intern	

SHORT COURSES, WORKSHOPS, AND OTHER EDUCATIONAL PROGRAMS

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

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.

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

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

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

SERVICE

Departmental service

Member, Structural Laboratory Executive Committee, 1990-1995
Member, SGEM Ph.D. Preliminary Exam Committee, 1990
Member, Departmental Committee on Laboratory Management, 1991
Member, Environmental Engineering Search Subcommittee, 1992
Member, Structural Engineering Search Committee, 1994
Member, 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, 2006-2014
Chair, Mentor Committee for Research Asst. Prof. Andrew Wood, 2007-2008
Program Director, Structural and Geotechnical Engineering and Mechanics Program, 2007-2011
Member, CEE Executive Committee, 2008-2011
Member, CEE Merit Review Committee, 2009-2010
Member, Structural and Geotechnical Search Committee, 2008-2009
Member, Mentor Committee for Asst. Prof. Alan Hamlet, 2009-2012
Chair, Structural Engineering Faculty Search Committee, 2011-2012
Member, Mentor Committee for Res. Assoc. Prof. Peter Mackenzie, 2011-present
Chair, Structural Engineering Faculty Search Committee, 2013-2014
Member, CEE Departmental Affairs Committee, 2013-2016
Chair, Structural Engineering Faculty Search Committee, 2014-2015
Chair, Mentor Committee for Assoc. Prof. Jeff Berman, 2014-2017
Program Leader, Structural Engineering and Mechanics Program, 2015-2018

Member, Mentor Committee for Assoc. Prof. Anne Goodchild, 2016-2017
Member, CEE Undergraduate Education Committee, 2016-present
- Chair, Subcommittee on Direct-to-College Admissions
Member, Mentor Committee for Prof. Michael Gomez, 2017 - present
Member, Mentor Committee for Prof. Richard Wiebe. 2017 – present
Member, Construction Engineering Lecturer Search Committee, 2018-2019.
Member, Structural Engineering Faculty Search Committee, 2019-2020.
Co-Graduate Advisor, Structural Engineering and Mechanics Program, 2019-present.

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
Member, College Council, 2014-2019
Member, College Council on Educational Policy, 2020-present.

University service

Professional society and other service *

Accelerated Bridge Construction – FIU University Transportation Center

Co-Director, University of Washington, 2017-present
Member, Workforce Development Advisory Board, 2018-present

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, 2000-2010

- Member, 445-B subcommittee on seismic shear, 2000-2009
- 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, 2008-2009

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, incorporated (NEESinc)

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

Member, Task Group on Data Sharing, 2002-2003

Member, NEES Consortium, Inc., 2003-2008

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, 2007-2010 (elected by membership)

- Member Governance Committee

Vice President, 2008-2010 (elected by Board of Directors)

Network for Earthquake Engineering Simulation, Purdue University (NEES)

Interim Director of Site Operations (2009)

Chair, Project Advisory Committee (2009-2010)

Member, Project Advisory Committee (2010-2014)

Chair, Subcommittee on Site Operations (2009-2014)

Member, Strategic Council (2010-2014)

Pacific Earthquake Engineering Research Center

Chair, Transportation System Research Program Committee, 2011-2017

Member, OpenSees Advisory Board, 2012-2017

co-Chair. Transportation Systems Session, Northridge20 Symposium, Jan. 2014.

Member, Resource Identification Committee, 2019-present.

Other

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

UW Host. 2017 Central Mexico Earthquake Seminar. 12/2017.

Guest Editor. With Mehdi Kashani and Mehdi Saiidi. Special issue title: Resilience-Based Design for Next-Generation Bridge Design and Construction, Journal of Structures (ISTRUCT). 2019-2020.

Community service

Special Olympics Assistant Coach (basketball, track, cross-country, softball) 1992-1996
Seattle Youth Soccer Association Coach (2008-2017)

International, 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,
2001-2002
- Member, subcommittee on structures

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

Co-Chair, Steering Committee for Haiti RAPIDS and Research Needs Workshop,
National Science Foundation/EERI, Washington, D.C., Sep. 2010

Member, Scientific Committee, Eighth Kwang-Hua Forum, Tongji University, Shanghai,
China, 2018.

Member, State of Washington Seismic Safety Committee, 2019-present.

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.