

“T.T. Soong Student Lecture Series” University at Buffalo

“2012 EERI Distinguished Lecture Award”:

Thomas D. O’Rourke, Ph.D.

Thomas R. Briggs Professor of Engineering, Cornell University

“The New Normal for Natural Disasters”

ABSTRACT

The effects of the Tohoku Earthquake and Tsunami, Canterbury Earthquake Sequence, and Hurricane Katrina are discussed with respect to their impact on regional and international economics, national practices for security and recovery, and worldwide energy policy. The severity and far ranging consequences of these extreme events have established in effect a new normal for natural disasters. The lecture explains why these events require a fundamental re-thinking of the way we evaluate the risks of extreme events, as well as define and protect critical infrastructure. Examples of critical infrastructure at risk are discussed with respect to earthquake effects on the water supply of Southern California and hurricane effects on New York City. Selective lessons learned from recent earthquakes are described with respect to mitigation measures. To address the need for protection against rare, high consequence events with limited financial resources, a strategy for improving infrastructure resilience is proposed.

DATE: Thursday, October 11 2012

TIME: 5:00 P.M.

LOCATION: 140 KETTER HALL, NORTH CAMPUS, UNIVERSITY AT BUFFALO

WEBCAST URL: [HTTP://CIVIL.ENG.BUFFALO.EDU/WEBCAST/](http://civil.eng.buffalo.edu/webcast/)

TECHNICAL DIFFICULTIES: SEESLWEBCAST@BUFFALO.EDU

ORGANIZED BY: *Student Chapter of EERI at UB, CSEE-GSA, MCEER, Dept. of CSEE and NEES*

Refreshments will be served!!!

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Dr. Thomas D. O’Rourke is the Thomas R. Briggs Professor of Engineering in the School of Civil and Environmental Engineering at Cornell University. He is a member of the US National Academy of Engineering and a Fellow of American Association for the Advancement of Science. Dr. O’Rourke received a number of distinctions for his research and teaching, some of which are ASTM C.A. Hogentogler Award, ASCE Collingwood, Huber Research, C. Martin Duke, Stephen D. Bechtel Pipeline Engineering, and Ralph B. Peck Awards, and the British ICE Trevithick Prize. Dr. O’Rourke gave the 2009 Rankine Lecture. Dr. O’Rourke served as President of the Earthquake Engineering Research Institute. Dr. O’Rourke authored or co-authored over 350 technical publications. Dr. O’Rourke’s research interests cover geotechnical engineering, earthquake engineering, underground construction technologies, engineering for large, geographically distributed systems, and geographic information technologies and database management. Dr. O’Rourke served on many national advisory committees, including the NIST Advisory Committee for Earthquake Hazards Reduction, NAE Committee on New Orleans Regional Hurricane Protection Projects, and NSF Engineering Advisory Committee. Dr. O’Rourke has served as chair or member of the consulting boards of many large civil construction projects, as well as the peer reviews for projects associated with highway, rapid transit, water supply, and energy distribution systems.