

INFORMAZIONI PERSONALI

Francesca Lotti

ESPERIENZA
PROFESSIONALE

2021	Founder and CEO of the Innovative Start-up SYMPLE (School of Hydrogeological Modelling and Project-related Strategies)
2018-2020	Organizer and trainer of the yearly course "Groundwater numerical models and how to make them useful" with John Doherty (author of PEST) and Giovanni Formentin (Tethys srl)
2018-20	Key expert in the Tender for the Development of Groundwater Models to Support Groundwater Management in the Maltese Island (CT3068/2018) with TEA Sistemi S.p.A. (Pisa)
2018	Trainer of the professional course "Groundwater Model Calibration using PEST", Fondazione Ordine degli Ingegneri Milano, September 24-27
2017	Trainer of the professional course "Model Calibration and Predictive Uncertainty Analysis using PEST", Università degli Studi della Tuscia, September 11-15
2017	Trainer of the professional course "Model Calibration and Predictive Uncertainty Analysis using PEST", University of Southampton, September 4-8
from 2017	Partner at Kataclima srl
from 2015	Hydrogeologist and Groundwater Modeler at Kataclima srl
2015-2016	Adjunct Professor of "Dinamica degli inquinanti e tecniche di monitoraggio e bonifica ambientale" (6 credits), BSc "Scienze Ambientali", University of Tuscia.
from 2014	Adjunct Professor of Geostatistics (6 credits), MSc "Geoenvironmental Resources and Risks", School of Science and Tecnology, University of Camerino.
2014-2015	Research agreement (Autostrade per l'Italia spa - Tor Vergata University) "Analysis and study of the hydrogeological model of sites under investigation".
from 2014	Lecturer at the Seminar: "Innovative Technologies in Groundwater Remediation: sustainability, methodologies, dimensioning and exercises on real cases" FAST, Milan.
from 2014	Lessons of Hydrogeology, II Level Master's Degree "Techniques and Environmental Controls", University of Rome Tor Vergata.
2014	Lecturer of the course "Groundwater Numerical Modelling" for the PhD in Ecology and Management of Biological Resources, University of Tuscia.
2014	Responsible of Working Placement, in collaboration with the University of Southampton, on geostatistical data processing and numerical modeling of groundwater.
2013	Research agreement (Lazio Region-Talet spa-Tuscia University) "As-well Corchiano. Research and uptake of alternative water resources for drinking water supply of Corchiano".
2012-2015	Research agreement (Arpa Lazio-Tuscia University) "Hydrogeological conceptual model and numerical simulation of flow and transport of the Vico Lake basin".

2012-2015	Research Program "Impacts assessment of the geothermal plant of the University Rectorate and General Services on the hydrogeology and physical, chemical and microbiological properties of the aquifer," University of Rome Tor Vergata.
from 2011	Lecturer in "Well Hydraulics" and "Spatial analysis of data", II Level Master's Degree "Characterization and Technologies for Remediation of Polluted Sites", University of Rome Sapienza.
2010-2013	PRIN Project "Hydrogeology of fractured and / or karst systems: theoretical research and applications to groundwater management under current climate change".
2010	Research agreement (Province of Viterbo-Tuscia University) "Census, investigation and description of the geological sites of the Province of Viterbo".
2010	Research agreement (Fenis srl - Tuscia University) "Production test of the Oasi well for the tapping of thermal waters".
2009	Research agreement (Free Time srl-Tuscia University) "Geochemical analysis of thermal water wells".
2009-2014	Adjunct Professor of the course Groundwater Resources (5 credits), MSc "Geoenvironmental Resources and Risks", School of Science and Technology, University of Camerino.
2009-2013	Contracts on Hydrogeology and numerical modelling of central Apennines aquifers, flow and heat transport models in volcanic aquifers and similar topics.
2008-2009	Adjunct Professor of the course of Hydrogeology, Bachelor Degree in Geological Sciences, University of Camerino.
2007-2008	Research agreement (Lazio Region-Tuscia University) "Enhancement of quarry materials in the town of Viterbo. Study of possible interference with hydrothermal resources of the mining area of Viterbo. Delineation and protection of the thermal safeguard areas, taking into account of the local mining activities".
2006	Integrative Course in Applied Geology "Exercises of Hydrology, Applied Geomorphology and Technical Geology through dedicated software", Tuscia University.
from 2005	Tutor / Cotutor of more than 20 thesis
2004	Research grant on "Integration of hydrogeological modeling and land planning of the basins of the lakes of Vico and Bracciano (Lazio) as a contribution to the management and protection of water resources" within the PRIN "Impact of human activities and climatic variations on the hydrogeological balance of the most important lakes of central Italy: modeling processes and possible management strategies ", University of Tuscia.
2003	Research grant on "Hydrological and hydrogeological issues of the Rio Fratta and Corchiano; implications for the sustainable management of water resources", University of Tuscia.

