

# **1st IMEKO TC4 International Workshop on Metrology for Geotechnics (MetroGeotechnics 2016)**

Benevento, Italy  
17-18 March 2016

ISBN: 978-1-5108-2291-7

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2016) by the International Measurement Confederation (IMEKO)  
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the International Measurement Confederation (IMEKO)  
at the address below.

IMEKO Secretariat  
Dalszinhaz utca 10, 1st floor, Office room No. 3  
H-1061 Budapest (6th district)  
Hungary

Phone/Fax: +36 1 353 1562

imeko@t-online.hu

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: curran@proceedings.com  
Web: www.proceedings.com

**Wednesday, March 16<sup>th</sup>**

---

**15:00 – 18:00**

**Registration**

---

---

**15:00 – 18:00**

**Tutorials**

---

**Session 1: Measurement uncertainty: how much can you rely on measurement results?**

**Lecturers:** Sergio Rapuano, *University of Sannio, Italy*  
Luca De Vito, *University of Sannio, Italy*

**Session 2: Metrological characteristics of sensors for geotechnics**

**Lecturers:** Francesco Lamonaca, *University of Sannio, Italy*  
Maria Riccio, *University of Sannio, Italy*

**Session 3: iMAHSH: An Early Warning System for landslides triggered by rain**

**Lecturer:** Sergio Florio, *Threads.it srl, Italy*

---

## Thursday, March 17<sup>th</sup>

---

**08:30 – 18:00**

**Registration**

---

---

**09:00 – 09:30**

**Welcome Addresses**

**Room:** *Museum of Sannio*

---

---

**09:30 – 10:30**

**Plenary Opening Session**

**Chairs:** Pasquale Daponte, *University of Sannio, Italy*

Armando Lucio Simonelli, *University of Sannio, Italy*

**Room:** *Museum of Sannio*

---

**Towards very large scale laboratory simulation of structure-foundation-soil interaction (SFSI) problems....1**

*Colin A. Taylor*

*University of Bristol, UK*

---

**10:30 – 10:50**

**Coffee Break**

**Place:** *Palazzo San Domenico*

---

**10:50 – 12:50**

**SS1: Measurements and Experimental Techniques for Studying Soil Microstructure**

**Chairs:** Giacomo Russo, *University of Cassino and Southern Lazio, Italy*

Dimistri Deneele, *IMN-CNRS, University of Nantes, France*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**10:50 [SPECIAL LECTURE] Pore size measurements for microstructure analyses....N/A**

Giacomo Russo, *University of Cassino and Southern Lazio, Italy*

- 11:05 [SPECIAL LECTURE] Scanning Electron Microscope (SEM) investigations in soil microstructure description....N/A**  
*Dimitri Deneele, IMN-CNRS, University of Nantes, France*
- 11:20 [SPECIAL LECTURE] Surface charge properties of clays with emphasis on smectites....12**  
*George Christidis, Technical University of Crete, Greece*
- 11:35 [SPECIAL LECTURE] Towards the Measurement of Fabric in Granular Materials with X-ray Tomography....N/A**  
*Gioacchino Viggiani, Laboratoire 3SR Grenoble, France*
- 11:50 Discussion**
- 12:00 The Contribution of Microstructural Investigation to the Study of Lime-Treated Soils....16**  
*Marta Di Sante, Università Politecnica delle Marche, Italy*
- 12:10 Short Term Effects on Microstructure of a Compacted Kaolin Clay Induced by Lime Addition....22**  
*Anastasia Capotosto, University of Strathclyde, UK*  
*Giacomo Russo, University of Cassino and Southern Lazio, Italy*  
*Alessandro Tarantino, University of Strathclyde, UK*
- 12:20 Multi-Scale Analysis on the Effects of Lime Treatment on a Kaolinite Soil....26**  
*Enza Vitale, University of Cassino and Southern Lazio, Italy*  
*Giacomo Russo, University of Cassino and Southern Lazio, Italy*  
*Dimitri Deneele, Institute of Material Jean Rouxel, University of Nantes, France*
- 12:30 On the Initial Consumption in Lime test in soil stabilization....31**  
*Costanza Cambi, University of Perugia, Italy*  
*Giulia Guidobaldi, University of Perugia, Italy*  
*Manuela Cecconi, University of Perugia, Italy*  
*Paola Comodi, University of Perugia, Italy*  
*Giacomo Russo, University of Cassino and Southern Lazio, Italy*
- 12:40 Discussion**
- 12:50 – 13:50 Lunch**

