

**Patxi Uriz, Ph.D., P.E.**  
**Managing Engineer**

**Professional Profile**

Dr. Uriz specializes in earthquake engineering. He has extensive experience with non-linear analysis, and performance-based design and assessment of steel, reinforced concrete (post-tensioned and conventionally reinforced), and wood frame structures and expertise in the design, instrumentation, and testing of large scale laboratory experiments. Dr. Uriz has also served as a Lecturer for graduate courses on the design and construction integration of steel structures, and advanced structural analysis for the department of Civil and Environmental Engineering at Stanford University.

Prior to joining Exponent, Dr. Uriz was a researcher at the University of California at Berkeley, where he focused on performance based seismic design and analysis of concentrically braced steel frame structures, studying the potential hazard of both buckling restrained brace frames, and conventionally buckling steel frames when subjected to earthquake loading.

**Academic Credentials and Professional Honors**

Ph.D., Civil and Environmental Engineering, University of California, Berkeley, 2005  
M.S., Civil and Environmental Engineering, University of California, Berkeley, 2001  
B.S., Civil and Environmental Engineering, University of California, Berkeley, 1999

National Science Foundation Summer internship award, National Center for Research in Earthquake Engineering, 2003; Natural Hazard Mitigation Program in Japan, Summer 2003; Clement T. Wiskocil Award, 1999; PEER summer fellowship, Summer 1998

**Licenses and Certifications**

Registered Professional Engineer, California, #C70663

## **Publications**

Uriz P (co-author). Concentric braced frames. Seismic Design Recommendations of the SEAOC Seismology Committee, Structural Engineers Association of California (SEAOC), August 2008.

Uriz P, Mahin SA. Toward earthquake-resistant design of concentrically braced steel-frame structures. Pacific Earthquake Engineering Research Center Report No. PEER 2008/08.

Uriz P, Filippou FC, Mahin SA. Model for cycle inelastic buckling of steel braces. *Journal of Structural Engineering* 2007; 134(4):619–628.

Uriz P, Mahin SA, Huang Y, Chen CH. Bracing for the future: What we know about concentrically braced steel frames. Proceedings, Structural Engineers Association of California, 2007 Annual Convention, Squaw Creek, CA, 2007.

Moncarz P, Uriz P. Impact of change in use or conditions of a structure on its safety and performance. Proceedings, Awarie Budowlane, 23<sup>rd</sup> Engineering Conference on Construction Failures, Szczecin-Miedzyzdroje, Poland, May 23–25, 2007. (In Polish).

Uriz P. Towards earthquake resistant design of concentrically braced steel frames. Doctoral Dissertation, Structural Engineering, Mechanics and Materials, Department of Civil and Environmental Engineering, University of California, Berkeley, CA, Fall 2005.

Uriz P, Mahin SA. Seismic vulnerability assessment of concentrically braced steel frames. *International Journal of Steel Structures* 2005; 4(4):239–248.

Mahin SA, Uriz P. A framework for performance-based design of braced steel frame buildings. International Conference in Commemoration of the 5<sup>th</sup> Anniversary of the 1999 Chi-Chi Earthquake, Howard International House, Taipei, Taiwan, September 8–9, 2004.

Mahin SA, Uriz P. Performance based seismic design of steel braced frame buildings. 3<sup>rd</sup> International Conference on Earthquake Engineering, University of Nanjing, Nanjing, China, October 18–20, 2004.

Uriz P, Mahin SA. Physical modeling and seismic vulnerability assessment. Proceedings, Structural Engineers Association of California 2004 Annual Convention, Monterrey, CA, August 2004.

Uriz P, Mahin SA. Seismic performance assessment of concentrically braced steel frames. Proceedings, 13<sup>th</sup> World Conference on Earthquake Engineering, Vancouver, British Columbia, Canada, August 2004.

Mahin SA, Aiken, ID, Uriz P, Field C, Ko E. Seismic performance of buckling restrained brace frame systems. 13<sup>th</sup> World Conference on Earthquake Engineering, Vancouver, B.C., Canada, 2004.

Uriz P, Dreger D. Comparison of amplitude scaling vs. source scaling for use in incremental dynamic analysis. Proceedings, SEAOC 2003 Convention, Squaw Creek, CA, September 2003.

Uriz P, Mahin SA. Seismic vulnerability of special concentrically braced steel frames. Proceedings, SEAOC 2003 Convention, Squaw Creek, CA, September 2003.

Mahin SA, Aiken ID, Uriz P. Large-scale testing of buckling restrained braced frames. Proceedings, Japan Passive Control Symposium, Tokyo Institute of Technology, Yokohama, Japan, December 2002.

Uriz P, Whittaker AS. Retrofit of pre-Northridge steel moment-resisting frames using fluid viscous dampers. The Structural Design of Tall Buildings Special Issue: Damping and Tall Buildings 2001 Dec; 10(5):371–390, December 2001.

### **Presentations**

Uriz P. Brace yourself for the next earthquake: What we understand about earthquake behavior of braced frames. Presentation at the SEAONC South Bay Dinner Meeting, February 17, 2009.

Uriz P. Update on braced frame design issues. Structural Engineers Association of Southern California on Steel Issues, March 19, 2005.

Uriz P. Modeling instability of beam-column elements. Presentation to the OpenSees workshop, Richmond, CA, August 16, 2006.

Uriz P. Performance of brace frame structures. Presentation to Rutherford and Chekene structural engineers in honor of 100-year anniversary of 1906 Earthquake.

### **Reviewer**

- Peer Reviewer, *Structural and Multidisciplinary Optimization*
- Peer Reviewer, *Journal of Structural Engineering, Engineering Structures*
- Peer Reviewer, *American Society of Civil Engineers, Journal of Structural Engineering*
- Reviewer, National Canadian Research Council research proposal

### **Professional Affiliations**

- Structural Engineers Association of Northern California (Chair of the steel seismology subcommittee)
- Earthquake Engineering Research Institute (member)
- Chi-Epsilon (member)