

## II PBD - Taormina, Italy, 28-30 May 2012



- 235 delegates (32 countries)
- 5 State-Of-The-Art Lectures + 20 Keynote Lectures
- 4 Invited Lectures
- 141 regular papers (365 authors) with 100 oral presentations
- 3 Special Sessions (14 speakers)
- 1 Workshop on RRTT (6 speakers)
- 1 Symposium in honour of Prof. Prakash (5 speakers)
- 1 Replication of Rankine Lecture
- 10 Exhibitors
- Hosted by the Italian Geotechnical Society (AGI)
- Conference Chair: Michele Maugeri



*Prof. Maugeri (standing, the second on the left), introducing the welcome ceremony of II PBD as Conference Chairman. At the desk, left to right: Prof. Castelli (on behalf of Catania University), Prof. Maugeri (Conference Chairman), Prof. Seco e Pinto (Chairman of the symposium in honour of Prof. Shamsheer Prakash), Prof. Pitilakis (TC203 chair), Prof. Aversa (AGI President)*



*Welcome message by Prof. Pitilakis, TC203 chair*



*Opening address of Prof. Seco e Pinto as Chairman of the symposium in honour of Prof. Shamsher Prakash.*



*Prof. Stefano Aversa, AGI President, at the welcome opening ceremony.*

The 2<sup>nd</sup> International Conference on Performance-Based Design in Earthquake Geotechnical Engineering (II PBD) was held between the 28th and 30th May 2012 in the congress area of the San Domenico Palace Hotel, a charming setting of a fifteenth century convent in the historical centre of Taormina.

The venue is a well-known touristic town located in the eastern coast of Sicily island, a very high seismicity area characterized by a complex tectonic and volcanic environment at the boundary between the Eurasian and African plates, which generated strong historical earthquakes in the past centuries (1169, 1542, 1693, 1818, 1848) until the recent 1990 Augusta event.

The Conference was held after the 2002 Molise and the 2009 Abruzzo earthquakes and few days after the mainshock of the 2012 Emilia-Romagna sequence; these events induced significant site effects and liquefaction phenomena, thus stimulated intense activities of the geotechnical scientific community addressing research to engineering practice. It was therefore an outstanding occasion for pointing out the relevance of performance-based design criteria for seismic geotechnical engineering.



The conference was hosted by AGI (the Italian Geotechnical Society), chaired by Prof. Michele Maugeri and co-chaired by Prof. Stefano Aversa, as AGI President, with the invaluable support by the AGI Secretariat, Mr. Claudio Soccodato and Ms. Susanna Antonielli.

The scientific and technical programme of the Conference as well the review and editorial processes of the scientific contributions were managed by the Scientific Committee and by an Italian task force established by the Conference Chairman, Prof. Michele Maugeri, and by the TC203 chair, Prof. Kyriazis Pitilakis.



*Some members of the organizing committee of II PBD: Profs. Michele Maugeri and Francesco Castelli (on the right) with Drs. Valentina Lentini, Vercinzia La Spina, Glenda Abate (from left to right).*



*Some members of the organizing committee of II PBD: Drs. Vercinzia La Spina, Glenda Abate., Paola Capilleri, Giuseppe Di Filippo, Salvatore Grasso and Antonio Ferraro. (from left to right)*





*Ms. Susanna Antonielli (AGI Secretary) together with two members of the organizing staff*

## Technical Programme

Following the footsteps of the successful first PBD conference, held in Tsukuba (Japan) in 2009, and of the 5th International Conference on Geotechnical Earthquake Engineering (5ICEGE), held in 2011 in Santiago (Chile), the II PBD conference offered an ideal forum to present and discuss the most recent advances and progresses in Geotechnical Earthquake Engineering focusing on Performance Based Design criteria. The conference program was organized through plenary and parallel sessions, stimulating fruitful technical and scientific interaction with the fields of seismology, geophysics and structural engineering. The Technical program included 5 State-Of-the-Art Lectures delivered, in plenary sections, on:

- *New challenges in evaluating liquefaction-induced damage*, by Prof. Kenji Ishihara (Chuo University, Tokyo, Japan)

- *Role of geophysical testing in geotechnical site characterization*, by Prof. Michele Jamiolkowski (Politecnico di Torino, Italy)
- *Seismic displacement-based design of structures: relevance of soil-structure interaction*, by Prof. Gian Michele Calvi (Università di Pavia, Italy)
- *Nonlinear soil-foundation-structure interaction*, by Prof. George Gazetas (National Technical University of Athens, Greece)
- *Performance and seismic design of underground structures*, by Prof. Kyriazis Pitilakis (Aristotle University of Thessaloniki, Greece)

20 Keynote Lectures, delivered by international top scientists with well-known background on the most representative topics of the conference, opened each one of the parallel Regular Sessions where 100 oral contributions were presented (among the 141 peer-reviewed papers).

Special sessions were also dedicated to the 2011 Tōhoku Earthquake and Tsunami (Convenors Profs. Kenji Ishihara, Takaji Kokusho and Susumu Yasuda) and to the two devastating earthquakes occurred in New Zealand in 2011 (Convenors Profs. Misko Cubrinovski and Michael Pender) and in Abruzzo (Italy) in 2009 (Convenors Profs. Stefano Aversa and Michele Maugeri).

A workshop on *Round Robin Tunnel Centrifuge Test* was also organized having Prof. Francesco Silvestri as Convenor and several selected Panelists.

