

GREGORY L. FENVES

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LEADERSHIP POSITIONS

2020	President Emory University
2015–2020	President The University of Texas at Austin
2013–2015	Executive Vice President and Provost The University of Texas at Austin
2008–2013	Dean, Cockrell School of Engineering The University of Texas at Austin
2002–2007	Chair, Department of Civil and Environmental Engineering University of California, Berkeley
1997–2002	Assistant Director for Lifeline Programs, Pacific Earthquake Engineering Research Center, University of California, Berkeley
1994–1996	Vice Chair for Graduate Affairs, Department of Civil and Environmental Engineering, University of California, Berkeley

ACADEMIC APPOINTMENTS

2020	Professor, Department of Computer Science Emory College of Arts and Sciences Emory University
2020	Cockrell Family Chair Emeritus in Engineering #15 Cockrell School of Engineering The University of Texas at Austin
2015–2020	Cockrell Family Chair in Engineering #15 Cockrell School of Engineering The University of Texas at Austin
2008–2020	Professor, Department of Civil, Architectural, and Environmental Engineering The University of Texas at Austin
2001–2008	Member of the faculty, <i>European School for Advanced Studies in Reduction of Seismic Risk</i> (ROSE School), University of Pavia, Italy
2008	Visiting Professor, Disaster Prevention Research Institute Kyoto University, Japan
1998–2008	T.Y. and Margaret Lin Professor of Engineering Department of Civil and Environmental Engineering University of California, Berkeley
1994–1998	Professor, Department of Civil and Environmental Engineering University of California, Berkeley
1990–1994	Associate Professor, Department of Civil and Environmental Engineering University of California, Berkeley

- 1988–1990 Assistant Professor, Department of Civil Engineering
University of California, Berkeley
- 1984–1987 Assistant Professor, Department of Civil Engineering
The University of Texas at Austin

EDUCATION

- Doctor of Philosophy, Department of Civil Engineering, University of California, Berkeley,
May 1984
- Master of Science, Department of Civil Engineering, University of California, Berkeley,
June 1980
- Bachelor of Science with Distinction, School of Civil and Environmental Engineering,
Cornell University, June 1979

MAJOR AWARDS

- Hope for Humanity Award, Dallas Holocaust Museum, 2018
- Grand Award, Cicero Speechwriting Awards (with Matthew Kivel), 2018
- Guardian of the Human Spirit Award, Holocaust Museum Houston, 2017
- Philosophical Society of Texas, elected member, 2017–2020
- Texas Academy of Medicine, Engineering, Science, and Technology (TAMEST), member, 2015–2020
- National Academy of Engineering, elected member, 2014
- Mexican Academy of Engineering, corresponding member, 2014
- Academy of Distinguished Alumni, Department of Civil and Environmental Engineering,
University of California, Berkeley, 2013
- J. James R. Croes Medal, American Society of Civil Engineers, 2009
- Walter L. Huber Research Prize, American Society of Civil Engineers, 1995
- Moisseiff Award, American Society of Civil Engineers, 1993
- Raymond C. Reese Research Prize, American Society of Civil Engineers, 1989
- Presidential Young Investigator Award, National Science Foundation, 1987

HIGHER EDUCATION BOARDS AND ACTIVITIES

- University Athletic Association, Presidents Council, 2020–present
- Georgia Independent College Association, Board of Directors, 2020–present
- Atlanta Regional Council for Higher Education, Board of Directors, 2020–present
- APLU (Association of Public and Land-grant Universities), Research Intensive Committee, 2018–2020
- APLU “Powered by Publics: Scaling Student Success,” cluster leader, 2018–2020
- College Football Playoff Administration, LLC, Board of Managers, 2018–2020
- University Research Association, Board of Trustees, 2017–2020
- University Innovation Alliance, Board of Directors, 2015–2020
- Big 12 Conference, Board of Directors, 2015–2020; Secretary/Treasurer, 2016–2020
- LBJ Foundation, ex officio member, Board of Directors, 2015–2020
- Dedman Foundation, Board of Directors, 2015–2020

COMMUNITY SERVICE

- Georgia Research Alliance, Board of Trustees, 2020–present
- Metro Atlanta Chamber of Commerce, Board of Directors, 2020–present
- Atlanta Committee for Progress, Board of Directors, 2020–present
- The Carter Center, Board of Trustees, 2020–present
- Woodruff Fund, Board of Directors, 2020–present
- Greater Austin Economic Development Corporation, Board of Directors, 2016–2020
- Mayor’s Task Force on Institutional Racism and Systemic Inequity, City of Austin,
task force member, 2016
- E3 Alliance (Education Equals Excellence), Austin, Texas, Board of Directors, 2015–2016

UNIVERSITY SERVICE

University of Texas at Austin

Steering Committee for the Dell Medical School, 2012–2013; chair, 2013–2014
Ex Students Association (Texas Exes), Board of Directors, 2014–2015
Search Committee for Founding Dean of the Dell Medical School, 2013
Strategic IT Accountability Board, 2009–2012; 2013–2015
Executive Compliance Committee, 2008–2011; 2013–2015
Facilities and Space Council, 2013–2015
Internal Audit Committee, 2013–2015
UT System Chancellor’s Cabinet on Technology Commercialization, 2012–2014
UT System Regental Task Force on Intellectual Property, 2014
UT System Task Force on Engineering Education, 2012–2013
Master Plan Advisory Committee, 2011–2012
Search Committee for Dean of the College of Natural Sciences, 2011–2012
Executive Committee for the Engineering Education and Research Center Project, 2010–2013
Chair, Committee on Regulatory Costs, 2010–2012
Search Committee for Dean of the Jackson School of Geosciences, 2009–2010

University of California, Berkeley

Task Committee on Educating Leaders, College of Engineering, 2003–2004
College Executive Committee, College of Engineering, 2002–2007
Group Leader, Structural Engineering, Mechanics and Materials, CEE Department, 2001–2002
CITRIS Executive Committee (Center for Information Technology Research in the Interest of Society),
UC Berkeley, 2001–2003
CITRIS Building Program Committee, UC Berkeley, 2001–2002
Richmond Field Station Study Committee, UC Berkeley, 2000–2002
Civil Systems Committee, CEE, 2000–2002
Seismic Review Committee, UC Berkeley, 1998–2002
Research Committee, Pacific Earthquake Engineering Research Center, 1997–2007

TEACHING AND MENTORING

Undergraduate courses taught 1999–2007, UC Berkeley (10 classes, total of 685 students)

CE 92, Introduction to Civil and Environmental Engineering
CE 120, Structural Engineering
CE 121, Advanced Structural Analysis
CE 192, Art and Science of Civil and Environmental Engineering Practice

Graduate courses taught 1999–2007, UC Berkeley (8 classes, total of 253 students)

CE 221, Nonlinear Structural Analysis
CE 222, Finite Element Methods
CE 224, Computer Aided Engineering
CE 225, Dynamics of Structures

Graduate Student Supervision

Completed supervision of 16 PhD students (4 co-supervised) at UC Berkeley, one PhD student at the University of Texas at Austin, and two PhD students at the ROSE School, University of Pavia, Italy. Seven former PhD students hold faculty appointments. Four former PhD students have received a CAREER Award and one a PECASE Award from the National Science Foundation.