Place: *Palazzo San Domenico*

---

**13:50 – 15:40**

**SS2: Static and Dynamic In Situ Measurements**

**Chairs:** Kenneth H. Stokoe, *University of Texas, US*  
Francesco Castelli, *University of Enna “Kore”, Italy*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**13:50 [INVITED LECTURE] Effectiveness of Inhibiting Liquefaction Triggering by Shallow Ground Improvement Methods: Field Shaking Trials with T-Rex at One Area In Christchurch, NZ....35**

Kenneth H. Stokoe, *University of Texas, US*  
J. N. Roberts, *University of Texas, US*  
S. Hwang, *University of Texas, US*  
B. R. Cox, *University of Texas, US*  
F. Y. Menq, *University of Texas, US*  
S. van Ballegoy, *Tonkin & Taylor Ltd, New Zealand*

**14:30 Discussion**

**14:40 Numerical Analysis of Field Vane Tests in Soft Clays....51**

Settimio Ferlisi, *University of Salerno, Italy*  
Bonaventura Taiani, *Freelance Engineer, Norwegian University of Science and Technology, Norway*  
Anders Samstad Gylland, *Multiconsult, Norwegian University of Science and Technology, Norway*

**14:50 Effects of Soil Types in Estimating Fines Content for Evaluating Liquefaction Strength....57**

Nozomu Yoshida, *Tohoku Gakuin University, Japan*  
Kazue Wakamatsu, *Tohoku Gakuin University, Japan*

**15:00 On the Interpretation of Piezocone Tests in Natural Silt and Sand Mixtures....63**

Maria Fernanda Garcia Martinez, *University of Bologna, Italy*  
Laura Tonni, *University of Bologna, Italy*  
Guido Gottardi, *University of Bologna, Italy*

**15:10 A Multi-Scale Study of Water Transfer through Clayey Geomaterials in Landfill Cap Covers....69**

Camille Barral, *CNAM, France*

Irini Djeran-Maigre, *University of Lyon, France*

Patrick Pierson, *University Grenoble Alpes, France*

G rard Didier, *University of Lyon, France*

**15:20 Combined Bender Elements and Accelerometers System: Measurement and Interpretation....75**

Antonio Gomes Correia, *University of Minho (ISISE), Portugal*

Jos  GRANJA, *University of Minho (ISISE), Portugal*

Cl udio PEREIRA, *University of Minho (ISISE), Portugal*

Cristiana FERREIRA, *University of Porto (CONSTRUCT), Portugal*

Miguel AZENHA, *University of Minho (ISISE), Portugal*

Sohel NAZARIAN, *University of Texas at El Paso (CTIS), United States of America*

**15:30 Discussion**

**15:40 – 16:00 Coffee Break**

**Place:** *Palazzo San Domenico*

---

**16:00 – 16:30**

**Miscellanea – Part I**

**Chair:** Paola Monaco, *University of L’Aquila, Italy*

Giuseppe Grimaldi, *University of Basilicata, Italy*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**16:00 [SPECIAL LECTURE] Flat dilatometer (DMT). Applications and Recent Developments....135**

Silvano Marchetti, *University of L’Aquila, Italy*

Diego Marchetti, *Studio Prof. Marchetti Srl, Italy*

Paola Monaco, *University of L’Aquila, Italy*

**16:12 SDMT Soil Testing for the Local Site Response Analysis....143**

Salvatore Grasso, *University of Catania, Italy*

Francesco Castelli, *University of Enna “Kore”, Italy*

Antonio Cavallaro, *CNR-IBAM, Catania, Italy*

16:22 *Discussion*

---

16:30 – 17:30

**SS4: Static and Dynamic Laboratory Testing**

**Chairs:** Anna d'Onofrio, *University of Naples Federico II, Italy*

Augusto Penna, *University of Sannio, Italy*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**16:30 Resonant Column Testing Challenges....149**

