

Guido Andreotti

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CURRICULUM VITAE

EDUCATION

- Master’s Degree in Civil Engineer (2013).
- Bachelor’s Degree in Civil Engineer (2010).
- Bachelor’s Degree in Natural Sciences (2003).

CURRENT POSITION

- PhD Candidate. Earthquake Engineering and Engineering Seismology (UME School). Institute for Advanced Study of Pavia (IUSS).

PROFESSIONAL EXPERIENCES

Currently carries out research activities on:

- Numerical modeling and seismic vulnerability of underground tunnels.
- Member of Working Group WG9 “Seismic effect on tunnels”. International Tunnelling and Underground Space Association (ITA-AITES).
- Numerical modeling of experimental tests.
- Site response analysis.

He has also carried out professional activities mainly in the following areas:

- GIS (Geographical Information System) analyst in Environmental Engineering, Geotechnical Earthquake Engineering and Earthquake Engineering.
- Geotechnical site investigations and characterization.
- Geostatistical methods for processing, interpretation and interpolation of spatial data (i.e. seismic, geotechnical, geological, environmental, biological, etc.).
- Digitizing, georeferencing and analysis of current and historical cartography.
- Geological, hydrogeological and seismic component in municipal planning.
- Characterization of contaminated sites and contaminated land rehabilitation.
- *Mining and Extraction of Sand and Gravel.*
- Environmental impact studies.

RESEARCH ACTIVITIES

He is/was involved in various research projects including:

- EUCENTRE-DPC 2014-2016 project: Seismic vulnerability of shallow and deep tunnels.
- EUCENTRE-DPC 2014-2016 project: Seismic risk of airport systems.
- STRIT (Strumenti e Tecnologie per la gestione del Rischio delle Infrastrutture di Trasporto) project:
 - OR1: Development of methods for assessing the vulnerability of large transport infrastructure.
 - OR2: Risk management of large transport infrastructure.
- ReLUIS-DPC 2010-2013 project: Site response analysis and lifelines.
- REAKT (Strategies and tools for Real Time EArthquake RiSk ReducTion) project.
 - WP5: Real time-dependent risk assessment. Task 5.2: State-dependent fragility curves for deep tunnels.

TEACHING ACTIVITIES

- Teaching assistant in Earthquake Geotechnical Engineering (Ph.D course). Institute for Advanced Study of Pavia (IUSS).
- Teaching seminars in Geotechnical Engineering (Undergraduate courses), University of Pavia.
- Teaching seminars in Earthquake Geotechnical Engineering (Undergraduate courses), University of Pavia.
- Undergraduate thesis co-supervisors in Geology and in Civil Engineering. University of Pavia.

MAIN SOFTWARE AND PROGRAMMING LANGUAGES

- FLAC-2D and FLAC 3D using FISH internal programming language (ITASCA, 2015).
- ABAQUS 6.13 (SIMULIA, 2013).
- ArcGIS 10 (ESRI, 2010).
- MATLAB R2013 (MathWorks, 2013).
- Fortran.
- Visual Basic.

PUBLICATIONS

- Andreotti G., Lai C.G., 2016. Nonlinear structural model for Soil-Structure Interaction using the direct approach. Under revision.
- Andreotti, G., Lai, C. G, 2016. The role of overburden stress on the seismic vulnerability of deep tunnels. In submission to the 16th World Conference on Earthquake Engineering. Chile, 2017.

- Andreotti G., Lai C.G., 2015. Methodology to Derive Damage State-Dependent Fragility Curves of underground tunnels. Proceedings of 6th International Conference on Earthquake Geotechnical Engineering (6ICEGE). Christchurch, New Zealand, 1-4 November 2015.
- Andreotti, G., Lai, C. G, 2014. Seismic Vulnerability of Deep Tunnels: Numerical Modeling for a Fully Nonlinear Dynamic Analysis. 2ECEES (Second European Conference on Earthquake Engineering and Seismology). Istanbul, Turkey, 25-29 August 2014.
- Andreotti, G., Lai, C. G, 2014. Numerical Model for the Assessment of Seismic Vulnerability of Deep Tunnels. XXV Convegno Nazionale Di Geotecnica. Baveno, Italy, 4-6 June 2014 (In Italian).
- Andreotti, G., Lai, C. G., Bozzoni, F., Scandella, L., 2013. New Soil Factors for the Italian Building Code (NTC08) Derived from 1D Fully Stochastic Ground Response Analyses. Proceedings XV Convegno ANIDIS. Padova, Italy, 1-4 Luglio, 2013.
- Andreotti, G., Lai, C. G., Bozzoni, F., Scandella, L., 2013. Hazard-Dependent Soil Amplification Factors Derived from 1D Fully Stochastic Ground Response Analyses. Proceedings of International Conference on Earthquake Geotechnical Engineering From Case History to Practice In honour of Prof. Kenji Ishihara. Istanbul, Turkey, 17-19 June 2013.
- Andreotti, G., Lai, C. G., Martinelli, M., 2013. Seismic Fragility Functions of Deep Tunnels: A New Cumulative Damage Model Based on Lumped Plasticity and Rotation Capacity. Proceedings of International Conference on Earthquake Geotechnical Engineering From Case History to Practice In honour of Prof. Kenji Ishihara. Istanbul, Turkey, 17-19 June 2013.
- Baglione, V., Marcos, J. M., Canestrari, D., Griesser, M., Andreotti, G., Bardini, C., Bogliani, G. 2005. Does year-round territoriality rather than habitat saturation explain delayed natal dispersal and cooperative breeding in the carrion crow? Journal of Animal Ecology, 74:842-851.

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Signature

