



UNIVERSITÀ
DEGLI STUDI
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Dipartimento di
Ingegneria Civile,
Edile-Architettura
e Ambientale

DIPARTIMENTO
DI ECCELLENZA
— MUR —
2023-2027

Ph.D.ICEAA

**Ph.D. Program in Civil, Building Construction and
Environmental Engineering**

Coordinator: Prof. Marcello Di Risio

Findings from Recent Earthquakes

Seminar series

Monday, March 25th, 2024

12:30 am to 1:30 pm (GMT+1)

Room B09 - Online seminar at room br2yuo6

**The earthquakes in Turkey (6 February
2023) and Japan (1 January 2024):
Seismology, recorded ground motions,
geotechnical aspects**

Prof. George Gazetas

National Technical University of Athens

Abstract

The two recent earthquakes, of magnitudes 7.8 (Turkey) and 7.6 (Japan), caused enormous structural and geotechnical damage, primarily near the respective causative Faults. A huge (by world standards) number of accelerograms were recorded on top of, or adjacent to, the two Faults. The lecture will introduce elements of seismology of the two events, and will try to relate the evolution in time and space of the rupture process with the intensity, duration, and frequency characteristics of the recorded motions. Accelerations higher than 1 g, recorded in about 10 sites in Turkey and Japan, will be studied and their potential for destruction will be explored. Geotechnical-type failures, such as tilting and settling of buildings due to exceedance of bearing capacity, liquefaction and settlement, lateral spreading, and fault emergence on the ground surface will be illustrated.



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About the Speaker



George Gazetas is Emeritus Professor of Geotechnical Engineering at the National Technical University of Athens, following an academic career in the US, where he taught at SUNY-Buffalo, Rensselaer (RPI), and Case Western Reserve University.

His main research interests have focused on the dynamic response of footings, piles and caissons; the seismic response of earth dams

and quay-walls; soil amplification of seismic waves; and soil–structure interaction problems.

Much of his research has been inspired by observations after destructive earthquakes. An active writer and teacher, he has been a consultant or referee on a variety of (mainly dynamic) geotechnical problems. Recipient of several awards for his research, he has delivered some prestigious lectures including the “Coulomb”, “Ishihara”, “Keneth Lee”, and “Michele Maugeri” Lectures, In 2015 he was awarded the Excellence in University Teaching Prize in Greece. He was honored as the 59th Rankine Lecturer, 2019, in London, and as a GeoLegend by ASCE’s Geotechnical Institute in the GeoStrata magazine, 2022.

#FREQs_seminar



For any inquiries, please email the Seminar Coordinator at anna.chiaradonna1@univaq.it