Adolfo Cavallari, *Megarisi S.r.l., Italy*

**16:40 Compression and Extension Triaxial Tests on Sand, Studied with X-ray Microtomography and Digital Image Correlation....157**

Erminio Salvatore, *University of Cassino and Southern Lazio, Italy*

Edward Andò, *CNRS-3SR Grenoble, France*

Gioacchino Viggiani, *Université Joseph Fourier – 3SR Grenoble, France*

Giuseppe Modoni, *University of Cassino and Southern Lazio, Italy*

**16:50 Small strain stiffness evolution of reconstituted medium density chalk....162**

Grzegorz Andrzej Bialowas, *University Walk, Bristol, UK*

Andrea Diambra, *University Walk, Bristol, UK*

David Nash, *University Walk, Bristol, UK*

**17:00 Cyclic Behavior of Soft Offshore Clays at Small to Large Strains....168**

Giuseppe Lanzo, *University of Roma, La Sapienza, Italy*

Alessandro Pagliaroli, *National Research Council Rome, Italy*

Alessandra Avalle, *National Research Council Rome, Italy*

Paolo Tommasi, *National Research Council Rome, Italy*

Francesca Budillon, *National Research Council Rome, Italy*

**17:10 Evolution of Small Strain Stiffness of Granular Soils with a Large Number of Small Loading Cycles in the 3-D Multiaxial Stress Space....175**

Alessandro Mandolini, *University of Bristol, UK*

Andrea Diambra, *University of Bristol, UK*

Erdinbraim, *University of Bristol, UK*

17:20 *Discussion*



---

**10:30 – 17:30**

**Poster Session**

**Place:** *Palazzo San Domenico*

---

**[INSITU MEAS] In Situ Measurements for Evaluating Liquefaction Potential under Cyclic Loading....79**

Salvatore Grasso, *University of Catania, Italy*

Francesco Castelli, *University of Enna "Kore", Italy*

Maria Rossella Massimino, *University of Catania, Italy*

Valentina Lentini, *University of Enna "Kore", Italy*

**In Situ and Laboratory Tests for Site Response Analysis in the Ancient City of Noto (Italy)....85**

Salvatore Grasso, *University of Catania, Italy*

Antonio Ferraro, *University of Catania, Italy*

Francesco Castelli, *University "Kore" of Enna, Italy*

Antonio Cavallaro, *CNR-IBAM, Catania, Italy*

**Validation of a theoretical solution through in situ measurements of a consolidation process....91**

Giuseppe Di Filippo, *University of Messina, Italy*

Giovanni Biondi, *University of Messina, Italy*

Ernesto Cascone, *University of Messina, Italy*

**HVSR and Masw Seismic Survey for Characterizing the Local Seismic Response: a Case Study in Catania Area (Italy)....97**

Sebastiano Imposa, *University of Catania, Italy*

Ernesto Motta, *University of Catania, Italy*

Piera Paola Capilleri, *University of Catania, Italy*

Giacomo Imposa, *University of Catania, Italy*

**Monitoring of Full Scale Diaphragm Wall for a Deep Excavation....103**

Francesco Castelli, *University of Enna "Kore", Italy*

Valentina Lentini, *University of Enna "Kore", Italy*

**Comparison of in Situ Devices for the Assessment of Pavement Subgrade Stiffness....109**

Salvatore Cafiso, *University of Catania, Italy*

Carmelo D'agostino, *University of Catania, Italy*

Brunella Capace, *University of Catania, Italy*

Ernesto Motta, *University of Catania, Italy*

Piera Paola Capilleri, *University of Catania, Italy*

**Site Response Analysis in Eastern Sicily Based on Direct and Indirect Vs Measurements....115**

Salvatore Grasso, *University of Catania, Italy*

Antonio Ferraro, *University of Catania, Italy*

Salvatore Caruso, *Georeti S.r.l. "Geotecnica e Ricerca sulle Reti" - S. Teresa di Riva, Italy*