EXTRAMURAL RESEARCH GRANTS

- Towards Petascale Simulation of Urban Earthquake Impacts* (Co-PI, in conjunction with Carnegie Mellon University; National Science Foundation; 2007–2013)—Develop methodologies, capability, and software for high-fidelity physics-based petascale simulations of urban regions to assess the engineering of large magnitude earthquakes on buildings, transportation system components, and the underground civil infrastructure. Include the interaction between the soil, the foundation and large inventories of structures; the interaction between structures in densely built areas; and the effect of the structures on the ground motion as well as the nonlinear soil behavior. Integrate with computational databases and scalable visualization tools.
- Software Framework for Earthquake Engineering Simulation* (PI; Pacific Earthquake Engineering Research Center from the National Science Foundation; 1997–2007)—Lead creator of comprehensive, object-oriented simulation framework for structural and geotechnical systems, including robust models, equation solvers, and algorithms; parallel and distributed processing applications. Open System for Earthquake Engineering Simulation (OpenSees)
<http://opensees.berkeley.edu/>.
- CITRIS-Center for Information Technology Research in the Interest of Society* (Co-PI; National Science Foundation; 2001–2007)—This was a \$7.5 million NSF ITR grant, with Prof. J. Demmel (EECS), as principal investigator. Responsible for a new sensor network for structural health assessment of bridges. A wireless MEMS sensor unit has been developed and will be deployed in a wireless network on the Golden Gate Bridge for dense spatial sensing of vibration characteristics, globally and locally. A new class of distributed system identification has been developed to minimize the communication needed for computing correlations between signals.
- NEES Simulation Component* (PI for subaward from San Diego Supercomputer Center, National Science Foundation; 2005–2009)—Continue to develop OpenSees for the Network for Earthquake Engineering Simulation (NEES) simulation services. Develop parallel version for TeraGrid and DataStar high-performance computers at San Diego Supercomputer Center. Create data interfaces for NEES repository. Provide interfaces for portal to OpenSees using GridSphere and other portal middleware.
- Seismic Performance of Bridge Systems with Conventional and Innovative Materials* (Co-PI, National Science Foundation; 2005–2009)—A collaborative project to extend the NEES demonstration project to improve design and analysis of bridge systems using innovative materials. Expand the simulation to include the effect of abutments and innovative methods for improving seismic performance, such as self-centering columns and composite materials.
- NEES System for Studying Soil-Structure-Foundation Interaction* (PI for collaborative project, National Science Foundation; 2003–2007)—Use NEES experimental sites to improve understanding of SFSI on bridges. Develop and calibrate advanced nonlinear models of bridge components against shaking table, centrifuge, in situ, and quasi-static tests. Investigate the system response of prototype bridges for a range of soil, foundation, and structural effects.
- NEESgrid Simulation Component* (PI for subaward from University of Illinois at Champaign-Urbana, National Science Foundation; 2003–2004)—Develop computational simulation capability using OpenSees for structural and geotechnical applications. Interact with NEESgrid team at NCSA on integrating simulation capability, including database interfaces, into NEES systems.
- Seismic Performance of Urban Regions* (PI; Mississippi State University subaward from the National Science Foundation, in conjunction with Carnegie Mellon University; 1999–2006)—Develop new simulation models of buildings and infrastructure in urban regions to estimate damage and vulnerability; create collaborative software framework for earthquake source modeling, regional geophysical features, and structural models with distributed processing and visualization methods.
- Earthquake Vulnerability of Electrical Substation Equipment* (PI; Pacific Gas & Electric Company; 1998–2004)—Experimental testing and analytical investigation of seismic vulnerability of transformer bushings and disconnect switches; qualification standards and characterization of fragility.

OTHER EXTRAMURAL RESEARCH GRANTS

- Simplified Earthquake Analysis Procedures for Bridges* (PI; California Department of Transportation; 1999–2002)
- Protective Systems for Bridges* (Co-PI; California Department of Transportation; 1995–2000)
- Earthquake Analysis of Bridges* (PI; California Department of Transportation; 1995–1998)
- Material Models for Earthquake Analysis of Concrete Dams* (PI; U.S. Bureau of Reclamation; 1992–1996)
- Evaluation of Interstate 10/215 Connector* (PI; California Division of Mines and Geology; 1993–1994)
- Earthquake Analysis of Gravity Dams* (PI; National Science Foundation; 1990–1993)
- Nonlinear Analysis of Concrete Arch Dams, Phase II* (PI; U.S. Bureau of Reclamation, County of Los Angeles, Harza Engineering Company; 1992–1993)
- Qualitative Reasoning of Structural Behavior* (PI; National Science Foundation; 1991–1993)
- Engineering Database for Seismic Assessment of the Bay Bridge* (Co-PI; California Department of Transportation; 1990–1993)
- Retrofitting Multi-Level/Multiple Column Structures* (Co-PI; California Department of Transportation; 1990–1993)
- Evaluation of the Dumbarton Bridge in the Loma Prieta Earthquake* (PI; California Department of Transportation; 1990–1992)
- Nonlinear Analysis of Concrete Arch Dams, Phase I* (PI; U.S. Corp of Engineers, County of Los Angeles, EPRI, PG&E, Harza Engineering Company; 1988–1990)
- Evaluation of Lateral Earthquake Force Procedures in Building Design* (PI; California Division of Mines and Geology; 1989–1990)
- Evaluation of Soil-Structure Interaction in Buildings* (PI; California Division of Mines and Geology; 1988–1989)
- Anchorage Zone Reinforcement in Post-Tensioned Girders* (Co-PI; National Cooperative Highway Research Projects; 1986–1989)
- Behavior of Wire Fabric Reinforced Columns* (Co-PI; Reinforced Concrete Research Council; 1986–1987)
- Analysis of Curved Steel Girder Units* (Co-PI; Texas Department of Highways; 1985–1987)
- Nonlinear Dam-Water Interaction Effects in the Earthquake Response of Concrete Dams* (PI; National Science Foundation; 1985–1987)

PROFESSIONAL AFFILIATIONS AND MAJOR ACTIVITIES

- American Society of Civil Engineers, Fellow
- Structural Engineering Institute (of ASCE), Fellow
- Earthquake Engineering Research Institute, Member
- American Association for the Advancement of Science, Member
- Committee on Grand Challenges in Earthquake Engineering: A Community Workshop, National Research Council, Co-Chair, 2010–2011
- Structural Identification of Constructed Systems Committee, Structural Engineering Institute, American Society of Civil Engineers, 2006–2011
- Strong Motion Instrumentation Advisory Panel, Golden Gate Bridge District, 1998–2008; Chair, 2006–2008
- NEES IT Vision Committee, Network for Earthquake Engineering Simulation, 2006–2007
- Research Policy Committee, Earthquake Engineering Research Institute, Chair, 2004–2006
- Panel on Research Agenda for Earthquake Engineering, Earthquake Engineering Research Institute, 2001–2003
- Methods of Analysis Committee, Structural Engineering Institute, American Society of Civil Engineers, 1998–2004
- Dynamic Effects Administrative Committee, Structural Engineering Institute, American Society of Civil Engineers, Chair, 1997–2000
- ASCE Steering Committee for 1998 Structural Engineers World Congress, Chair, 1995–1998
- CUREe, Elected At-large Member of Board of Directors, 1995–1999

Seismic Effects Committee, Structural Division, American Society of Civil Engineers, 1986–1997, 2002–2009; Publications Secretary, 1990–1993; Chair, 1994–1997
Computer-Aided Design and Analysis Committee, Structural Division, American Society of Civil Engineers, 1991–1998
Database Committee, Technical Council on Computer Practices, American Society of Civil Engineers, 1988–1998
Dynamics Committee, Engineering Mechanics Division, American Society of Civil Engineers, 1984–1992
Panel on Earthquake Engineering for Concrete Dams, Committee on Earthquake Engineering, National Research Council, 1986–1988

