

Lisa M. Shusto, P.E., LEED AP
Senior Managing Engineer

Professional Profile

Ms. Lisa M. Shusto is a Senior Managing Engineer in Exponent's Buildings and Structures practice. Ms. Shusto specializes in evaluating the performance and failure of structures and mechanical components, as well as defects in construction and deterioration of construction materials. She has applied her technical skills to a wide array of engineering applications and problem-solving, with specialized expertise in structural damage assessments and identification of the cause(s) of distress to single- and multi-family residential structures. Ms. Shusto's experience also includes structural safety and damage assessments of structures and equipment in the petroleum industry, dynamic steady state and transient analysis of mechanical components for prediction of failure modes, inspection and evaluation of deteriorated buried pipelines, and torsional analysis and testing of crankshafts.

In the area of seismic engineering, she has performed post-earthquake structural safety and damage assessments (site inspection, rapid visual assessment, structural analysis) and has provided repair/retrofit alternatives for structures damaged by the 1987 Whittier, 1989 Loma Prieta, 1994 Northridge, 1999 Koacelli (Turkey), 2001 Nisqually, 2003 Pasos Robles, 2007 Alum Rock, and 2008 Chino Hills earthquakes.

Ms. Shusto is often called upon to manage complex, multi-disciplinary failure investigations that require coordination of many consultants working on various aspects of the same technical issue. She has utilized this expertise to assist the legal and insurance communities on matters related to the World Trade Center collapse and class action litigations involving building components. Another aspect of Ms. Shusto's expertise is the development of investigation protocols, including technical peer review and management services, for insurance companies facing large numbers of claims following a catastrophe.

Academic Credentials and Professional Honors

M.S., Structural Engineering/Structural Mechanics, University of California, Berkeley, 1983
B.S., Civil Engineering, University of the Pacific, 1982

Licenses and Certifications

Registered Professional Civil Engineer, California, #C039917; Nevada, #017547, Texas, #106894
Registered Professional Engineer, Arkansas, #15072; Colorado, #41380; Kansas, #18748;
Missouri, #2005032844; New Jersey, #GE04718100; New York, #085275

U.S. Green Building Council, Leadership in Energy and Environmental Design Accredited Professional, LEED AP, 2009

Post-Disaster Safety Assessment Program, Damage Assessment Volunteer, California Office of Emergency Services #SAP10011 (Certified Program Evaluator)

Publications

Wolf J, Shusto L. Woodframe project case studies. The CUREE-Caltech Woodframe Project Publication No. W-04, case study 7, 2001.

Osteraas J, Shusto L, McDonald B. Earthquake damage assessment and repair protocols. pp. 209–218. In: Forensic Engineering: Proceedings, Second Congress. American Society of Civil Engineers, San Juan, Puerto Rico, May 21–23, 2000.

Osteraas J, Shusto L, McDonald B. Engineering involvement in post-Northridge damage assessment and repair of wood-frame dwellings. Paper Number 2593. 12th World Conference on Earthquake Engineering, Auckland, New Zealand, January 30–February 4, 2000.

Johnston P, Shusto L, McDonald B. Correlating torsional response to engine performance parameters. International Off-Highway and Power Plant Congress and Exposition, Society of Automotive Engineering, Milwaukee, WI, September 1993.

Franke RS, Jones DR, Roberts BL, Shusto LM. Analysis of composite material containing defects. Vol. 10, pp. 320–329. In: Composite Materials Testing and Design. Grimes GC (ed), ASTM STP1120, American Society for Testing and Materials, Philadelphia, PA, 1992.

Johnston PR, Shusto L, Swanger LA. Transient analysis of diesel engine crankshaft torsional vibrations. 9th International Conference on Structural Mechanics in Reactor Technology, Lausanne, Switzerland, August 1987.

Johnston PR, Shusto L. Numerical modeling of pendulum dampers in torsional systems. Paper No. 861227, International Off-Highway Power Plant Congress and Exposition, Society of Automotive Engineers, Milwaukee, WI, September 1986.

Johnston PR, Shusto L. Analysis of diesel engine crankshaft torsional vibrations. Society of Automotive Engineers Special Publications on Diesel Engines, November 1986.

Presentations

Shusto L. Engineering issues for post-earthquake damage assessment. Co-instructor, Training for Insurance Adjusters based on technical requirements of California Department of Insurance, California Code of Regulations, 2004–2008.

Shusto L. Post-disaster safety assessment program training. Speaker and Co-Instructor, Disaster Emergency Services Committee of Structural Engineers Association of Southern California, various engagements 2003–2008, most recent May 2008.

Shusto L. World Trade Center: Process and results of a post failure analysis. Stanford University Department of Structural Engineering and Geomechanics, January 15, 2003.

Shusto L. Koacelli, Turkey earthquake reconnaissance. ASCE Forensic Technical Group, 1999.

Shusto L. The art of failures. University of the Pacific, Engineering Day Guest Lecturer, 1991, 1993, 1994.

Shusto L. Structural failures—Case studies. University of the Pacific, Senior Synthesis Class Guest Lecturer, March 1989.

Shusto L, Eason E. Failure analysis—Case studies. University of California, Berkley, American Society of Civil Engineers Student Chapter Meeting, Fall 1983.

Prior Experience

Principal Engineer and Human Resource Manager, Hopper Engineering Associates, 2005–2009
Principal Engineer, Exponent Failure Analysis Associates, 1982–2005

Professional Affiliations

- American Society of Civil Engineers (member)
- Structural Engineering Association of Southern California (member)
- Post-Disaster Safety Assessment Program, California Office of Emergency Services #SAP10011 (Certified Program Evaluator)

Structural Engineers Association of California OES Safety Assessment Program, Secondary Disaster Coordinator & Contact, current; American Society of Civil Engineers, Los Angeles Forensic Technical Group Chairperson, 2001–2002; Los Angeles Forensic Technical Group, Program Chairperson, 1998–1999 (responsible for developing and implementing educational training program titled “Lessons Learned in Forensic Engineering”); Structural Engineers Association of California (State committee chair), Disaster Emergency Services, 1998–1999; Structural Engineers Association of Northern California (committee chair); Disaster Emergency Services, 1994–1995; SEAONC Earthquake Damage Assessment Training Seminar (chairperson)