Maria Rossella Massimino, *University of Catania, Italy*

**Seismic Vulnerability of a High-Rise Hospital Building Using Field Monitoring Data....121**

Sotiria Karapetrou, *Aristotle University of Thessaloniki, Greece*

Dimitris Pitilakis, *Aristotle University of Thessaloniki, Greece*

**Virtual DMT: An Opportunity for Pile Design?....127**

Gianni Togliani, *Geologist, Switzerland*

[MISC1]

**Case Study: DMT Application for Confirming CPT - Based Liquefaction and Settlement Analyses of Thick Reclaimed Sandy Earth Fill – Duqm Port - Sultanate of Oman....N/A**

Emad Sharif, *Arab Center for Engineering Studies , United Arab Emirates*

**Seismic Displacements of Retaining Walls: Shaking Table Test Results vs Numerical Predictions....181**

Giovanni Biondi, *University of Messina, Italy*

Paola Capilleri, *University of Catania, Italy*

Ernesto Motta, *University of Catania, Italy*

[LAB TEST]

**Particle crushing: passive detection....187**

Sha Luo, *University of Bristol, UK*

Andrea Diambra, *University of Bristol, UK*

Erdin Ibrahim, *University of Bristol, UK*

**Shear-Wave Velocity-Based Assessment of Liquefaction Resistance of Carbonate Sands....194**

Daniela Dominica Porcino, *University Mediterranea of Reggio Calabria, Italy*

Valentina Diano, *University Mediterranea of Reggio Calabria, Italy*

**An Original Dynamic Interpretation of Acceleration Histories  
Recorded During Undrained Triaxial Cyclic Tests....204**

Augusto Penna, *University of Sannio, Italy*

Gianmario Sorrentino, *University of Sannio, Italy*

Alessandro Flora, *University of Naples Federico II, Italy*

Armando Lucio Simonelli, *University of Sannio, Italy*

---

**20:00 – 22:00**

**Gala Dinner**

**Restaurant La Fortezza– Torrecuso, Benevento**

---

## Friday, March 18<sup>th</sup>

---

**08:30 – 18:00**

**Registration**

---

---

**09:10 – 10:10**

**Plenary Opening Session**

**Chairs:** Armando Lucio Simonelli, *University of Sannio, Italy*  
Stefano Aversa, *University of Parthenope, Italy*

**Room:** *Museum of Sannio*

---

**A new generation of sensor technologies for geotechnical engineering....N/A**

*Kenichi Soga*

*University of Cambridge, UK*

---

**10:10 – 10:30**

**Coffee Break**

**Place:** *Palazzo San Domenico*

---

**10:30 – 11:00**

**SS5: Geotechnics and Energy Measurement and Monitoring**

**Chair:** Armando Lucio Simonelli, *University of Sannio, Italy*  
Alessandro Gajo, *University of Trento, Italy*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**10:30 Dynamic Characterization of Shallow Foundations with Full-scale Tests....218**

*Aldo Madaschi, University of Trento, Italy*

*Alessandro Gajo, University of Trento, Italy*

*Marco Molinaro, University of Trento, Italy*

*Daniele Zonta, University of Trento, Italy*

**10:42 Measurement of Subsoil Parameters in Geothermal Heat Pump Plants....207**

*Mirko Marracci, University of Pisa, Italy*

*Alessandro Sbrana, University of Pisa, Italy*

*Michele Sbrana, Terra Energy S.r.l., Italy*

*Bernardo Tellini, University of Pisa, Italy*

**10:52 Discussion**

---

**11:00 – 13:30**

**SS6: Landslides Monitoring and Forecasting**

**Chair:** Leonardo Cascini, *University of Salerno, Italy*  
Jordi Corominas, *Technical University of Catalonia (UPC), Spain*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**11:00 [INVITED LECTURE] The Use of Optical Fibres for Early Prediction of Slope Failure....269**