EDITORIAL ACTIVITIES

Editorial Board, *Earthquake Engineering & Structural Dynamics*, 2012–2016
Guest Editor, *Earthquake Engineering & Structural Dynamics*, April 2009
Editorial Board, *Earthquake Spectra*, EERI, 2002–2008
Editorial Board, *Journal of Earthquake Engineering*, 2002–2008
Associate Editor, *Journal of Structural Engineering*, ASCE, 1990–1993
Guest Editor, *Journal of Computing in Civil Engineering*, ASCE, July 1992

SELECTED PROFESSIONAL CONSULTING

Applied Technology Council, Redwood City, CA, 2007–2009; develop guidelines for performance-based earthquake engineering.
California Department of Transportation, 2006–2008; member of Seismic Advisory Board, reporting to Caltrans Director.
Lawrence Livermore National Laboratory, 2004–2006; member of review panel providing oversight of transportation safety study.
Lawrence Livermore National Laboratory, 2003–2004; chair of review panel for ground vibration study.
T.Y. Lin International, San Francisco, 1998–1999; design of the new Bay Bridge.
Applied Technology Council, Redwood City, CA, 1998–2002; develop new national seismic bridge specifications.

PROFESSIONAL LICENSE

Texas PE 105574 (Inactive)

REFEREED PUBLICATIONS

Archival Journals

1. G.L. Fenves and A.K. Chopra, “Effects of Reservoir Bottom Absorption on Earthquake Response of Concrete Gravity Dams,” *Earthquake Engineering and Structural Dynamics*, Vol. 11, No. 6, 1983, pp. 809–829.
2. G.L. Fenves and A.K. Chopra, “Earthquake Analysis of Concrete Gravity Dams Including Reservoir Bottom Absorption and Dam-Water-Foundation Rock Interaction,” *Earthquake Engineering and Structural Dynamics*, Vol. 12, No. 5, 1984, pp. 663–680.
3. G.L. Fenves and A.K. Chopra, “Effects of Reservoir Bottom Absorption and Dam-Water Interaction on Frequency Response Functions for Concrete Gravity Dams,” *Earthquake Engineering and Structural Dynamics*, Vol. 13, No. 1, 1985, pp. 13–31.
4. G.L. Fenves and A.K. Chopra, “Reservoir Bottom Absorption Effects in Earthquake Response of Concrete Gravity Dams,” *Journal of Structural Engineering*, ASCE, Vol. 111, No. 3, 1985, pp. 545–563.

5. G.L. Fenves and A.K. Chopra, "Simplified Earthquake Analysis of Concrete Gravity Dams: Separate Hydrodynamic and Foundation Interaction Effects," *Journal of Engineering Mechanics*, ASCE, Vol. 111, No. 6, 1985, pp. 715–735.
6. G.L. Fenves and A.K. Chopra, "Simplified Earthquake Analysis of Concrete Gravity Dams: Combined Hydrodynamic and Foundation Interaction Effects," *Journal of Engineering Mechanics*, ASCE, Vol. 111, No. 6, 1985, pp. 736–756.
7. G.L. Fenves, "Earthquake Response of Concrete Dam Systems," *Computer-Aided Simulation of Fluid-Structure Problems*, ASCE, 1987, pp. 22–32.
8. G.L. Fenves and A.K. Chopra, "Simplified Earthquake Analysis of Concrete Gravity Dams," *Journal of Structural Engineering*, ASCE, Vol. 113, No. 8, 1987, pp. 1688–1708.
9. L.M. Vargas-Loli and G.L. Fenves, "Nonlinear Dynamic Analysis of Fluid-Structure Systems," *Journal of Engineering Mechanics*, ASCE, Vol. 114, No. 2, 1988, pp. 219–240.
10. L.M. Vargas-Loli and G.L. Fenves, "Effects of Concrete Cracking on the Earthquake Response of Gravity Dams," *Earthquake Engineering and Structural Dynamics*, Vol. 18, No. 4, 1989, pp. 575–592.
11. G.L. Fenves, "Object-Oriented Programming for Engineering Software Development," *Engineering with Computers*, Vol. 6, 1990, pp. 1–15.
12. G. Serino and G.L. Fenves, "Soil-Structure Interaction in Buildings from Earthquake Records," *Earthquake Spectra*, Vol. 6, No. 4, 1990, pp. 641–655.
13. E.P. Kasl, G.L. Fenves and R.W. Furlong, "Welded Structural Wire Reinforcement for Columns," *ACI Structural Journal*, Vol. 88, No. 5, 1991, pp. 585–591.
14. G.L. Fenves, S. Mojtahedi and R.B. Reimer, "Effect of Contraction Joints on Earthquake Response of an Arch Dam," *Journal of Structural Engineering*, ASCE, Vol. 118, No. 4, 1992, pp. 1039–1055.
15. G.L. Fenves, "Object Oriented Technology in Civil Engineering," editorial, *Journal of Computing in Civil Engineering*, ASCE, Vol. 6, No. 3, 1992, pp. 245–247.
16. G.L. Fenves and S. Mojtahedi, "Earthquake Response of an Arch Dam with Contraction Joint Opening," *Dam Engineering*, Vol. IV, No. 2, 1993, pp. 63–88.
17. L.M. Bozzo and G.L. Fenves, "Qualitative Reasoning and the Representation of Fundamental Principles in Structural Engineering," *Research in Engineering Design*, Vol. 6, No. 1, 1994, pp. 61–72.
18. L.M. Bozzo and G.L. Fenves, "Qualitative Reasoning Strategy and Its Application to Structural Engineering," *Research in Engineering Design*, Vol. 6, No. 1, 1994, pp. 73–84.
19. J.W. Chavez and G.L. Fenves, "Earthquake Analysis of Concrete Dams Including Base Sliding," *Earthquake Engineering and Structural Dynamics*, Vol. 24, No. 5, 1995, pp. 673–686.
20. J.W. Chavez and G.L. Fenves, "Earthquake Response of Concrete Gravity Dams Including Base Sliding," *Journal of Structural Engineering*, ASCE, Vol. 121, No. 5, 1995, pp. 865–875.
21. G.L. Fenves and F. McKenna, Discussion, *Journal of Structural Engineering*, ASCE, Vol. 123, No. 3, 1997, pp. 377–381.
22. R. DesRoches and G.L. Fenves, "Evaluation of Recorded Earthquake Response of a Curved Highway Bridge," *Earthquake Spectra*, Vol. 13, No. 3, 1997, pp. 363–386.
23. J.P. Stewart and G.L. Fenves, "System Identification for Evaluating Soil-Structure Interaction Effects in Buildings from Strong Motion Recordings," *Earthquake Engineering and Structural Dynamics*, Vol. 27, 1998, pp. 869–885.
24. J. Lee and G.L. Fenves, "Plastic-Damage Model for Cyclic Loading of Concrete Structures," *Journal of Engineering Mechanics*, ASCE, Vol. 124, No. 8, 1998, pp. 892–900.
25. J. Lee and G.L. Fenves, "A Plastic-damage Model for Earthquake Analysis of Dams," *Earthquake*

