

## **POLITECNICO DI TORINO**



## LIQUEFACTION INDUCED DAMAGE TO THE BUILT ENVIRONMENT DURING THE CANTERBURY EARTHQUAKE SERIES

## LIAM WOTHERSPOON Research Fellow The University of Auckland Department of Civil and Environmental Engineering, Auckland, New Zealand

## **Abstract**

The city of Christchurch and the surrounding towns in the Canterbury region of New Zealand suffered significant damage during the 2010-2011 Canterbury earthquake series. The most damaging was the Mw 6.2 earthquake on the 22 February 2011, resulting in 185 fatalities and severe damage to buildings and infrastructure. A major factor in this damage was the severity and spacial extent of liquefaction and the progression of damage as a result of repeated liquefaction in many areas. This presentation will provide an overview of the liquefaction-induced damage to the region during the Canterbury earthquake series, with a focus on the performance of lifelines and the interdependency of these lifeline systems.



**BIOGRAPHICAL SKETCH** 

Liam Wotherspoon is the Earthquake Commission Research Fellow at the University of Auckland, New Zealand. He completed his PhD jointly at the University of Auckland and Iowa State University on a Fulbright Award. His research focuses on both structural and geotechnical aspects of earthquake engineering. He is currently involved in consulting and research in the UK on the GCG (Geotechnical Consulting Group) Fellowship.

DATE: Tuesday, October 30<sup>th</sup>, 2012

**TIME: 2:30 PM** 

LOCATION: AULA ALBENGA 2<sup>nd</sup> floor, Department of Structural, Building and Geotechnical Engineering (DISEG), Polytechnic of Torino Faculty, graduate students, and all others are invited to attend.

Gian Paolo Cimellaro

Politecnico di Torino – Dipartimento di Ingegneria Strutturale e Geotecnica Corso Duca degli Abruzzi, 24 – 10129 Torino Italia tel: +39 011 464 4801 fax: +39 011 464 4899 e-mail: gianpaolo.cimellaro@polito.it url: www.polito.it/ricerca/dipartimenti/distr/