Luciano Picarelli, *Second University of Naples, Italy*  
Emilia Damiano, *Second University of Naples, Italy*  
Aldo Minardo, *Second University of Naples, Italy*  
Lucio Olivares, *Second University of Naples, Italy*  
Luigi Zeni, *Second University of Naples, Italy*

**11:30 Field Investigation of Soil-Atmosphere Interaction on a Slope Prone to Shallow Landslides....224**

Massimiliano Bordoni, *University of Pavia, Italy*  
Claudia Meisina, *University of Pavia, Italy*  
Roberto Valentino, *University of Parma, Italy*  
Marco Bittelli, *University of Bologna, Italy*  
Silvia Chersich, *University of Pavia, Italy*  
Maria Giuseppina Persichillo, *University of Pavia, Italy*

**11:40 The Regional Early Warning System For Rainfall-Induced Landslides Operating In Campania (Italy): Performance Evaluation of Two Warning Strategies....255**

Michele Calvello, *University of Salerno, Italy*  
Gaetano Pecoraro, *University of Salerno, Italy*  
Luca Piciullo, *University of Salerno, Italy*

**11:50 Discussion**

**12:05 [SPECIAL LECTURE] Monitoring of fast moving landslides in the Pyrenees....236**

Olga Mavrouli, *Technical University of Catalonia, Spain*  
Marcel Hürlimann, *Technical University of Catalonia, Spain*  
Claudia Abancó, *WORLDSENSING SL, Spain*  
Jose Moya, *Technical University of Catalonia, Spain*  
Ramon Copons, *Institut d'Estudis Andorrans, Andorra*  
Roger Ruiz-Carulla, *Technical University of Catalonia, Spain*

- 12:20 An Integrated Approach for Rock Slope Failure Monitoring: the Case Study of Coroglio Tuff Cliff (Naples, Italy) – preliminary results....242**  
Fabio Matano, *IAMC-CNR, Italy*  
Marco Sacchi, *IAMC-CNR, Italy*  
Mauro Caccavale, *IAMC-CNR, Italy*  
Teresa Caputo, *INGV-Osservatorio Vesuviano, Italy*  
Giuseppe Esposito, *IAMC-CNR, Italy*  
Giuseppe Maria Grimaldi, *IAMC-CNR, Italy*  
Aldo Minardo, *Second University of Naples, Italy*  
Germana Scepi, *University of Naples, Federico II, Italy*  
Renato Somma, *INGV - Osservatorio Vesuviano, Italy*  
Claudia Troise, *INGV - Osservatorio Vesuviano, Italy*  
Giovanni Zeni, *CNR-IREA, Italy*  
Luigi Zeni, *Second University of Naples, Italy*  
Giuseppe De Natale, *INGV - Osservatorio Vesuviano, Italy*
- 12:30 Non Destructive Tests to Detect the Integrity of Steel Anchors in Corrosive Environments....230**  
Luigi Ferrigno, *University of Cassino and Southern Lazio, Italy*  
Giuseppe Modoni, *University of Cassino and Southern Lazio, Italy*  
Erminio Salvatore, *University of Cassino and Southern Lazio, Italy*  
Giovanni Betta, *University of Cassino and Southern Lazio, Italy*  
Paolo Croce, *University of Cassino and Southern Lazio, Italy*
- 12:40 Discussion**
- 12:50 [SPECIAL LECTURE] Twenty-five Years of Vallcebre Landslide Monitoring: from Theodolite to Radar....261**  
Josep A. Gili, *Technical University of Catalonia (UPC), Spain*  
Jose Moya, *Technical University of Catalonia (UPC), Spain*  
Jordi Corominas, *Technical University of Catalonia (UPC), Spain*  
Michele Crosetto, *Geomatics Division, CTTC, Spain*  
Oriol Monserrat, *Geomatics Division, CTTC, Spain*  
Guido Luzi, *Geomatics Division, CTTC, Spain*
- 13:05 [SPECIAL LECTURE] A Procedure for the Analysis of Building Vulnerability to Slow-Moving Landslides....248**  
Dario Peduto, *University of Salerno, Italy*  
Giovanni Pisciotta, *University of Salerno, Italy*  
Gianfranco Nicodemo, *University of Salerno, Italy*

