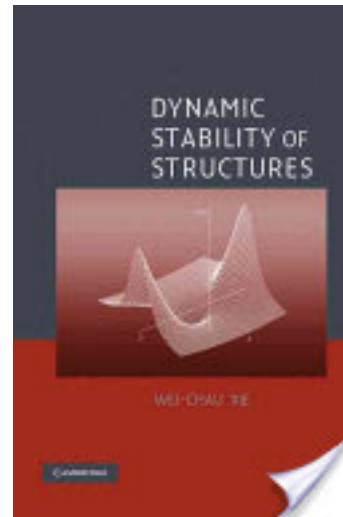




**Professor Wei-Chau Xie**



Wei-Chau Xie, *Dynamic Stability of Structures*, Cambridge University Press, June 2006, 435 pages

See:

<http://www.civil.uwaterloo.ca/xie/>

<https://www.amazon.com/Wei-Chau-Xie/e/B001HOBK16>

<http://www.worldcat.org/identities/lccn-no2001-693/>

[http://www.goodreads.com/author/show/1086450.Wei\\_Chau\\_Xie](http://www.goodreads.com/author/show/1086450.Wei_Chau_Xie)

Department of Civil & Environmental Engineering  
University of Waterloo, Ontario, Canada

### **Research Interests:**

Seismic risk analysis and design of engineering structures, such as nuclear power plants; Reliability and safety analysis of engineering systems; Dynamic stability of structures, structural dynamics and random vibration, nonlinear dynamics, and stochastic mechanics. The applications of particular interest are those pertaining to the reliability and safety analysis and design of nuclear power plants, on-shore and off-shore structures, tall buildings that are subjected to loadings caused by earthquakes, ocean waves and wind turbulence. The objective of research is to have a better understanding of the dynamic and stability behaviour of structures, and to provide methods for the reliability and safety analysis and design of structures, machinery, and engineering systems in general.

### **Awards:**

Distinguished Teacher Award the highest formal recognition given by the University of Waterloo for a superior record of continued excellence in teaching, University of Waterloo, 2007.

Teaching Excellence Award in recognition of an exemplary record of outstanding teaching, concern for students and a commitment to the development and enrichment of engineering education at Waterloo, Faculty of Engineering, University of Waterloo, 2001.

Distinguished Performance Award for outstanding contribution in teaching, scholarship and service during 1999

Faculty of Engineering, 2000; for outstanding contribution in teaching, scholarship and service during 2005

Faculty of Engineering, 2006; for outstanding contribution in teaching, scholarship and service during 2012

Faculty of Engineering, 2013.

Natural Sciences and Engineering Research Council of Canada (NSERC) Doctoral Prize for outstanding doctoral research and potential for a research career, 1992.

University of Waterloo Alumni Association Gold Medal for outstanding achievement in graduate studies at the Ph.D. level, 1990.

### **Selected Publications:**

#### **Books:**

Wei-Chau Xie, *Dynamic Stability of Structures*, Cambridge University Press, June 2006, 435 pages

M. Pandey, W.-C. Xie and L. Xu (eds.) *Solid Mechanics and Its Applications: Advances in Engineering Structures, Mechanics and Construction*. Springer, Dordrecht, 2006

#### **Journal Articles:**

Ariaratnam, S. T.; Xie, W. C.: Dynamic snap buckling of structures under stochastic loads. In: Ariaratnam, S. T.; Schueller, G. I.; Elishakoff, I. (eds.) *Stochastic structural dynamics*, pp. 1–20, New York: Elsevier 1988

Ariaratnam, S. T. and Xie, W.-C., ‘Almost-sure stochastic stability of coupled nonlinear oscillators’, *International Journal of Non-Linear Mechanics* 29(2), 1994, 197–204.

S.T. Ariaratnam and Wei-Chau Xie, “Dynamic buckling of shallow curved structures under stochastic loads”, *Nonlinear Dynamics*, Vol. 8, No. 1, pp 179-195, July 1995

Xie W-C. Buckling mode localization in nonhomogeneous beams on elastic foundations. *Chaos Solitons Fractals* 1997;8(3):411–31.

Xie W-C, Ibrahim A. Buckling mode localization in rib-stiffened plates with misplaced stiffeners – a finite strip approach. *Chaos Solitons Fractals* 2000;11(10):1543–58.