- Engineering and Structural Dynamics*, Vol. 27, No. 9, 1998, pp. 937–956.
26. G.C. Archer, G.L. Fenves and C. Thewalt, “A New Object-Oriented Finite Element Analysis Program Architecture,” *Computers & Structures*, Vol. 70, No. 1, 1999, pp. 63–75.
 27. J.P. Stewart, G.L. Fenves and R.B. Seed, “Seismic Soil-structure Interaction in Buildings, I: Analytical Methods,” *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, Vol. 125, No. 1, 1999, pp. 26–37.
 28. J.P. Stewart, R.B. Seed and G.L. Fenves, “Seismic Soil-structure Interaction in Buildings, II: Empirical Finding,” *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, Vol. 125, No. 1, 1999, pp. 38–48.
 29. R. DesRoches and G.L. Fenves, “Design of Seismic Cable Hinge Restrainers for Bridges,” *Journal of Structural Engineering*, ASCE, Vol. 126, No. 4, 2000, pp. 500–509.
 30. J. Lee and G.L. Fenves, “A Return-Mapping Algorithm for Plastic-Damage Models: 3-D and Plane Stress Formulation,” *International Journal for Numerical Methods in Engineering*, Vol. 50, No. 2, 2001, pp. 487–506.
 31. R. DesRoches, and G.L. Fenves, “Simplified Restrainer Design Procedure for Multiple-Frame Bridges,” *Earthquake Spectra*, Vol. 17, No. 4, 2001, pp. 551–567.
 32. A.S. Gilani, A.S. Whittaker and G.L. Fenves, “Seismic Evaluation and Retrofit of 230-kV Porcelain Transformer Bushings,” *Earthquake Spectra*, Vol. 17, No. 4, 2001, pp. 597–616.
 33. A.S. Whittaker, G.L. Fenves and A.S.J. Gilani, “Earthquake Performance of Porcelain Transformer Bushings,” *Earthquake Spectra*, Vol. 20, No. 1, 2004, pp. 205–223.
 34. G. Mosqueda, A.S. Whittaker and G.L. Fenves, “Characterization and Modeling of Friction Pendulum Bearings Subjected to Multiple Components of Excitation,” *Journal of Structural Engineering*, Vol. 130, No. 3, 2004, pp. 433–442.
 35. D.N. Grant, G.L. Fenves and A.S. Whittaker, “Bidirectional Modeling of High-Damping Rubber Bearings,” *Journal of Earthquake Engineering*, Vol. 8, Special Issue 1, 2004, pp. 161–185.
 36. M.H. Scott, P. Franchin, G.L. Fenves and F.C. Filippou, “Response Sensitivity for Nonlinear Beam-Column Elements,” *Journal of Structural Engineering*, Vol. 130, No. 9, 2004, pp. 1281–1288.
 37. Y. Takahashi and G.L. Fenves, “Software Framework for Distributed Experimental-Computational Simulation of Structural Systems,” *Earthquake Engineering and Structural Dynamics*, Vol. 35, 2006, pp. 267–281.
 38. M.H. Scott and G.L. Fenves, “Plastic Hinge Integration Methods for Force-Based Beam-Column Elements,” *Journal of Structural Engineering*, Vol. 132, No. 2, 2006, pp. 244–252.
 39. A.S. Whittaker, G.L. Fenves and A.S.J. Gilani, “Seismic Evaluation and Analysis of High-Voltage Substation Disconnect Switches,” *Engineering and Structures*, Vol. 29, No. 12, 2007, pp. 3538–3549.
 40. M.H. Scott, G.L. Fenves, F. McKenna and F.C. Filippou, “Software Patterns for Nonlinear Beam Column Models,” *Journal of Structural Engineering*, Vol. 134, No. 4, 2008, pp. 519–687.
 41. S.N. Pakzad, G.L. Fenves, S.K. Kim and D. Culler, “Design and Implementation of Scalable Wireless Sensor Network for Structural Monitoring,” *Journal of Infrastructure Systems*, Vol. 14, No. 1, 2008, pp. 89–101.
 42. S.N. Pakzad and G.L. Fenves, “Statistical Analysis of Vibration Modes of Suspension Bridge Using Spatially Dense Wireless Sensor Network,” *Journal of Structural Engineering*, Vol. 135, No. 7, 2009, pp. 863–872.

43. G. Attanasi, F. Auricchio and G.L. Fenves, "Feasibility Assessment of an Innovative Isolation Bearing System with Shape Memory Alloys," *Journal of Earthquake Engineering*, Vol. 13, No. 1, 2009, pp. 18–39.
44. F. McKenna, M.H. Scott and G.L. Fenves, "Finite Element Analysis Software Architecture Using Object Composition," *Journal of Computing in Civil Engineering*, Vol. 24, No. 1, 2010, pp. 95–107.
45. M.H. Scott and G.L. Fenves, "A Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames," *Journal of Structural Engineering*, Vol. 136, No. 5, 2010, pp. 473–480.
46. G. Petropoulos and G.L. Fenves, "Interprocessor Communication for High Performance, Explicit Time Integration," *Engineering with Computers*, Vol. 26, No. 2, 2010, pp. 149–157.
47. X. Ji, G.L. Fenves, K. Kajiwara and M. Nakashima, "Seismic Damage Detection of a Full-Scale Shaking Table Test Structure," *Journal of Structural Engineering*, Vol. 137, No. 1, 2011, pp. 14–21.

Refereed Conference Proceedings

1. G.L. Fenves and A.K. Chopra, "Earthquake Response of Dams with Wave Absorbing Reservoir Bottom," *Proceedings*, Fourth Engineering Mechanics Specialty Conference, ASCE, May 1983.
2. G.L. Fenves, "Nonlinear Analysis of External Prestressed Bridges," *Proceedings*, Ninth Conference on Electronic Computation, ASCE, February 1986, pp. 192–200.
3. G.L. Fenves and A.K. Chopra, "Interaction Effects in the Earthquake Response of Concrete Gravity Dams," Abstract, *Proceedings*, Structures Congress 86, ASCE, September 1986, p. 167.
4. G.L. Fenves and A.K. Chopra, "Effects of Concrete Cracking on Earthquake Response of Gravity Dams," Abstract, *Proceedings*, Engineering Mechanics Division Specialty Conference, ASCE, May 1987, p. 99.
5. G.L. Fenves, "Object Representations for Structural Analysis and Design," *Proceedings*, Fifth Conference on Computing in Civil Engineering, ASCE, March 1988, pp. 502–511.
6. L.M. Vargas-Loli and G.L. Fenves, "Nonlinear Response of Concrete Gravity Dams," *Proceedings*, Ninth World Conference on Earthquake Eng., Vol. VI, Tokyo, Japan, August 1988, pp. 343–348.
7. G.L. Fenves, "Earthquake Induced Cracking in Concrete Gravity Dams," *Seismic Engineering*, Structures Congress 89, ASCE, May 1989, pp. 337–346.
8. G.L. Fenves, "Object-Oriented Models for Engineering Data," *Proceedings*, Sixth Conference on Computing in Civil Engineering, September 1989, pp. 564–570.
9. G.L. Fenves, M.E. Kreger and K. El-Habr, "Finite Element Analysis of Externally Post-Tensioned Segmental Box Girder Construction," *Proceedings*, ACI-PCI-PTI International Symposium on External Prestressing in Bridges, December 1989, pp. 389–407.
10. G. Serino and G.L. Fenves, "Evaluation of Soil-Structure Effects in the Earthquake Response of a Building," *Proceedings*, Fourth U.S. National Conference on Earthquake Engineering, Vol. 3, Palm Springs, California, May 1990, pp. 895–904.
11. J.W. Chavez and G.L. Fenves, "Hybrid Frequency Time Domain Analysis of Nonlinear Fluid Structure Systems," *Proceedings*, Fourth U.S. National Conference on Earthquake Engineering, Vol. 2, Palm Springs, California, May 1990, pp. 97–106.
12. O.L. Burdet, C.L. Roberts, D.H. Sanders, G.L. Fenves and J.E. Breen, "Models and Tests of Anchorage Zones of Post-Tensioned Tendons," *Proceedings*, International Association for Bridge and Structural Engineering, Stuttgart, Germany, 1991, pp. 545–550.
13. J.W. Chavez and G.L. Fenves, "The Hybrid Frequency-Time Domain Procedure for Nonlinear Analysis," *Proceedings*, Structures Congress 91, ASCE, May 1991, pp. 378–381.