Livia Arena, *University of Salerno, Italy*  
Settimio Ferlisi, *University of Salerno, Italy*  
Giovanni Gullà, *CNR-IRPI, Italy*  
Luigi Borrelli, *CNR-IRPI, Italy*  
Gianfranco Fornaro, *CNR-IREA, Italy*  
Diego Reale, *CNR-IREA, Italy*

**13:20**    *Discussion*

**13:30 – 14:30**    **Lunch**  
                         **Place:** *Palazzo San Domenico*

---

**14:30 – 15:30**

**SS7: Measurements and Monitoring of Earth Dams**

**Chair:**    Sebastiano Rampello, *University of Rome La Sapienza, Italy*  
                         Francesco Silvestri, *University of Naples Federico II, Italy*  
**Room:**    *Blue Hall, Palazzo San Domenico*

---

**14:30**    **Differential SAR Interferometry for Surface Monitoring of an Earth Dam....295**

Marco Corsetti, *University of Rome Sapienza, Italy*  
Franco Giancola, *University of Rome Sapienza, Italy*  
Michele Manunta, *IREA – CNR, Istituto per il Rilevamento Elettromagnetico dell’Ambiente, Italy*  
Maria Marsella, *IREA – CNR, Istituto per il Rilevamento Elettromagnetico dell’Ambiente, Italy*  
Alberico Sonnessa, *University of Rome Sapienza, Italy*

**14:45**    **Rockfill dam monitoring through ground-based and remote sensing techniques....276**

Matteo Albano, *Istituto Nazionale di Geofisica e Vulcanologia, University of Cassino and Southern Lazio, Italy*  
Giuseppe Modoni, *University of Cassino and Southern Lazio, Italy*  
Michele Saroli, *University of Cassino and Southern Lazio, Italy*  
Paolo Croce, *University of Cassino and Southern Lazio, Italy*  
Giacomo Russo, *University of Cassino and Southern Lazio, Italy*  
Marco Polcari, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*  
Christian Bignami, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*  
Marco Moro, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*

Salvatore Stramondo, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*

**15:00 Seismic Behaviour of Large Earth Dams: from Site Investigation to Numerical Modelling....288**

Luca Masini, *University of Rome Sapienza, Italy*

Sebastiano Rampello, *University of Rome Sapienza, Italy*

Luigi Callisto, *University of Rome Sapienza, Italy*

**15:15 Discussion**

**15:30 – 15:50 Coffee Break**

**Place:** *Palazzo San Domenico*

---

**15:50 – 16:50**

**SS8: Methods and Modern Technologies in Nearshore-Offshore Surveying and Seafloor Geotechnics**

**Chairs:** Domenico Lombardi, *The University of Manchester, UK*

Marco Sacchi, *IAMC-CNR, Italy*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**15:50 Metrology in Geotechnical Standards for in Situ Testing and Geophysical Survey....301**

Joek Peuchen, *Fugro, Netherlands*

**16:02 A model-estimation of gas overpressure in gas saturated layers in a volcanic setting: a case study from the Banco della Montagna (Naples Bay, Italy)....313**

Guido Ventura, *INGV, Roma*

Salvatore Passaro, *IAMC-CNR, Italy*

Stella Tamburrino, *IAMC-CNR, Italy*

Mattia Vallefucio, *IAMC-CNR, Italy*

Marco Sacchi, *IAMC-CNR, Italy*

**16:14 Geophysical and Geotechnical Surveys for Submarine Cables Installations: Main Applications and Methods....322**

Giovanni de Alteriis, *IAMC – CNR and Next Geosolution Europe, Italy*

Lucio Amato, *Next Geosolution Europe, Italy*

Giuseppe Guadagno, *Tecno In, Italy*



**16:26 The Virtual Drilling Crew....318**  
Aldo Arriaga, *Igeotest, Spain*  
Marcos Arroyo, *Technical University of Catalonia, UPC-BarcelonaTech, Spain*  
Norma Pérez, *Igeotest, Spain*

