

CURRICULUM VITAE

CLAUDIA MEISINA

Date and place of birth: 21/10/1968 - Voghera (PV), Italy

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ACADEMIC BACKGROUND

1992 MSc Degree in Geological Sciences, University of Pavia.

1996 Earth Science Ph.D, University of Pavia (Geotechnical and mineralogical characterisation of some swelling soils of Northern Italy, Tutors: Prof. A. Piccio, Prof. G. Braga).

1996-1998 post-doctoral researcher at the Bureau de Recherches Géologiques et Minières (Marseille – France). “Development of a swelling/shrinkage hazard mapping methodology”.

CURRENT POSITION

14/04/2015 to present: Associate professor in engineering geology (GEO/05), Department of Earth and Environmental Sciences, University of Pavia

1/07/1998 – 13/04/2015: Assistant Professor in engineering geology, Department of Earth and Environment Sciences, University of Pavia.

2005 to present: responsible of the Laboratory of Engineering Geology and Geotechnique of the Department of Earth Sciences and Environment of the University of Pavia

Member of national and international professional societies (International Association for Engineering Geology and the Environment, European Geosciences Union, American Geophysical Union, Italian Geotechnical Association).

TEACHING ACTIVITY

Since 1998 she held the courses of Subsoil Exploration, Natural and Artificial Slope Stability, Geological Hazard and Environmental Impact, Engineering Geology for Land Planning for the MSc degree in Geological Sciences; Geological and Geophysical Surveys, Engineering and Environmental Geology, Geological Hazard and Risk for the Bachelor degree in Geology and Natural Resources; Engineering Geology for the Bachelor degree in Engineering for Environment and Territory.

Supervisor and co-supervisor of more than 100 M.Sc theses and of 7 Ph.D theses.

RESEARCH ACTIVITY

The research activity is mainly addressed to Engineering Geology, with particular focus on:

A) Development and application of methodologies for the geological interpretation at different scale of satellite radar interferometric data (Persistent Scatterer techniques), study of the applicability of these techniques for landslide and subsidence.

B) Development and application of methodologies for subsoil geological model and for engineering geological mapping to support geohazard assessment (seismic microzonation, liquefaction hazard assessment) and foundation conditions. Study of the applicability of the most used empirical correlations for soil classification and soil stratigraphy description based on CPT and CPTU.

A) Geological and geotechnical characterisation of swelling/shrinking clay soils, development of traditional and non-traditional techniques in situ and in laboratory for the prediction of the swelling/shrinking soil parameters.

C) Study of the triggering mechanism of rainfall-induced landslides in different climatic and geological contexts, through the long-term hydro-mechanical monitoring of shallow soils.

MAIN RESEARCH/TECHNICAL PROJECTS

- Research project financed by BRGM -Service Géologique R gional Ile de France (1998) "*Evaluation de l'al a retrait/gonflement des sols argileux dans le d partement de l'Essonne (France)*".
- Research project financed by Provincia di Pavia (2001). *Identification of the potential areas for the production of building stone.*
- Research project for young researcher of University of Pavia (2002) "*Swelling/shrinking clayey soil potential determination via artificial neural network*".
- Research project financed by Regione Lombardia (2003) "*Activities for the geological and hydrogeological analysis and interpretation of PSInSAR data in the Oltrepo Pavese in Pavia Province*".
- Research project financed by Regione Lombardia (2005) "*Analysis of the geological causes of building damages in Oltrepo Pavese with reference to the swelling/shrinking phenomenon*".
- Research project financed by Provincia di Pavia (2005) "*Guideline for the environmental recovery of quarries in Pavia Province*".
- Research project financed by ARPA Piemonte (2006-2009) "*PSInSAR data interpretation in Piemonte Region*". The research was part of the Interreg IIIb - "*ClimChAlps*".
- Research project financed by Brescia Civil Protection (2007) "*Geological interpretation of PSInSAR data in area subjected to landslides and subsidences*".
- Research project financed by Pagani geotechnical Equipment (2007) "*Innovative methods related to the interpretation of Cone Penetration Test*".
- Research project financed by Istituto Regionale di Ricerca della Lombardia (IRER) (2008): "*Analysis and geological and hydrogeological interpretation of PSInSAR data in the provinces of VA, CO, LC, SO, BG e BS*".
- Research project financed by Provincia di Pavia – (2010) *Study of shallow landslides triggered by the 27-28 April 2009 event in Oltrepo Pavese and guidelines for a correct slope management.*