A Symposium in honour of Prof. Shamsheer Prakash including distinguished invited speakers was chaired by Profs. Pedro Seco e Pinto and Michele Maugeri.

In this conference, the TC203 Young Researcher Award was given for the first time to Dr. Ioannis Anastasopoulos (National Technical University of Athens) who lectured on *Effectiveness of shallow soil improvement on the performance of rocking-isolated bridge piers: monotonic and cyclic pushover testing*.

Finally, Prof. Malcom Bolton (University of Cambridge, UK) replicated his Rankine Lecture on *Performance-Based Design in Geotechnical Engineering*. The coffee and lunch breaks, hosted in the ancient monastery's cloisters and halls, gave chance to the 10 exhibitors to meet the delegates.

The proceedings of the Conference included 141 technical papers by 365 authors.





*Prof. Jonathan D. Bray was invited to deliver a Keynote Lecture on “Liquefaction-induced building movements”*



*Profs. Maugeri and Aversa, Convenors of the Special Session on the 2009 Abruzzo (Italy) Earthquake*



*Prof. Michele Maugeri with Prof. Malcom Bolton (University of Cambridge, UK) after his replication of the Rankine Lecture on "Performance-Based Design in Geotechnical Engineering"*

## Social Programme

At the sunset of the conference opening day, delegates were invited to a welcome reception in the ancient monastery's cloisters of the conference venue.

The Gala dinner was held in the restaurant of the San Domenico Palace hotel which hosted the conference, after a piano and violin concert delivered by two Sicilian musicians.





*The cloister of the ancient monastery' which hosted the Conference*

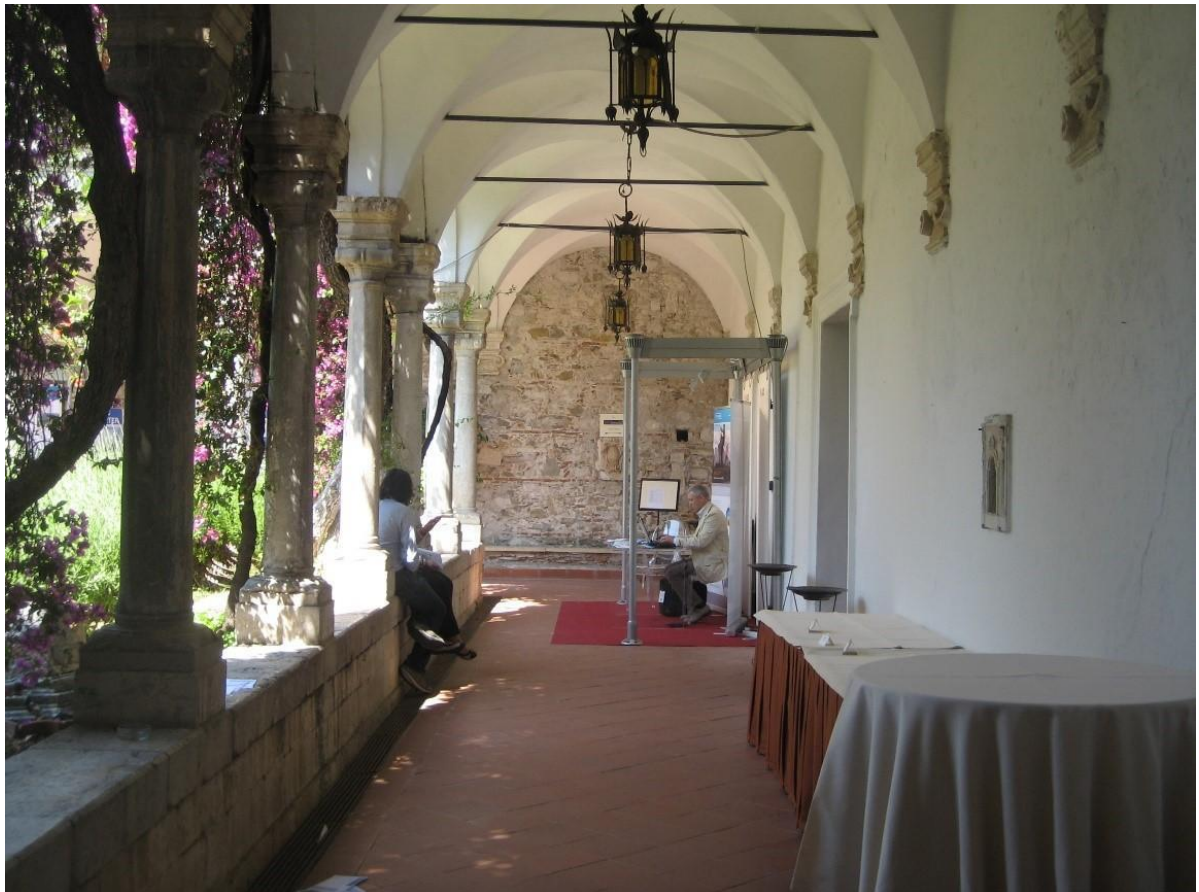


*The masters Pier Paolo Strona (at the piano) and Samuele Galeano (the violinist) at the concert which introduced the gala dinner*





*From left to right, counterclockwise, Profs. Francesco Silvestri, Anna d'Onofrio, Shamsheer Prakash, and George Bouckovalas enjoying the gala dinner.*

















*Prof. Michele Maugeri, Conference Chairman, greeting the delegates at the closing ceremony*