



Tuesday, September 11, 2012 (2:30-3:30 pm)

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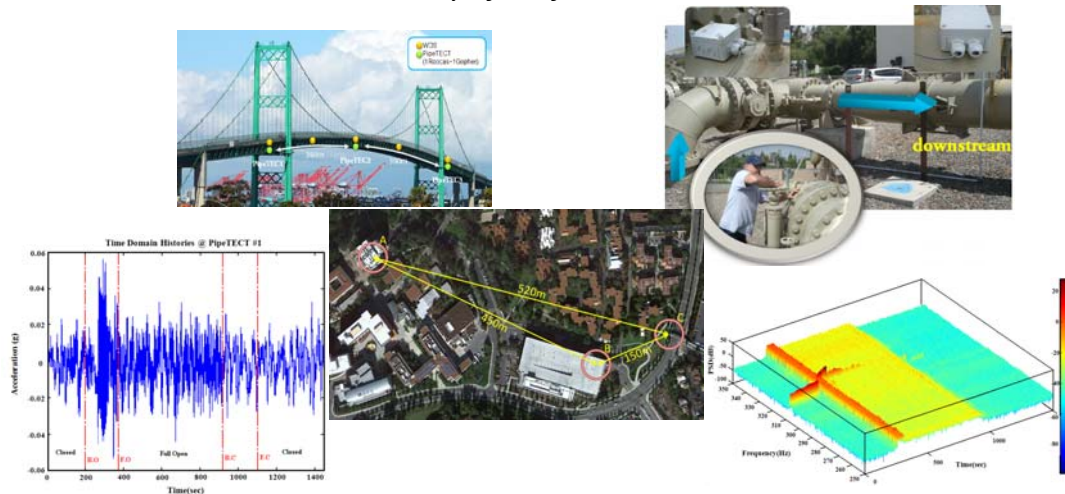
REMOTE MONITORING OF CIVIL INFRASTRUCTURE SYSTEMS

Prof. Masanobu Shinozuka

Distinguished Professor

Department of Civil and Environmental Engineering

University of California, Irvine



This seminar addresses the emerging technology here referred to as “remote structural monitoring and control in real time”. The technology can improve resilience and sustainability of large-scale complex infrastructure systems under natural and manmade hazards. In this context, the seminar attempts to initiate and promote the effort to expand the existing concept of structural monitoring into continuous, if not permanent, system performance monitoring and control, remotely and in real time. This is done in the spirit of advancing the existing SCADA system (Supervisory Control and Data Acquisition system), widely deployed by utility providers for steady operations of their systems, into the next generation of SCADA system. For this reason, the seminar first deals with the next generation SCADA for water distribution networks as a test-bed and then it presents examples involving bridges and other systems.



Dr. Shinozuka's research focuses on continuum mechanics, micromechanics, stochastic processes and fields, structural dynamics and control, and earthquake and wind engineering. He also studies systems engineering, with an emphasis on structural and system reliability; risk assessment of lifeline systems, including water, electrical power and transportation networks; and analysis of the socio-economic impacts of natural disasters. He also is interested in advanced technologies, specifically remote sensing and geographic information systems (GIS) for disaster assessment and mitigation, smart materials and structures, and nondestructive evaluation.

The applications for his work are in earthquake engineering in buildings, bridges, lifeline and environmental systems. His work highlights the multidisciplinary aspects of infrastructure system problems.

Dr. Shinozuka is a member of the National Academy of Engineering.