



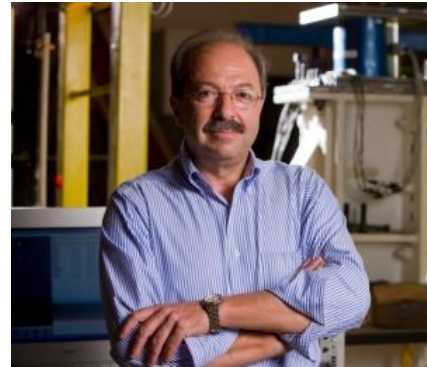
School of Engineering and Applied Sciences

University at Buffalo *The State University of New York*

SUNY Distinguished Professor Lecture Series

HISTORY OF SEISMIC PROTECTIVE SYSTEMS

Michael C. Constantinou
SUNY Distinguished Professor
Civil, Structural and
Environmental Engineering
University at Buffalo, SUNY



Friday, April 17, 10:00am, Agrusa Auditorium, 101 Davis Hall

Abstract

Seismic protective systems are technologies for mitigating the damaging effects of earthquakes on structures through the introduction of flexibility and/or energy absorption capability within the structural system. Adding these systems to new or existing construction deflects earthquake-induced energy away from the structure and dissipates part of the energy in elements not forming part of the gravity framing system. This construction technique limits or eliminates inelastic action and damage to the gravity-load-resisting system, reduces foundation design forces and, under certain conditions, reduces accelerations and protects non-structural systems.

Seismic protective systems appear to have a recent origin as they employ modern materials and hardware, and apply novel concepts in counteracting the effects of earthquakes on structures. Yet, this is a technology with about 2500-year history. This presentation traces efforts to develop such systems from the simple but effective systems in antiquity to the first documented modern system in 1870 to the plethora of today's applications. It will conclude with a brief presentation of new concepts now evolving at the University at Buffalo.

Biosketch

Michael C. Constantinou is SUNY Distinguished Professor in the Department of Civil, Structural and Environmental Engineering at the University at Buffalo, State University of New York. His research interests concentrate on seismic protective systems on which he authored or co-authored about 300 papers, books and book chapters and reports. He received a 1988 Presidential Investigator Award and a 1991 Best Paper Award from ACI, was co-recipient of the 2005 ASCE CERF Pankow Award for Innovation, and was co-recipient of three professional practice awards: the 1994 US General Services Administration Design Award for the structural strengthening of the US Court of Appeals Building in San Francisco, the 2002 Diamond Award and the 2002 Grand Award of the American Council of Engineering Companies, both for the retrofit design of the Ataturk International Airport in Istanbul, Turkey. He received the 2015 ASCE Moisseiff Award together with colleague Professor A.M. Reinhorn and recent doctoral graduate A. Sarlis. He has consulted extensively on the analysis, design and testing of structures with seismic protective systems for engineers and owners in Azerbaijan, Canada, Chile, China, Cyprus, Ecuador, Greece, Italy, Korea, Mexico, Panama, Russia, Switzerland, Turkey, UK and US.

The SUNY Distinguished Professor Lecture is part of the
Annual Graduate Student Association Conference on Career Perspectives and Networking

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