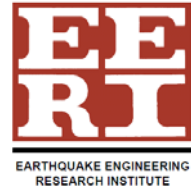# POLITECNICO DI TORINO

**Dipartimento di Ingegneria Strutturale e Geotecnica**

## NONLINEAR ANALYSIS METHODS FOR THE SEISMIC RESPONSE EVALUATION OF STRUCTURES

Prof. FILIP C. FILIPPOU

University of California, Berkeley

Berkeley, California

94720-1710, USA

### Abstract

Nonlinear analysis methods have been introduced in seismic design codes of many countries. It is expected that such methods will be in widespread use in the near future either in the form of static push-over procedures or even in the form of nonlinear time history procedures. The talk will address the development of a family of models for the simulation of the nonlinear hysteretic behavior of structures and offer a critical appraisal of their benefits and limitations. These models are deployed in a general computational framework that permits the seismic response evaluation of structure-foundation systems.

BIOGRAPHICAL SKETCH

Filip C. Filippou is professor of structural analysis in the Department of Civil and Environmental Engineering at the University of California, Berkeley.  He received the Ph.D. from the same University in 1983.  He has conducted research in: Nonlinear analysis of structures, Finite Element Analysis; Constitutive Models of Materials; Design, Analysis and Behavior of Structures under Seismic Excitations; reinforced and prestressed concrete.  Among professor Filippou`` notable awards are the Roy W. Carlson Distinguished Professor of Civil Engineering 2004-2007,  the Walter L. Huber Civil Engineering Research Prize in 1994 and Alfred Noble Prize, American Society of Civil Engineers in 1988.

**DATE: Thursday, MARCH 19, 2008**

**TIME: 2:30 PM**
**LOCATION: AULA ALBENGA 2nd floor, Department of Structural and Geotechnical Engineering (DISTR), Polytechnic of Torino**
Faculty, graduate students, and all others are invited to attend.

Gian Paolo Cimellaro