14. S. Rahmann, G.L. Fenves and G.H. Powell, "Database Design for the San Francisco Bay Bridge," *Proceedings*, Seventh Conference on Computing in Civil Engineering, ASCE, May 1991, pp. 769–778.
15. L.M. Bozzo and G.L. Fenves, "Qualitative Evaluation of Preliminary Structural Designs," *Proceedings*, Eighth Conference on Computing in Civil Engineering, ASCE, June 1992, pp. 89–96.
16. G.L. Fenves, S. Mojtahedi and R.B. Reimer, "Nonlinear Earthquake Analysis of Arch Dam/Reservoir," *Proceedings*, Tenth World Conference on Earthquake Engineering, Vol. 8, Madrid, Spain, July 1992, pp. 4595–4600.
17. L.M. Bozzo and G.L. Fenves, "Qualitative Reasoning About Seismic Behavior of Buildings," *Proceedings*, Tenth World Conference on Earthquake Engineering, Vol. 10, Madrid, Spain, July 1992, pp. 6291–6296.
18. G.L. Fenves and F.C. Filippou, "Response of the Dumbarton Bridge in the Loma Prieta Earthquake," *Proceedings*, Third NSF Workshop on Bridge Engineering Research in Progress, University of California at San Diego, November 1992, pp. 175–178.
19. S.P. Singh and G.L. Fenves, "Earthquake Analysis of Elevated Freeway Structures," *Proceedings*, Third NSF Workshop on Bridge Engineering Research in Progress, University of California at San Diego, November 1992, pp. 179–182.
20. L.M. Bozzo and G.L. Fenves, "Reducing Ambiguity in Qualitative Reasoning," *Proceedings*, Fifth International Conference on Computing in Civil and Building Engineering, ASCE, Vol. 2, June 1993, pp. 1259–1266.
21. S. Rahmann and G.L. Fenves, "Design and Implementation of a Database for Seismic Evaluation of Structures," *Proceedings*, Fifth International Conference on Computing in Civil and Building Engineering, ASCE, Vol. 2, pp. 790–797.
22. G.L. Fenves, "Nonlinear Earthquake Analysis of Concrete Dams Including Sliding," Analysis and Computation, *Proceedings of Eleventh Conference on Electronic Computation*, ASCE, April 1994, pp. 173–182.
23. J.W. Chavez and G.L. Fenves, "Earthquake Analysis of Concrete Gravity Dams Including Sliding," *Proceedings*, Fifth U.S. National Conference on Earthquake Engineering, EERI, Vol. II, July 1994, pp. 475–484.
24. G.L. Fenves, E. Safak and M. Raghavendrachar, "Examples of Structural Identification from Measured Earthquake Response: Buildings, Bridges, and Dams," *Proceedings*, ASCE Structures Congress, ASCE, April 1996, pp. 659–666.
25. G. Archer, G.L. Fenves and C.R. Thewalt, "A New Software Architecture for Finite Element Analysis," *Proceedings*, ASCE Third Congress on Computing in Civil Engineering, June 1996, pp. 683–689.
26. S.P. Singh and G.L. Fenves, "Earthquake Response of Two-Level Viaduct Bridges," *Proceedings*, Eleventh World Conference on Earthquake Engineering, Acapulco, Mexico, June 1996.
27. G.L. Fenves and S. Mojtahedi, "Response of a Concrete Arch Dam in the 1994 Northridge, California Earthquake," *Proceedings*, Eleventh World Conference on Earthquake Engineering, Acapulco, Mexico, June 1996.
28. J.W. Chavez and G.L. Fenves, "Evaluation of Earthquake Induced Sliding in Gravity Dams," *Proceedings*, Eleventh World Conference on Earthquake Engineering, Acapulco, Mexico, June 1996.
29. G. Archer, C.R. Thewalt and G.L. Fenves, "A New Interface to the Analysis Task in Finite Element Systems," *Proceedings*, Canadian Computing Conference, August 1996.

30. R. DesRoches and G.L. Fenves, "Design Procedure for Intermediate Hinge Restrainers for Multiple Frame Bridges," *Proceedings*, National Seismic Conference on Bridges and Highways, Federal Highway Administration, Sacramento, California, July 1997.
31. R. DesRoches and G.L. Fenves, "Effects of Pounding and Restrainers on Ductility Demands for Multiple-Frame Bridges," *Proceedings*, Sixth U.S. National Conference on Earthquake Engineering, EERI, Seattle, Washington, May 1998.
32. G.L. Fenves and M. Ellery, "Nonlinear Analysis of Concrete Bridges," *Proceedings*, 1998 Structural Engineers World Congress, Paper T110-3, San Francisco, California, July 1998.
33. S. Mazzoni and G.L. Fenves, "Displacement-based Seismic Design of Statically-Indeterminate Bridge Piers," *Proceedings*, Twelfth World Conference on Earthquake Engineering, paper no. 1851, Auckland, New Zealand, January 2000.
34. E. Anderson, S.A. Mahin, G.L. Fenves and A.S. Whittaker, "Evaluation of the AASHTO Uniform Load Method for Estimating Forces and Deformations in Seismically Isolated Bridge Systems," *Proceedings*, Twelfth World Conference on Earthquake Engineering, paper no. 2550, Auckland, New Zealand, January 2000.
35. W.-H. Huang, G.L. Fenves and A.S. Whittaker, "Characterization of Seismic Isolation Bearings for Bridges From Bi-directional Testing," *Proceedings*, Twelfth World Conference on Earthquake Engineering, paper no. 2047, Auckland, New Zealand, January 2000.
36. A.C.T. Thompson, A.S. Whittaker, G.L. Fenves and S.A. Mahin, "Property Modification Factors for Elastomeric Seismic Isolation Bearings," *Proceedings*, Twelfth World Conference on Earthquake Engineering, paper no. 1307, Auckland, January 2000.
37. F. McKenna and G.L. Fenves, "An Object-Oriented Software Design for Parallel Structural Analysis," *Advanced Technology in Structural Engineering, Proceedings*, Structures Congress 2000, ASCE, May 2000.
38. G.L. Fenves, "Advances in Earthquake Engineering with Information Technology," *Earthquake Engineering Frontiers in the New Millennium, Proceedings of the China-U.S. Millennium Symposium on Earthquake Engineering*, Beijing, A.A. Balkema, Lisse, The Netherlands, November 2001, pp. 383–387.
39. C. Chadwell, G.L. Fenves and S.A. Mahin, "Cable-stayed Bridge Behavior Under Earthquake Excitation: A Case Study," *Proceedings*, Seventh U.S. National Conference on Earthquake Engineering, Chicago, July 2002.
40. S. Pakzad and G.L. Fenves, "Structural Health Monitoring Applications Using MEMS Sensor Networks," *Proceedings*, 4th International Workshop on Structural Control, Columbia University, DEStech Publications, June 2004, pp. 47–56.
41. G.L. Fenves, F. McKenna, M.H. Scott and Y. Takahashi, "An Object-Oriented Software Environment for Collaborative Network Simulation," *Proceedings*, Thirteenth World Conference on Earthquake Engineering, Vancouver, Canada, Paper No. 1492, August 2004.
42. D.N. Grant, G.L. Fenves and F. Auricchio, "Bridge Isolation with High-Damping Rubber Bearings: Analytical Modelling and System Response," *Proceedings*, Thirteenth World Conference on Earthquake Engineering, Vancouver, Canada, Paper No. 1002, August 2004.
43. J. Park, G.L. Fenves and B. Stojadinovic, "Spatial Distribution of Response of Multi-Story Structures for Simulated Ground Motions," *Proceedings*, Thirteenth World Conference on Earthquake Engineering, Vancouver, Canada, Paper No. 1545, August 2004.
44. C.B. Chadwell, S.A. Mahin and G.L. Fenves, "Numerical Investigation of Seismic Isolation for Single Tower Cable-Stayed Bridges," *Proceedings*, Thirteenth World Conference on Earthquake Engineering, Vancouver, Canada, Paper No. 1552, August 2004.

