

CURRICULUM VITAE

Marco Masetti

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Present position

01/10/2011- Associate Professor in Engineering Geology, Dipartimento di Scienze della Terra, Università degli Studi di Milano (Italy)

Past position

2002-2011- Researcher in Engineering Geology, Dipartimento di Scienze della Terra, Università degli Studi di Milano (Italy)

PhD

1994-1996 PhD in Engineering Geology, Università degli Studi di Ferrara (Italy)

RESEARCH ACTIVITIES

The main fields of research are represented by the following topics: 1) Spatial statistical methods to evaluate time and space dependent vulnerability of aquifers to non-point sources of contamination; 2) Characterization and monitoring of groundwater flow in unsaturated conditions and numerical modeling of contaminant transport in the vadose zone, including the evaluation of remediation activities; 3) Evaluation of the influence of infiltration processes in terraced slope stability at different scales.

Scientific projects as Principal Investigator and period in foreign Universities

2014 - Teaching, Research and Advisory Services for the PhD Program in Hydrogeology. Department of Earth Science, University of Addis Ababa, Ethiopia (2 months)

2013/14: ARPA Lombardia: “Hydrogeological study of the area between Adda and Oglio rivers and groundwater contaminants situation in the Zingonia Area” (P.I.: M. Masetti). (2013, 18 months)

2013: ERSAF Lombardia – Regional Office for Agricultural and Forestal Services: “Identification of groundwater vulnerability areas to agricultural sources of nitrate” (P.I.: M. Masetti). (1 year)

2010: Istituto Regionale di Ricerca della Lombardia (IRER): “Influence of infiltration basin on shallow aquifers in the greater Expo 2015 area: Phase 2 – Designing, monitoring and basin management” (P.I.: G.P. Beretta and M. Masetti). (1 year)

2008: Istituto Regionale di Ricerca della Lombardia (IRER): “Influence of infiltration basin on shallow aquifers: infiltration and contaminant problems” (P.I.: G.P. Beretta, M. Masetti). (1 year)

2008: Fondo Ambiente Italiano (FAI): “Hydrological cycle, recharge and management strategies of the Blue Lake in Campodolciino (SO)”. (P.I.: M. Masetti G. Sfondrini) (1 year)

2004: Regione Lombardia “Methods and guidelines for agricultural soils management (SIGMA)” (P.I.: G.P. Beretta, M. Masetti). (1 year)

2002: Post-doc scholarship at the Department of Environmental and Hydraulic Engineering of the Politecnico di Milano: “Influence of the Hydrogeological structure in the propagation of contaminant from industrial sources” (1year).

Main Research projects as official participant

2013: NASA: “Mega Urban Changes and Impacts in the Decade of the 2000s” (P.I.: S. Nghiem, Jet Propulsion Laboratory) (3 years)

2013: European Commission: FP7 ENV.2012.6.4-2: “Long-term monitoring experiment in geologically active regions of Europe prone to natural hazards: the Supersite concept. MED_SUV (MEDiterranean SUPersite Volcanoes)” EC-INGV. (Unit Responsible: T. Apuani, Università degli Studi di Milano) (3 years)

2006: PRIN 2005: “Evaluation of hydrogeological techniques for DNAPL groundwater contaminated sites”. Research Unit of Milan” (Unit Responsible: G.P. Beretta, Università degli Studi di Milano). (2 years)

2006: COMUNITA' MONTANA DELLA VALCHIAVENNA (FONDAZIONE CARIPLO Project): “Development of an expert-systems for water management in mountainous areas” (Unit Responsible: G. P. Beretta, Università degli Studi di Milano). (2 years)

2005: GNV-INGV project: “Monitoring and research activity at Stromboli and Panarea -Evaluation of possible scenarios of deformation and dynamics of the Sciara del Fuoco” (P.I. P. Papale – INGV). Research Unit “Slope instabilities at Stromboli: looking for the instability thresholds” (Unit Responsible: T. Apuani, Università degli Studi di Milano). (2 years)

2005: INTERREG III-B: “Alpine space”. Progetto ALPTER “Terraced landscape in the Alpine environment” (project Leader: regione Veneto). Research Unit of Milan “Management and socio-environmental analysis of the terraced landscape of Valchiavenna (SO)” (Unit Responsible: G. Sfondrini, Università degli Studi di Milano). (2 years)

Additional information

- Scientific coordinator and organizer of the POPLEX project (PO PLain Experiment- <http://urban.jpl.nasa.gov/poplex/description.html>). A series of field surveys, tests and meetings including researchers from Italian and Foreign Universities and Scientific Institutions (NASA Jet Propulsion Laboratory, University of Southampton, Université libre de Bruxelles, CNR-IFAC, Università degli Studi di Padova, Alma Mater Studiorum Università di Bologna), Milan-Padua-Bologna-Florence May 2014 (Project results published on EOS v.96, n°21)