- Research project financed by IREALP (2010) *Landslide inventory update (GEOIFFI) in the Pavia and Brescia provinces.*
- Research project financed by IRER (2010) *Geological interpretation of PST and RADARSAT interferometric data.*
- Research project financed by Regione Liguria (2010). “*Analysis of interferometric data (PSInSAR technique) in Imperia and Savona provinces*”.
- Research project funded by Comunità Montana Sebino Bresciano (2012) “*Municipal Emergency Plan of Sebino Bresciano*” .
- AO for utilization of the TERRASAR-X archive (2013) “*Use of SAR-satellite data to monitor and model landslides and subsidence hazards*”. Principal Investigator Davide Notti.
- Research project financed by ARPA Piemonte (2015). “*Updating the landslide inventory with ancillary data, monitoring and interferometric data*”
- Horizon 2020 project LIQUEFACT (*Assessment and mitigation of liquefaction potential across Europe: a holistic approach to protect structures / infrastructures for improved resilience to earthquake-induced liquefaction disasters*) (2016-2019) (responsible for DSTA)

MAIN PUBLICATIONS (2012-2016)

1. **Ninfo A., Zizioli D., Meisina C., Castaldini D., Zucca F., Luzi L., De Amicis M.** (2012). The survey and mapping of sand-boil landforms related to the Emilia 2012 earthquakes: preliminary results. ANNALS OF GEOPHYSICS, 55, 4, 727-733; doi: 10.4401/ag-6114.
2. **Zizioli D., Meisina C., Valentino R., Montrasio L.** (2013). Comparison between different approaches to modeling shallow landslide susceptibility: a case history in Oltrepo Pavese, Northern Italy. Nat. Hazards Earth Syst. Sci., 13, 559–573, www.nat-hazards-earth-syst-sci.net/13/559/2013/doi:10.5194/nhess-13-559-2013,
3. **Lo Presti D. C. F., Sassu M., Luzi L., Pacor F., Castaldini D., Tosatti G., Meisina C., Zizioli D., Zucca F., Rossi G., Saccorotti G., Piccinini D.** (2013). *A report on the 2012 seismic sequence in Emilia (Northern Italy)*. Seventh International Conference on case Histories in Geotechnical Engineering, April 29-May 4, 2013 Chicago. ISBN 1-887009-17-5.
4. **Meisina C., Notti D., Zucca F., Ceriani M., Colombo A., Poggi F., Roccati A., Zaccone A.** (2013). *The use of PSInSAR™ and SqueeSAR™ techniques for updating landslide inventories*. Landslides Science and Practice. Volume 1: Landslide Inventory and Susceptibility and Hazard Zoning. Margottini, Claudio; Canuti, Paolo; Sassa, Kyoji (Eds.), 81-87, ISBN 978-3-642-31324-0, Springer, DOI: 10.1007/978-3-642-31325-7_10.
5. **Notti D., Meisina C., Colombo A., Lanteri L. & Zucca F.** (2013). *Studying and monitoring large landslides with persistent scatterer data*. Italian Journal of Engineering Geology and Environment – Book Series (6), 349-360, DOI: 10.4408/IJEGE.2013-06.B-33, ISBN 978-88-95814-96-4.
6. **Molinari M.E., Cannata M., Meisina C.** (2014). *r.massmov: an open-source landslide model for dynamic early warning systems*. Nat Hazards, 70, 2, 1153-1179, DOI 10.1007/s11069-013-0867-8.
7. **Notti D., Herrera G., Bianchini S., Meisina C., García-Davalillo J. C. & Zucca F.** (2014) *A methodology for improving landslide PSI data analysis*, International Journal of Remote Sensing, 35:6, 2186-2214, DOI 10.1080/01431161.2014.889864.

