

Organization

Vincenzo Fioravante | University of Ferrara
Alessandro Flora | University of Napoli
Keith Jones | Anglia Ruskin University
Carlo G. Lai | University of Pavia
Giuseppe Modoni | University of Cassino
Gabriele Bartolini | Emilia Romagna Region
Luca Martelli | Emilia Romagna Region
Paola Barchiesi | Emilia Romagna Region
Simona Tondelli | Ord. Ing. Bologna

Correspondence:

info@liquefact.eu

Workshop

ASSESSMENT AND MITIGATION OF LIQUEFACTION POTENTIAL ACROSS EUROPE

Bologna, October 3rd 2016



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A holistic approach to protect structures / infrastructures for improved resilience to earthquake-induced liquefaction disasters

Consortium

- Anglia Ruskin University (United Kingdom) - *coordinator*
- Università degli Studi di Cassino e del Lazio Meridionale (Italy)
- Università degli Studi di Napoli Federico II (Italy)
- Università degli Studi di Pavia and European Centre for Training and Research in Earthquake Engineering - EUCENTRE (Italy)
- Istituto Sperimentale Modelli Geotecnici – ISMGEO (Italy)
- Trevi S.p.A. (Italy)
- Stiftelsen Norsar (Norway)
- Universidade do Porto (Portugal)
- Slp d.o.o. Ljubljana (Slovenia)
- Univerza v Ljubljani (Slovenia)
- Istanbul Universitesi (Turkey)

Venue

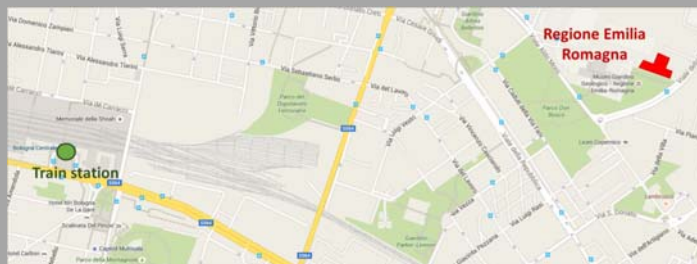
From airport (*Guglielmo Marconi International Airport in Bologna*) to train station (*Stazione Centrale*):

Train BLQ (TPER Trasporto Passeggeri Emilia Romagna)
Stop: “Stazione Centrale”

From train station (Stazione Centrale) either bus 35 or 38.

Bus n.35 : *Facoltà di Ingegneria - Ospedale Maggiore - Stazione Centrale - Fiera - Facoltà di Agraria*
Stop: “Fiera - Aldo Moro”

Bus n.38: *Circolare periferica destra*
Stop: “Fiera - Aldo Moro”



Sala 20 maggio 2012 - Terza Torre
Regione Emilia-Romagna
Viale della Fiera, 8 - Bologna - Italy

The event is organized in cooperation with the **Ordine degli Ingegneri della Provincia di Bologna**. Participation is acknowledged with 3 CFP for the morning session and 3 CFP for the afternoon session, pending registration to the link <http://ambiente.regione.emilia-romagna.it/geologia/>



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Abstract

Recent events have demonstrated that Earthquake Induced Liquefaction Disasters (EILDs) are responsible for tremendous structural damages and fatalities causing in some cases half of the economic loss caused by earthquakes. With the causes of liquefaction being substantially acknowledged, it is important to recognize the factors that contribute to its occurrence, to estimate hazards, then to practically implement mitigation strategies that consider the susceptibility of the site to liquefaction, the type and size of involved structures. The LIQUEFACT project, funded by the EU within the H2020 – DRS 2015 call (Research Innovation Action), addresses the mitigation of risks to EILD events in European communities with a holistic approach. The project deals not only with the resistance of structures to EILD events, but also with the resilience of the collective urban community in relation to their quick recovery from an occurrence. The LIQUEFACT project sets out to achieve a more comprehensive understanding of EILDs, the applications of the mitigation techniques, and the development of more appropriate techniques tailored to each specific scenario, for both European and worldwide situations.

Morning session

8:30-9:00 – RESISTRATION

9:00-10:15 – OPENING SESSION

Dott.ssa **Paola Gazzolo**

Assessore alla difesa del suolo e della costa, protezione civile e politiche ambientali e della montagna

Dott. **Paolo Ferrecchi**

Direttore generale Cura del Territorio e dell'Ambiente

Dott. Ing. **Gabriele Bartolini**

Servizio Geologico Sismico e dei Suoli

Dott. Ing. **Marco Franceschini**

Ordine degli Ingegneri della Provincia di Bologna

Prof. **Mauro Dolce**

Dipartimento Protezione Civile

Prof. **Keith Jones**

Anglia-Ruskin University, coordinatore progetto LIQUEFACT

10:15-11:00 – GUEST LECTURE

Prof. **Misko Cubrinovski** | University of Canterbury, New Zealand
Impacts of Liquefaction in the 2010-2011 Christchurch Earthquakes and rehabilitation projects

11:00 – 11:15 **COFFEE BREAK**

11:15-11:45 – KEYNOTE LECTURE

Prof. **Vincenzo Fioravante** | Università di Ferrara, Italy
The experience of liquefaction in areas struck by the Emilia 2012 earthquake.

11:45-12:15 – OVERVIEW OF LIQUEFACT PROJECT

Prof. **Carlo G. Lai** | Università di Pavia, Italy

12:15-13:15 – THEME LECTURES

Susceptibility to liquefaction and mitigation

12:15 - Prof. **Alessandro Flora** | Università di Napoli Federico II, Italy
Mitigation of liquefaction susceptibility

12:35 - Prof. **Antonio Viana da Fonseca** | University of Porto , Portugal
Measurement of liquefaction resistance by laboratory tests

12:55 - Prof. **Giuseppe Modoni** | Università di Cassino , Italy
Liquefaction in the international standards

13:15 -14:30 **LUNCH BREAK**

Afternoon session

14:30-15:15 – ROUND TABLE

15:15-17:30 – WORK PACKAGES OF LIQUEFACT PROJECT

15:15 - Prof. **Keith Jones** | Anglia-Ruskin University , UK
WP1 : Stakeholder Requirements and Industry/Research Gaps

15:30 - Prof. **Carlo Lai** | Università di Pavia, Italy
WP2 : European Liquefaction Hazard Map (Macrozonation) and Methodology for Localized Assessment of Liquefaction Potential (Microzonation)

15:45 - Prof. **Antonio Viana da Fonseca** | University of Porto, Portugal
WP3 : Structural Liquefaction Resilience & Vulnerability Assessment Methodologies

16:00 - Prof. **Alessandro Flora** | Università di Napoli Federico II, Italy
WP4 : Comparative Analysis of State of the Art Liquefaction Mitigation Measures

16:15 -16:30 **COFFEE BREAK**

16:30 - Prof. **Keith Jones** | Anglia-Ruskin University , UK
WP5 : Community Resilience and Built Asset Management Planning Framework

16:45 - Dr. **Dominik H. Lang** | NORSAR, Norway
WP6 : Liquefaction Mitigation Planning Software – Integrated Knowledge and Methodologies from WP2, 3, 4 and 5

17:00 - Prof. **Giuseppe Modoni** | Università di Cassino , Italy
WP7 : Case Study Validation and Future Eurocode recommendations

17:15 - Dott. Geol. **Maurizio Siepi** | TREVÌ, Italy
WP8 : Dissemination and Exploitation

17:30 - Prof. **Keith Jones** | Anglia-Ruskin University , UK
WP9 : Consortium / Project Management