ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ
ΠΟΛΥΤΕΧΝΙΚΗ ΣΧΟΛΗ - ΤΜΗΜΑ ΠΟΛΙΤΙΚΩΝ ΜΗΧΑΝΙΚΩΝ
ΣΕΙΡΑ ΕΠΙΣΤΗΜΟΝΙΚΩΝ ΔΙΑΛΕΞΕΩΝ
ΑΚΑΔΗΜΑΪΚΟΥ ΕΤΟΥΣ 2024-2025

Key aspects of liquefaction in alluvial gravels and gravel reclamation – insights from recent New Zealand earthquakes

Professor Gabriele Chiaro
Full Professor of Geotechnical Engineering
Department of Civil and Natural Resources Engineering
University of Canterbury, New Zealand

Τετάρτη **19/3/2025**, Ώρα: **12:00**
Αίθουσα Α2

Περίληψη: At least 32 case histories worldwide have indicated that large-magnitude earthquakes can trigger liquefaction in gravelly soils, resulting in severe damage to the natural and build environment. However, the evaluation of the liquefaction potential of gravelly soils remains to be a major challenge due to the many factors affecting it, e.g. soil density and packing state, gravel content, fabric/structure, among others. In this seminar some of the key findings from ongoing field and laboratory investigations, conducted at the University of Canterbury, New Zealand, which is aimed at providing useful insights on this critical topic, will be presented and discussed, with special focus on natural alluvial gravels and port reclamation gravel fills.

Σύντομο Βιογραφικό: Gabriele Chiaro is Full Professor of Geotechnical Engineering in the Department of Civil and Natural Resources Engineering, University of Canterbury, New Zealand. His research focuses on "Geotechnical Engineering for Resilience and Sustainability" with special interests on earthquake geotechnical engineering and related problems, geo-disaster risk assessment and mitigation, experimental geotechnics, GSI systems for seismic-resilient structures and computational geotechnics (constitutive, DEM and FEM modelling). He holds a BEng and MEng degree in civil engineering (University of Cassino and Southern Lazio, Italy), and a PhD degree in geotechnical earthquake engineering (University of Tokyo, Japan). His research career involves 17 years of work in the academy, including 5 years in Japan, 3 years in Australia and 9 years in New Zealand. His research has been sponsored through competitive grant awards from a diverse range of funding agencies, including EQC, MBIE (Smart Ideas Endeavour Fund), QuakeCoRE, DEVORA, JSPS and JST. To date, he has secured over NZ$ 3 million in external research funds (of which NZ$ 2+ million as a primary investigator). He has authored or co-authored over 170 technical publications. He has received many honours, including the JGS Best Paper Award (2022), IABSE Outstanding Scientific Paper Award (2021), NZSEE Otto Glogau Award (2020), and JSPS Research Fellowship (2014). Gabriele served as the Team Leader of the 2016 NZSEE “Learning from Earthquake” Mission in Kumamoto, Japan, and Team Co-Leader of the 2015 JGS/JSCE “Learning from Earthquake” Mission in Nepal. Currently, he is representing the New Zealand Geotechnical Society in the ISSMGE AsRTC1 "Geotechnical Mitigation and Adaptation to Climate Change-induced Geo-disasters in Asia-Pacific Regions".