



UNIVERSITÀ DEGLI STUDI DI CATANIA

DIPARTIMENTO DI INGEGNERIA CIVILE E ARCHITETTURA

Cittadella Universitaria, Via Santa Sofia 64, Catania



Corso di Laurea in *Ingegneria Civile, Ambientale e Gestionale*
Corso di Laurea Magistrale in *Ingegneria Civile Strutturale e Geotecnica*
Dottorato di Ricerca in *Valutazione e Mitigazione dei rischi urbani e territoriali*

Venerdì 14 marzo 2025 ore 9:00

Aula Magna Oliveri, Edificio 4, Cittadella Universitaria



Key aspects of liquefaction in gravelly soils - insights from recent New Zealand earthquakes

Relatore: **Prof. Gabriele Chiaro**

Ordinario di Ingegneria Geotecnica
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Recent case histories in New Zealand have indicated that large-magnitude earthquakes can trigger liquefaction in gravelly soils, resulting in severe damage to the natural and built environment. 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 an 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. Examples of ground improvement techniques implemented in New Zealand to mitigate liquefaction will be also described.

BIOGRAPHY:

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.

Saluti

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