



POLITECNICO DI TORINO



EARTHQUAKE ENGINEERING
RESEARCH INSTITUTE
STUDENT CHAPTER
POLITECNICO DI TORINO

IMPROVING COMMUNITY RESILIENCE THROUGH EMERGING SYSTEMS IN NORTH AMERICA SEISMIC DESIGN

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Abstract

The objective of the 10-hours course is to provide a brief overview on the behavior and design of three types of structural systems that are being increasingly used in North America, namely: (1) Steel Plate Shear Walls, (2) Buckling Restrained Braces, (3) seismic behavior of steel bridges, with emphasis on ductile diaphragms

BIOGRAPHICAL SKETCH

Michel Bruneau, Ph.D., P.Eng., has conducted extensive research on the evaluation and retrofit of existing bridges and buildings subjected to large destructive forces up to collapse. This research has encompassed the development and large-scale experimental validation of various metallic energy-dissipating design concepts to enhance the resilience of structures against extreme events. This work has contributed to the adoption of special design requirements for ductile steel walls, ductile bridge diaphragms, tubular eccentrically braced frames, structural fuses, and controlled-rocking piers. Recent focus has been on the development of multi-hazard resistant design concepts capable of simultaneously providing an adequate level of protection against collapse under both seismic and blast loading. Dr. Bruneau has conducted numerous reconnaissance visits to disaster stricken areas, and is a member of many professional and technical code-writing committees. He also served as Director (2003-2008) and Deputy Director (1998-2003) of the Multidisciplinary Center for Earthquake Engineering Research, a National Center of Excellence funded by the National Science Foundation, the Federal Highway Administration, and many others. His past service to the profession include participation in many expert peer review panels, project advisory committees, special project design teams, conference steering and advisory committees, and journal editorial boards. Prior to his appointment in academia, he practiced as a consultant for the firms of Morrison Hershfield Limited (Toronto, Canada) and Buckland and Taylor (Vancouver, Canada).

DATE: Monday, MARCH 14, 2011 **10.00 - 13.00**

Tuesday, MARCH 15, 2011 **8.30 - 11.30**

Wednesday, MARCH 16, 2011 **14.30 – 17.30**

LOCATION: AULA ALBENGA, (Second floor of DISTR), Politecnico di Torino
Faculty, graduate students, and all others are invited to attend.

Gian Paolo Cimellaro

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