45. J. Bielak, A. Askan, A. Fernández, G.L. Fenves, B. Stojadinovic, J. Park, G. Petropoulos, T. Haupt, R. King and J. Meyer, "Simulation for Determining the Seismic Performance of Urban Regions," EURODYNE 2005, MI Press, Rotterdam, September 2005, pp. 1479–1484.
46. S.N. Pakzad, S. Kim, G.L. Fenves, S.D. Glaser, D.E. Culler and J.W. Demmel, "Multi-purpose Wireless Accelerometer for Civil Infrastructure Monitoring," Structural Health Monitoring 2005, *Proceedings of the 5th International Workshop on Structural Health Monitoring*, ed. F-K Chang, Stanford University, September 2005.
47. G.L. Fenves, J. Park and B. Stojadinovic, "Modification of Design Strength for Directivity Effects," 8th National Conference on Earthquake Engineering, San Francisco, Paper No. 8NCEE-000444, April 2006.
48. G.L. Fenves, J. Park and B. Stojadinovic, "Parallel Simulation Methods for Regional Seismic Response Analysis," 8th National Conference on Earthquake Engineering, San Francisco, Paper No. 8NCEE-001349, April 2006.
49. G.L. Fenves and M. Tomizuka, "Distributed Sensor Applications for Civil Infrastructure Monitoring and Sensing Rich Approach to the Design of Modern Mechatronic Systems," Keynote Lecture, *Proceedings*, 4th International Conference on Earthquake Engineering, Paper No. 201, Taipei, Taiwan, October 2006.
50. A. Schellenberg, S. Mahin and G.L. Fenves, "Applications of an Experimental Software Framework for International Hybrid Simulation," *Proceedings*, 4th International Conference on Earthquake Engineering, Paper No. 261, Taipei, Taiwan, October 2006.
51. S. Kim, D. Culler, J. Demmel, S. Pakzad, G.L. Fenves, S. Glaser and M. Turon, "Poster Abstract: Wireless Sensor Networks for Structural Health Monitoring," SenSys 2006, 4th ACM Conference on Embedded Networked Sensor Systems, Boulder, November 2006.
52. G.L. Fenves, "Computational Simulation for Earthquake Engineering," Keynote Lecture, 4th International Conference on Urban Earthquake Engineering, CUE, Tokyo Institute of Technology, Tokyo, Japan, March 2007.
53. G.L. Fenves, "Scalable Wireless Sensor Networks for Structural Monitoring," Keynote Lecture, 5th International Conference on Urban Earthquake Engineering, CUE, Tokyo Institute of Technology, Tokyo, Japan, March 2008.
54. Y. Takahashi and G.L. Fenves, "Seismic Response of Bridge with C-Bent RC Column by Distributed Hybrid Simulation," 5th International Conference on Urban Earthquake Engineering, CUE, Tokyo Institute of Technology, Tokyo, Japan, March 2008.
55. G. Attanasi, F. Auricchio, C. Crosti, and G.L. Fenves, "An Innovative Isolation Bearing with Shape Memory Alloys," 14th World Conference on Earthquake Engineering, Paper 11-0055, Beijing, 2008.
56. M. Dryden and G.L. Fenves, "Validation of Simulations of a Two-Span Reinforced Concrete Bridge," 14th World Conference on Earthquake Engineering, Paper 14-0073, Beijing, 2008.
57. G.N. Petropoulos and G.L. Fenves, "Large-Scale Simulation of Soil-Structure Interaction on Building Response in a Region," 14th World Conference on Earthquake Engineering, Paper 14-0061, Beijing, 2008.
58. S.N. Pakzad, M. Dryden and G.L. Fenves, "Parametric Bootstrap for System Identification of a Scaled Reinforced Concrete Bridge," *Proceedings*, ASCE/SEI Structures Congress, Austin, April 2009.

CHAPTERS IN BOOKS AND EDITED PROCEEDINGS

1. “Nonlinear Analysis and Response Behavior,” Chapter 4, *Earthquake Engineering for Concrete Dams: Design Performance and Research Needs*, Panel on Earthquake Engineering for Concrete Dams, National Academy Press, 1990, pp. 61–79.
2. Co-Editor, *Structural Engineering Worldwide*, 1998, Proceedings of the Structural Engineers World Congress, Elsevier, July 1998.
3. F.C. Filippou and G.L. Fenves, “Methods of Analysis for Earthquake-resistant Structures (Chapter 6),” *Earthquake Engineering: From Engineering Seismology to Performance-Based Engineering*, Y. Bozorgnia and V.V. Bertero, eds., CRC Press, pp. 6-1–6-65, 2004.

NONREFEREED PUBLICATIONS

Technical Reports

1. G.L. Fenves and A.K. Chopra, *Earthquake Analysis and Response of Concrete Gravity Dams*, Report No. UCB/EERC-84/10, Earthquake Engineering Research Center, University of California, Berkeley, August 1984.
2. G.L. Fenves and A.K. Chopra, *EAGD-84: A Computer Program for Earthquake Analysis of Concrete Gravity Dams*, Report No. UCB/EERC-84/11, Earthquake Engineering Research Center, University of California, Berkeley, August 1984.
3. G.L. Fenves and A.K. Chopra, *Simplified Analysis for Earthquake Resistant Design of Concrete Gravity Dams*, Report No. UCB/EERC-85/10, Earthquake Engineering Research Center, University of California, Berkeley, June 1986.
4. L.M. Vargas-Loli and G.L. Fenves, *Nonlinear Earthquake Response of Concrete Gravity Dams*, Report to NSF, Department of Civil Engineering, University of Texas at Austin, December 1987.
5. G. Serino and G.L. Fenves, *Dynamic Soil-Structure Interaction in Building Response from Earthquake Records*, Report No. UCB/SEMM-89/01, Department of Civil Engineering, University of California, Berkeley, January 1989.
6. G. Serino and G.L. Fenves, *Evaluation of Soil-Structure Interaction in Buildings During Earthquakes*, Final Report, California Strong Motion Instrumentation Program, California Department of Conservation, June 1989.
7. G.L. Fenves, S. Mojtahedi and R.B. Reimer, *ADAP-88: A Computer Program for Nonlinear Earthquake Analysis of Concrete Arch Dams*, Report No. UCB/EERC-89/12, Earthquake Engineering Research Center, University of California, Berkeley, November 1989.
8. P. Mira and G.L. Fenves, *Evaluation of Lateral Force Procedures for Buildings*, Final Report, California Strong Motion Instrumentation Program, California Department of Conservation, December 1990.
9. G.L. Fenves, F.C. Filippou and D.T. Sze, *Response of the Dumbarton Bridge in the Loma Prieta Earthquake*, Report No. UCB/EERC-92/02, Earthquake Engineering Research Center, University of California, Berkeley, January 1992.
10. S. Mojtahedi, G.L. Fenves and R.B. Reimer, *ADAP-88: A Computer Program for Nonlinear Earthquake Analysis of Concrete Arch Dams, User Guide*, Report No. UCB/EERC-92/10, Earthquake Engineering Research Center, University of California, Berkeley, March 1992.
11. S. Mojtahedi, G.L. Fenves and R.B. Reimer, *Parameter Study of Joint Opening Effects on Earthquake Response of Arch*, Report No. UCB/EERC-92/05, Earthquake Engineering Research Center, University of California, Berkeley, April 1992.
12. L.M. Bozzo and G.L. Fenves, *Qualitative Reasoning About Structural Behavior for Conceptual Design*, Report No. UCB/SEMM-92/26, Department of Civil Engineering, University of California, Berkeley, December 1992.