- Member of the Steering Committee of the Doctorate in Earth Sciences at the Università degli Studi di Milano

- Elected Member of the Council of the Italian Chapter of the International Association of Hydrogeologists (IAH)

- Member of the International Association of Mathematical Geosciences (IAMG)

- Member of the Organizing Committee of AQUA 2015, the 42nd Congress of IAH, Roma 13-18 September 2015
- Member of the Organizing Committee of FLOWPATH 2014, the 2nd Congress of the Italian chapter of IAH, Viterbo 18-20 June 2014
- Member of the Organizing Committee of FLOWPATH 2012, the 1st Congress of the Italian chapter of IAH, Bologna 20-22 June 2012

- Referee for many peer-review journals: Journal of Environmental Management, Hydrological Processes, Environmental Progress & Sustainable Energy, Water Resources Management, Environmental Monitoring and Assessment, Science of the Total Environment

- More than 50 oral and poster presentation in many International (NASA-LCLUC, EGU, Euregeo, AGU, IAH, IAMG, ISRM) and National (AIGA, FIST-GeoItalia, GIT, SGI) Congresses

TEACHING ACTIVITIES

Courses

- Since 2009/10: “Technical Geology”, for the second level degree in Earth Sciences at the Università degli Studi di Milano
- Since 2010/11: “Engineering Geology and Lab – Hydrogeology section”, for the first level degree in Geological Sciences at the Università degli Studi di Milano
- Since 2010/11 “Laboratory of Geotechnique and Hydrogeology and field campaign” for the second level degree in Earth Sciences at the Università degli Studi di Milano
- From 2003/04 to 2009/10: “Groundwater flow in the vadose and saturated zone” for the first level degree in Geological Sciences at the Università degli Studi di Milano.
- From 2003/04 to 2009/10: “Engineering Geology and technical legislation” for the first level degree in Geological Sciences at the Università degli Studi di Milano.
- 2002/03: “Groundwater flow in rock masses” for the first level degree in Geological Sciences at the Università degli Studi di Milano.
- 2001/02 and 2002/03: “Engineering Geology” for the first level degree in Environmental Engineering at the Politecnico di Milano.

Tutoring for Master and PhD theses

- 5 PhD theses for the Earth Sciences doctorate program (Univ. degli Studi di Milano)
- 31 Master theses for the Second level Degree in Earth Sciences (Univ. degli Studi di Milano)
- 17 theses for the first level degree in Geological Sciences (Univ. degli Studi di Milano)
- 6 theses for the first level degree in Environmental Engineering (Politecnico di Milano)

OTHER INFORMATION

Academic roles

2015: Elected Member of the Academic Senate of Università degli Studi di Milano, Milan, Italy (3 years)

Departmental roles

- Responsible of the Stage activities for the first level degree in Geological Sciences at the Università degli Studi di Milano
- Responsible of the Stage activities for the second level (Master) degree in Earth Sciences Università degli Studi di Milano
- Member of the Council of the Earth Sciences Library at the Università degli Studi di Milano
- Member of the Committee for the Evaluation of the Department of Earth Sciences of the Università degli Studi di Milano

