



TEXAS TECH UNIVERSITY
National Wind Institute

Wednesday, March 9, 2016
3:30 p.m. to 4:30 p.m.
Experimental Science Building 120
Reception to follow

The McDonald-Mehta Lecture Series Presents:
Seismic Isolation of Structures, Components and Systems
in Safety-Related Nuclear Facilities

Andrew S. Whittaker, Ph.D.

Professor and Chair, Department of Civil, Structural and Environmental Engineering
Director, Multidisciplinary Center for Earthquake Engineering Research
University at Buffalo

Abstract: Seismic isolation is a relatively mature technology that is suitable for the protection of structures, systems and components in safety-related nuclear facilities. The presentation will describe recent developments in the United States to implement isolation in nuclear facilities, including the writing of risk-oriented standards for analysis and design of isolated nuclear structures, and the development, verification and validation of advanced numerical models for elastomeric and sliding isolators, and their implementation in OpenSees and ABAQUS. Performance goals for isolated nuclear facilities will be identified and discussed, and differences with traditional practice for isolated buildings and bridges will be highlighted.

Short Biography of Speaker: Dr. Andrew Whittaker is Professor and Chair in the Department of Civil, Structural and Environmental Engineering at the University at Buffalo, and serves as the Director of MCEER. He is a registered civil and structural engineer in the State of California. Whittaker served as the Vice-President and President of the Consortium of Universities for Research in Earthquake Engineering (www.curee.org) from 2003 to 2011, and on the Board of Directors of the Earthquake Engineering Research Institute (www.eeri.org) and the World Seismic Safety Initiative from 2008 to 2010. Currently, he is a member of the Advisory Board for the Southern California Earthquake Center. Whittaker made significant contributions to the first generation of tools for performance based earthquake engineering (FEMA 273/274, 1992-1997) and led the structural engineering team that developed the second generation of these tools (FEMA P58, 2000-2013). Whittaker serves on a number of national committees including ASCE 4, ASCE 7, and ASCE 43, and ACI 349. His research interests are broad and include earthquake and blast engineering of buildings, long-span bridges and nuclear structures. The US National Science Foundation, US Department of Energy, US Nuclear Regulatory Commission, US Federal Highway Administration, and Canadian Nuclear Safety Commission fund his research. He consults to federal agencies, regulators, consultancies, contractors, and utilities in the United States, Canada, United Kingdom, Europe and Asia.