13. S. Rahmann, G.L. Fenves and G.H. Powell, *Seismic Condition Assessment of the East Bay Crossing of the San Francisco-Oakland Bay Bridge, Volume 4: An Engineering Database for Seismic Evaluation*, Report to California Department of Transportation, Department of Civil Engineering, University of California, Berkeley, December 1993.
14. J.W. Chavez and G.L. Fenves, *Earthquake Analysis and Response of Concrete Gravity Dams with Base Sliding*, Report No. UCB/EERC-93/07, Earthquake Engineering Research Center, University of California, Berkeley, August 1993.
15. J. Lee and G.L. Fenves, *Numerical Implementation of Plastic-Damage Model for Concrete Under Cyclic Loading: Application to Concrete Dams*, Report No. UCB/SEMM-94/03, Department of Civil Engineering, University of California, Berkeley, May 1994.
16. G.L. Fenves and C.R. Thewalt, "Transportation Structures," Chapter 5 in *Preliminary Report on the Seismological and Engineering Aspects of the January 17, 1994 Northridge Earthquake*, Report No. UCB/EERC-94/01, Earthquake Engineering Research Center, University of California, Berkeley, January 1994.
17. W. Chavez and G.L. Fenves, *EAGD-SLIDE: A Computer Program for the Earthquake Analysis of Concrete Gravity Dams Including Base Sliding*, Report No. UCB/SEMM-94/02, Department of Civil and Environmental Engineering, University of California, Berkeley, May 1994.
18. S.P. Singh and G.L. Fenves, *Earthquake Analysis and Response of Two-Level Viaducts*, Report No. UCB/EERC-94/11, Earthquake Engineering Research Center, University of California, Berkeley, October 1994.
19. R. DesRoches and G.L. Fenves, *Response of the Northwest Connector in the Landers and Big Bear Earthquakes*, Report No. UCB/EERC-94/12, Earthquake Engineering Research Center, University of California, Berkeley, December 1994.
20. A. Gilani, S.A. Mahin, G.L. Fenves, I.D. Aiken and J.W. Chavez, *Field Testing of Bridge Retrofit Concepts, Part 1 of 2: Field Testing and Dynamic Analysis of a Four-Span Seismically Isolated Viaduct in Walnut Creek, CA*, Report No. UCB/EERC-95/14, Earthquake Engineering Research Center, University of California, Berkeley, December 1995.
21. A. Gilani, J.W. Chavez and G.L. Fenves, *Field Testing of Bridge Design and Retrofit Concepts, Part 2 of 2: Experimental and Analytical Studies of the Mt. Diablo Boulevard*, Report No. UCB/EERC-96/02, Earthquake Engineering Research Center, University of California, Berkeley, June 1996.
22. A. Astaneh-Asl, J.F. Hall, G.L. Fenves et al., *Innovative Techniques of Response Control*, Report No. CKI-20, California Universities for Research in Earthquake Engineering, March 1998.
23. A. Gilani, J.W. Chavez, G.L. Fenves and A.S. Whittaker, *Seismic Evaluation of 196kV Porcelain Transformer Bushings*, Report No. PEER-1998/02, Pacific Earthquake Engineering Research Center, University of California, Berkeley, May 1998.
24. J.P. Stewart, R.B. Seed and G.L. Fenves, *Empirical Evaluation of Inertial Soil-Structure Interaction Effects*, Report No. PEER-98/07, Pacific Earthquake Engineering Research Center, University of California, Berkeley, November 1998.
25. G.L. Fenves and M. Ellery, *Behavior and Failure Analysis of a Multiple-Frame Highway Bridge in the 1994 Northridge Earthquake*, Report No. PEER-98/08, Pacific Earthquake Engineering Research Center, University of California, Berkeley, December 1998.
26. A. Gilani, A.S. Whittaker, G.L. Fenves and E. Fujisaki, *Seismic Evaluation of 550 kV Porcelain Transformer Bushings*, Report No. PEER-1999/14, Pacific Earthquake Engineering Research Center, University of California, Berkeley, October 1999.
27. A. Gilani, A.S. Whittaker, G.L. Fenves and E. Fujisaki, *Seismic Evaluation and Retrofit of 230-kV Porcelain Transformer Bushings*, Report No. PEER-1999/14, Pacific Earthquake Engineering Research Center, University of California, Berkeley, December 1999.
28. S. Mojtahedi and G.L. Fenves, *Effect of Contraction Joint Opening on Pacoima Dam in the 1994*

- Northridge Earthquake*, Data Utilization Report CSMIP/00-5, California Division of Mines and Geology, California Department of Conservation, March 2000.
29. A. Gilani, A.S. Whittaker, G.L. Fenves, C.-H. Chen, H. Ho and E. Fujisaki, *Seismic Evaluation and Analysis of 230-kV Disconnect Switches*, Report No. PEER-1999/14, Pacific Earthquake Engineering Research Center, University of California, Berkeley, July 2000.
 30. S. Mazzoni, G.L. Fenves and J.B. Smith, *Effect of Local Deformations on Lateral Response of Bridge Frames*, Final Report to California Department of Transportation, Contract No. 59A0201, April 2004.
 31. S.M. Takhirov, G.L. Fenves, E. Fujisaki and D. Clyde, *Ground Motions for Earthquake Simulator Qualification of Electrical Substation Equipment*, Report No. PEER-2004-07, Pacific Earthquake Engineering Research Center, University of California, Berkeley, January 2005.
 32. S.M. Takhirov, G.L. Fenves and E. Fujisaki, *Seismic Qualification and Fragility Testing of Line Break 550-kV Disconnect Switches*, Report No. PEER-2004-08, Pacific Earthquake Engineering Research Center, University of California, Berkeley, February 2005.
 33. D. Grant, G.L. Fenves and F. Auricchio, *Modelling and Analysis of High-damping Rubber Bearings for the Seismic Protection of Bridges*, Research Report No. ROSE-2005/01, European School for Advanced Studies in Reduction of Seismic Risk, Pavia, Italy, May 2005.
 34. S.H. Schellenberg, S.A. Mahin and G.L. Fenves, *Advanced Implementation of Hybrid Simulation*, Report No. PEER-2009/104, Pacific Earthquake Engineering Research Center, University of California, Berkeley, November 2009.