8. **Valentino R., Meisina C., Montrasio L., Losi G.L. & Zizioli D.** (2014). *Predictive Power Evaluation of a Physically Based Model for Shallow Landslides in the Area of Oltrepò Pavese, Northern Italy*. *Geotech Geol Eng*, 32, 783–805, DOI 10.1007/s10706-014-9758-3.
9. **Meisina, C., Bordoni, M., Zizioli, D., Chersich, S., Valentino, R., Bittelli, M.** (2014). *Soil-atmosphere interaction in a slope affected by shallow landslides: An example in Northern Italy*. *Unsaturated Soils: Research and Applications - Proceedings of the 6th International Conference on Unsaturated Soils, UNSAT 2014*, Volume 2, 2014, Pages 1409-1415, 6th International Conference on Unsaturated Soils, UNSAT 2014; Sydney, NSW; Australia; 2 July 2014 through 4 July 2014; Code 105275, ISBN: 978-113802690-2, Taylor and Francis – Balkema.
10. **Zizioli D., Meisina C., Bordoni M., and Zucca F.** (2014). *Rainfall-Triggered Shallow Landslides Mapping Through Pleiades Images*. *Landslide Science for a Safer Geoenvironment*, 2, 325-329, DOI 10.1007/978-3-319-05050-8_51, K. Sassa et al. (eds.), Springer International Publishing Switzerland 2014. ISBN 978-3-319-05050-8.
11. **Notti D., Calò F., Cigna F., Manunta M., Herrera G., Berti M., Meisina C., Tapete D., Zucca F.** (2015). *A user-oriented methodology for DInSAR time series analysis and interpretation: landslides and subsidence case studies*. *Pageoph, Pure and Applied Geophysics*, ISSN 0033-4553, DOI 10.1007/s00024-015-1071-4
12. **Bordoni M., Meisina C., Valentino R., Lu N., Bittelli M., Chersich S.** (2015) *Hydrological factors affecting rainfall-induced shallow landslides: from the field monitoring to a simplified slope stability analysis*. *Engineering Geology*, 193, 19-37, doi:10.1016/j.enggeo.2015.04.006.
13. **Bordoni M., Meisina C., Valentino R., Bittelli M. and Chersich S.** (2015). Site-specific to local-scale shallow landslides triggering zones assessment using TRIGRS. *Nat. Hazards Earth Syst. Sci.*, 15, 1025–1050, 2015, www.nat-hazards-earth-syst-sci.net/15/1025/2015/, doi:10.5194/nhess-15-1025-2015.
14. **Abay A. and Meisina C.** (2015). *Engineering-geological properties of carbonates and shale: their implications for dam construction in Mekelle, Northern Ethiopia*. *Momona Ethiopian Journal of Science (MEJS)*, 7(1), 64-84, Mekelle University, ISSN:2220-184X.
15. **Bonì R., Herrera G., Meisina C., Notti D., Béjar-Pizarro M., Zucca F., González P. J., Palano M., Tomás R., Fernández J., Fernández-Merodo J. A., Mulas J., Aragón R., Guardiola-Albert C. and Mora O.** (2015). *Twenty-year advanced DInSAR analysis of severe land subsidence: the Alto Guadalentín Basin (Spain) case study*. *Engineering Geology*, 198, 40–52. doi: 10.1016/j.enggeo.2015.08.014.
16. **Zizioli D., Meisina C., Zucca F., Bordoni M., Notti D., Remondino F., and Gamba P.** (2015). *Evaluation of Pleiades images for rainfall-triggered shallow landslides mapping*. G. Lollino et al. (eds.), *Engineering Geology for Society and Territory – Volume 2*, 405-409, DOI: 10.1007/978-3-319-09057-3_64, © Springer International Publishing Switzerland 2015, ISBN 978-3-319-09056-6.
17. **Bordoni M., Meisina C., Vercesi A., Bischetti G.B., Chiaradia E.A., Vergani C., Chersich S., Valentino R., Bittelli M., Comolli R., Persichillo M.G., Cislighi A.** (2016). *Quantifying the contribution to soil mechanical reinforcement of grapevines in an area susceptible to shallow landslides*. *Soil & Tillage Research* 163 (2016) 195–206, <http://dx.doi.org/10.1016/j.still.2016.06.004>.
18. **Bordoni M., Persichillo M.G. & Meisina C.** (2016). *The role of the vineyards on slope stability: a case study from an area susceptible to shallow landslides*. *Rend. Online Soc. Geol. It.*, Vol. 39 (2016), pp. 8-11, 4 figs. (doi: 10.3301/ROL.2016.34)

19. **Bonì R., Cigna F. , Bricker S., Meisina C., McCormack H.** (2016). *Characterisation of the hydraulic head changes and aquifer properties in the London Basin using Persistent Scatterer Interferometry ground motion data*. Journal of Hydrology 540 (2016) 835–849. <http://dx.doi.org/10.1016/j.jhydrol.2016.06.068>.
20. **Persichillo M.G., Bordoni M., Meisina C., Bartelletti C., Giannecchini R, D'Amato Avanzi G., Galanti Y., Cevasco A., Brandolini P., Galve J.P., Barsanti M.** (2016). *Shallow landslides susceptibility analysis in relation to land use scenarios - Landslides and Engineered Slopes. Experience, Theory and Practice*, 1605-1612 – Aversa et al. (Eds), 2016 Associazione Geotecnica Italiana, Rome, Italy, ISBN 978-1-138-02988-0.