**16:38 Discussion**

---

**16:50 – 17:30**

**Miscellanea – Part 2**

**Chairs:** Gianpiero Russo, *University of Naples Federico II, Italy*  
Augusto Penna, *University of Sannio, Italy*

**Room:** *Blue Hall, Palazzo San Domenico*

---

**16:50 San Pasquale Station of Line 6 in Napoli....339**  
Gianpiero Russo, *University of Napoli Federico II, Italy*  
Marco Valerio Nicotera, *University of Napoli Federico II, Italy*  
Silvia Autori, *University of Napoli Federico II, Italy*

**17:00 Numerical Interpretation of Monitoring Data of an Instrumented Tunnel Segmental Ring....350**  
Stefania Fabozzi, *University of Naples Federico II, Italy*  
Emilio Bilotta, *University of Naples Federico II, Italy*  
Gianpiero Russo, *University of Naples Federico II, Italy*

**17:10 Dynamic Behavior of the Leighton Buzzard Sand-B Under Very Low Confining Stresses....200**  
Augusto Penna, *University of Sannio, Italy*  
Gianmario Sorrentino, *University of Sannio, Italy*  
Anna d’Onofrio, *University of Naples Federico II, Italy*  
Francesco Silvestri, *University of Naples Federico II, Italy*  
Armando Lucio Simonelli, *University of Sannio, Italy*

**17:20 Discussion**

---

**10:30 – 17:30**

**Poster Session**

**Place:** *Palazzo San Domenico*

---

[GEO ENERGY]

**Influence of The Focal Mechanism on the Ground Motion Characteristics....212**

Massimina Castiglia, *University of Molise, Italy*

Filippo Santucci de Magistris, *University of Molise, Italy*

[EARTH DAMS]

**Geotechnical investigation and field performance of a zoned earth dam in Italy....281**

Ernesto Ausilio, *University of Calabria, Italy*

Giovanni Dente, *University of Calabria, Italy*

Paolo Zimmaro, *University of California Los Angeles, United States*

[OFFSHORE]

**Geospatial 3D Model of Active Normal Faults Offshore the Salento Peninsula (Ionian Sea, Italy): implications for hazard evaluation....307**

Pietro Iannace, *University of Sannio, Italy*

Maurizio Maria Torrente, *University of Sannio, Italy*

Alfonsa Milia, *IAMC, CNR, Italy*

**Active Deformation in the Naples Bay Evidenced by Joined High-Resolution Marine Geophysics and InSAR processing....334**

Salvatore Passaro, *IAMC-CNR, Italy*

Fabio Matano, *IAMC-CNR, Italy*

Marco Sacchi, *IAMC-CNR, Italy*

Mattia Vallefucoco, *IAMC-CNR, Italy*

Guido Ventura, *INGV, Italy*

Stella Tamburrino, *IAMC-CNR, Italy*

**Opto-Acoustic 3D Reconstruction of the “Punta Scifo D” Shipwreck....327**

Fabio Bruno, *University of Calabria, Italy*

Antonio Lagudi, *University of Calabria, Italy*

Salvatore Passaro, *IAMC-CNR, Italy*

[MISC2]

**Understanding the Effects of Tunneling on Buildings by  
Analyzing DInSAR Data: the Case of the New Subway in Rome,  
Italy....345**

Peppe J.V. D'Aranno, *University of Rome Sapienza, Italy*

Francesca Gizzi, *University of Rome Sapienza, Italy*

Maria Marsella, *University of Rome Sapienza, Survey Lab Spin  
Off of Sapienza University, Italy*

Silvia Scifoni, *University of Rome Sapienza, Survey Lab Spin Off of  
Sapienza University, Italy*

Marianna Scutti, *Survey Lab Spin Off of Sapienza University, Italy*

Alberico Sonnessa, *University of Rome Sapienza, Survey Lab Spin  
Off of Sapienza University, Italy*

Manuela Bonano, *National Research Council, Italy*

Michele Manunta, *National Research Council, Italy*

---

**17:30 – 18:00**

**Closing and Awards Ceremony**

**Room:** *Blue Hall, Palazzo San Domenico*

---