SELECTED PUBLICATIONS

1. **Masetti M.**, Nghiem S.V., Sorichetta A., Stevenazzi S., Fabbri P., Pola M., Filippini M., Brakenridge G.R. (2015) "Urbanization Affects Air and Water in Italy's Po Plain". *EOS*. 96, 21, 13-16, doi:10.1029/2015EO037575
2. **Masetti M.**, Pedretti D., Sorichetta A., Stevenazzi S., Bacci F.: (on line first) "Impact of a Storm-Water Infiltration Basin on the Recharge Dynamics in a Highly Permeable Aquifer". *Water Resources Management*, 10.1007/s11269-015-1151-3
3. Camera C., Apuani T., **Masetti M.** (2015) "Modeling the stability of terraced slopes: an approach from Valtellina (Northern Italy). *Environmental Earth Sciences*. doi: 10.1007/s12665-015-4089-0.
4. Stevenazzi S., **Masetti M.**, Nghiem S.V., Sorichetta A. (2015) Groundwater vulnerability maps derived from a time-dependent method using satellite scatterometer data. *Hydrogeology Journal*. doi: 10.1007/s10040-015-1236-3
5. Camera C., Apuani T., **Masetti M.** (2014) "*Mechanisms of failure on terraced slopes: the Valtellina case (northern Italy)*", *Landslides*, doi 10.1007/s10346-012-0371-3.
6. Stevenazzi S., **Masetti M.**, Nghiem, S.V., Sorichetta, A.(2014) "*Use of scatterometer data in groundwater vulnerability assessment*", *Rendiconti Online Soc. Geol. It.*, 30, 45-50 doi 10.3301/ROL.2014.10. ISSN: 20358008
7. Pedretti D., **Masetti M.**, Beretta G.P., Vitiello M. (2013). "*A Revised Conceptual Model to Reproduce the Distribution of Chlorinated Solvents in the Rho Aquifer (Italy)*". *Groundwater Monitoring & Remediation*, 33, 69-77, doi: 10.1111/gwmr.12017.
8. Sorichetta A., Ballabio C., **Masetti M.**, Robinson G.R Jr., Sterlacchini S (2013) "*A Comparison of Data-Driven Groundwater Vulnerability Assessment Methods*" *Ground Water*, doi: 10.1111/gwat.12012
9. Sorichetta A., **Masetti M.**, Ballabio C. Sterlacchini S. (2012) "*Aquifer nitrate vulnerability assessment using positive and negative Weights of Evidence methods, Milan, Italy,*" *Computers & Geosciences*, 48, 199-210, <http://dx.doi.org/10.1016/j.cageo.2012.05.021>.
10. Camera C., **Masetti M.**, Apuani T. (2012) "*Rainfall, infiltration, and groundwater flow in a terraced slope of Valtellina (Northern Italy): field data and modelling*" *Environmental Earth Sciences*" 65, 1191-1202, doi 10.1007/s12665-011-1367-3.
11. Pedretti D, **Masetti M.**, Marangoni T, Beretta G.P. (2012) "*Slurry wall containment performance: monitoring and modelling of unsaturated and saturated flow*", *Environmental Monitoring and Assessment*, 184, 607-624, doi 10.1007/s10661-011-1990-1.
12. Sorichetta A, **Masetti M.**, Ballabio C., Sterlacchini S., Beretta G.P., (2011). "*Reliability of groundwater vulnerability maps obtained through statistical methods*". *Journal of Environmental Management*, 92, 1215-1224, doi:10.1016/j.jenvman.2010.12.009.
13. Sterlacchini, S., Ballabio C., **Masetti M.**, Sorichetta A., (2011). "*Spatial agreement of predicted patterns in landslide susceptibility maps*". *Geomorphology*, 125, 51-61, doi:10.1016/j.geomorph.2010.09.004.
14. **Masetti M.**, Diolaiuti G., D'Agata C., Smiraglia C., (2010): "*Hydrological Characterization of an Ice-Contact Lake: Miage Lake (Monte Bianco, Italy)*." *Water Resources Management*, 24, 1677-1696, doi 10.1007/s11269-009-9519-x.
15. **Masetti M.**, Sterlacchini S., Ballabio C., Sorichetta A., Poli S., (2009): "*Influence of threshold value in the use of statistical methods for groundwater vulnerability assessment*" *Science of the Total Environment*, 407, 3836-3846, doi: 10.1016/j.scitotenv.2009.01.055,

16. Pedretti D, **Masetti M.** Francioli A., (2009): “Geostatistical techniques for DNAPL contamination assessment in polluted aquifers. The case of the former “Chimica Bianchi” facility in the Milan-Rho district”. *Rendiconti online Soc. Geol. It.*, Vol. 8 (2009), 105-108.
17. **Masetti M.**, Poli S., Sterlacchini S., Beretta G.P., Facchi A. (2008). “*Spatial and statistical assessment of factors influencing nitrate contamination in groundwater*”. *Journal of Environmental Management*, 86, 272-281, doi:10.1016/j.jenvman.2006.12.023.
18. **Masetti M.**, Poli S., Sterlacchini S. (2007). “*The Use of the Weights-of-Evidence Modeling Technique to Estimate the Vulnerability of Groundwater to Nitrate Contamination*”. *Natural Resources Research*, 16, 109-119, doi:10.1007/s11053-007-9045-6.
19. Apuani, T., **Masetti M.**, Uttini A. (2007). “*Debris slope stability analysis in an active volcano area*” *Proceedings of the International Workshop on Volcanic Rocks, 11th ISRM Congress, Ponta Delgada, Azores, Portugal, ISBN: 978-0-415-45140-6.*
20. Apuani, T., **Masetti M.**, Rossi M. (2007). “*Stress–strain–time numerical modelling of a deep-seated gravitational slope deformation: preliminary results*”. *Quaternary International*, 171-172, 80-89, doi:10.1016/j.quaint.2007.01.014.