Conference and Symposium Proceedings

1. G. Serino and G.L. Fenves, "Soil-Structure Effects in Building Response," *Proceedings*, SMIP 89 Seminar, California Strong Motion Instrumentation Program, California Division of Mines and Geology, May 1989, pp. 11-1–11-10.
2. G.L. Fenves, "Evaluation of Lateral Force Procedures for Buildings," *Proceedings*, SMIP 90 Seminar, California Strong Motion Instrumentation Program, California Division of Mines and Geology, June 1990, pp. 6-1–6-10.
3. G.L. Fenves, F.C. Filippou and D.T. Sze, "Evaluation of the Dumbarton Bridge in the Loma Prieta Earthquake," *Proceedings*, First Annual Seismic Research Workshop, California Department of Transportation, December 1991, pp. 67–76.
4. G.L. Fenves and F.C. Filippou, "Nonlinear Static and Dynamics Analysis of Reinforced Concrete Members, Subassemblages and Structures," *Proceedings*, First Annual Seismic Research Workshop, California Department of Transportation, December 1991, pp. 195–202.
5. G.L. Fenves, "Earthquake Analysis and Response of Multi-span Bridges and Viaduct Structures," *Seismic Design and Retrofit of Bridges*, Earthquake Engineering Research Center, University of California, Berkeley, June 1992.
6. S.P. Singh and G.L. Fenves, "Earthquake Response of Multi-Span Freeway Structures," *Proceedings*, Second Annual Seismic Research Workshop, California Department of Transportation, March 1993.
7. R. DesRoches and G.L. Fenves, "Response of the Northwest Connector in the Landers and Big Bear Earthquakes," SMIP 94 Seminar, California Strong Motion Instrumentation Program, California Division of Mines and Geology, May 1994, pp. 61–74.
8. G.L. Fenves, "Nonlinear Dynamic Analysis of Earthquake Response of Bridges," *Seismic Design and Retrofitting of Reinforced Concrete Bridges*, *Proceedings*, Second International Workshop, Queenstown, New Zealand, August 1994, pp. 3–24.
9. G.L. Fenves and S.P. Singh, "Earthquake Response of Structure 'A' Using Nonlinear Dynamic Analysis," *Seismic Design and Retrofitting of Reinforced Concrete Bridges*, *Proceedings*, Second International Workshop, Queenstown, New Zealand, August 1994, pp. 701–724.

10. G.L. Fenves, "Seismic Evaluation of Concrete Dams Using Nonlinear Analysis," *Proceedings*, NSF Natural Hazard Mitigation Grantees Workshop, North Tahoe, California, April 1995.
11. G.L. Fenves and S. Mojtahedi, "Effect of Contraction Joint Opening on Pacoima Dam in the 1994 Northridge Earthquake," *Proceedings*, SMIP 95 Seminar, California Strong Motion Instrumentation Program, California Division of Mines and Geology, May 1995, pp. 57–68.
12. G.L. Fenves and P. Chung, "Effects of Pile Footings on Inelastic Earthquake Response of Bridge Columns," *Proceedings*, Twelfth U.S.-Japan Bridge Engineering Workshop, UJNR Panel on Wind and Seismic Effects, Buffalo, New York, October 1996, pp. 121–135.
13. R. DesRoches and G.L. Fenves, "Intermediate Hinge Restrainers for Bridges: Performance, Design, and Retrofit," *Proceedings*, Third U.S.-Japan Workshop on Seismic Retrofit of Bridges, Osaka, Japan, December 1996.
14. A. Gilani, S.A. Mahin, G.L. Fenves, J.W. Chavez and I. Aiken, "Field Testing of a Four-span Seismically Isolated Bridge," *Proceedings*, Fourth U.S.-Japan Workshop on Protective Systems for Bridges, Osaka, Japan, December 1996.
15. A.S. Whittaker, I. Aiken, P. Clark, G.L. Fenves, N. Makris and S.A. Mahin, "Testing of Protective Systems and Hardware for Bridge Applications," *Proceedings*, Fourth U.S.-Japan Workshop on Protective Systems for Bridges, Osaka, Japan, December 1996.
16. G.L. Fenves, "Utilization of Strong-Motion Data from Bridges and Dams," SMIP 97 Seminar, California Strong Motion Instrumentation Program, California Division of Mines and Geology, May 1997, pp. 111–127.
17. G.L. Fenves, W.-H. Huang, A.S. Whittaker, P. Clark and S.A. Mahin, "Modeling and Characterization of Seismic Isolation Bearings," *Proceedings*, U.S.-Italy Workshop on Seismic Protective Systems for Bridges, National Center for Earthquake Engineering, New York, New York, April 1998.
18. G.L. Fenves and M. Ellery, "Evaluation of the R14/I5 Separation and Overhead in the 1994 Northridge Earthquake," Fifth Caltrans Seismic Research Workshop, California Department of Transportation, June 1998.
19. G.L. Fenves, A.S. Whittaker, W.-H. Huang, P.W. Clark and S.A. Mahin, "Analysis and Testing of Seismically Isolated Bridges Under Bi-axial Excitation," Fifth Caltrans Seismic Research Workshop, California Department of Transportation, June 1998.
20. G.L. Fenves, A.S. Whittaker, W.-H. Huang, P.W. Clark and S.A. Mahin, "Analysis and Testing of Seismically Isolated Bridges Under Bi-axial excitation," Fifth Caltrans Seismic Research Workshop, Sacramento, June 1998.
21. J. Lee, F.C. Filippou and G.L. Fenves, "Simulation of Hysteretic Behavior of Reinforced Concrete Members," *Structural Engineering in the 21st Century*, Richard Avent, Editor, ASCE, 1999, pp. 199–202.
22. G.L. Fenves, "Instrumentation for Assessment of Earthquake Performance of Bridges and Dams," *Proceedings*, Instrumental Systems for Diagnostics of Seismic Response of Bridges and Dams, Recommended Guidelines, Report CP-2001/01, COSMOS, January 2001.
23. G.L. Fenves and S.A. Mahin, "Summary of Performance of Modern Bridges in the 1999 Chi-chi, Taiwan Earthquake," *Proceedings*, Instrumental Systems for Diagnostics of Seismic Response of Bridges and Dams, Recommended Guidelines, Report CP-2001/01, COSMOS, January 2001.
24. A.S. Whittaker, G.L. Fenves and A.J. Gilani, "Evaluation of seismic qualification procedures for high-voltage substation equipment," *Proceedings of the 2001 Structures Congress and Exposition*, ASCE, May 2001.

25. S. Mazzoni, J.B. Smith and G.L. Fenves, "Effects of local deformations on the seismic response of bridge structures," Sixth Caltrans Seismic Research Workshop, Sacramento, California, June 2001.
26. S. Mazzoni and G.L. Fenves "Flexibility of Beam-Column Connections in RC Frames—Joint Shear and Bar Elongation/Slip," *Proceedings*, ASCE Structures Congress, Seattle, May 2003.
27. M.H. Scott and G.L. Fenves, "A Krylov Subspace Accelerated Newton Algorithm," *Proceedings*, ASCE Structures Congress, Seattle, May 2003.
28. G.L. Fenves, "A Vision for Computational Simulation in Earthquake Engineering," *Proceedings*, NSF Workshop on Computational Simulation and Visualization Environment for NEES, Lawrence, Kansas, December 2003.
29. G.L. Fenves, "Needs for Collaborative Research Programs in Computational Simulation for Earthquake Engineering," *Proceedings*, Workshop on NEES/E-Defense Collaboration, National Science Foundation and NIED (Japan), April 2004.
30. S. Pakzad and G.L. Fenves, "Structural Health Monitoring Applications Using MEMS Sensor Networks," *Proceedings*, 4th International Workshop on Structural Control, Columbia University, June 2004.