ISTRUZIONE E FORMAZIONE

2011	Course "Applied reactive transport modeling", dr. C. Zheng, H. Prommer, Centro di Ricerca CERi, Università Sapienza (Roma)
2010	Course " <i>PEST (Model-Independent Parameter Estimation)</i> ", dr. John Doherty, Watermark Numerical Solutions, Centro di Ricerca CERi, Università Sapienza, Valmontone (Roma).
2010	Course " <i>Calibration, Sensitivity Analysis and Uncertainty Evaluation of Groundwater Models</i> ", dr. Mary Hill, U.S. Geological Survey, Università Roma Tre, Roma

- 2007 Course "*Calibration, Sensitivity Analysis and Uncertainty Evaluation of Groundwater Models*", dr. Mary Hill, U.S. Geological Survey, Centro di Geotecnologie, Università degli Studi di Siena, San Giovanni Valdarno (AR).
- 2007 Course "*FEFLOW Training Course*", WASY GmbH (Institute for Water Resources Management and Systems Research), Ferrara.
- 2005 PhD in "*Applied Geology, Geomorphology and Hydrogeology*", Università degli Studi di Perugia, about: "*Schema idrogeologico e modello di flusso in stazionario dell'acquifero vulcanico cimino-vicano (Lazio)*".
- 2004 Course "*Geostatistica applicata alle problematiche ambientali*", APAT - Università degli Studi di Roma "La Sapienza", Roma.
- 2003 Summer School "*Formazione in Metodologie Statistiche per l'Ambiente*", Gruppo di Ricerca per le Applicazioni della Statistica ai Problemi Ambientali, Università degli Studi di Roma "La Sapienza", Caprarola (VT).
- 2003 Course "*Groundwater modelling I: Theory and Handson Applications using MODFLOW, Modpath & MT3D*", Waterloo Hydrogeologic, Roma.
- 2001 Degree in Environmental Sciences (*indirizzo terrestre, orientamento chimico*) 110/110 cum Laude, Università degli Studi della Tuscia
- 1995 Languages high school graduation (60/60), Viterbo

COMPETENZE PERSONALI

Lingua madre Italiano

Altre lingue

	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
Inglese	C1	C1	C1	C1	C1

Livelli: A1/A2: Utente base - B1/B2: Utente intermedio - C1/C2: Utente avanzato
 Quadro Comune Europeo di Riferimento delle Lingue

Patente di guida B

ULTERIORI INFORMAZIONI

Pubblicazioni

Recognition of "Best Article" of the Malta mean Sea Level Aquifer paper. In Voss, C.I. Editor's Message: The 2021 Editors' Choice articles. *Hydrogeol J* **30**, 1–2 (2022). <https://doi.org/10.1007/s10040-022-02457-w>

Lotti F, Borsi I, Guastaldi E, Barbagli A, Basile P, Favaro L, Mallia A, Xuereb R, Schembri M, Mamo JA, Sapiano M (2021) Numerically enhanced conceptual modelling (NECoM) applied to the Malta Mean Sea Level Aquifer. *Hydrogeology Journal*, in press.

V Piscopo, F Formica, L Lana, F Lotti, L Pianese, M Trifuoggi (2020) Relationship Between Aquifer Pumping Response and Quality of Water Extracted from Wells in an Active Hydrothermal System: The Case of the Island of Ischia (Southern Italy). *Water* **12**, 2576; doi:10.3390/w12092576

V Piscopo, F Lotti, F Formica, L Lana, L Pianese (2019) Groundwater flow in the Ischia volcanic island (Italy) and its implications for thermal water abstraction. *Hydrogeology Journal*

A Baiocchi, F Formica, F Lotti, L Pianese, V Piscopo, G Summa (2019) Occurrence, management and protection of mineral and thermal waters in some volcanic areas of Italy: Current knowledge and future directions. *Sustainable Water Resources Management* 5 (4), 1495-1509

Viaroli S, Lotti F, Mastrocillo L, Paolucci V, Mazza R (2019) Simplified two-dimensional modelling to constrain the deep groundwater contribution in a complex mineral water mixing area, Riardo Plain, southern Italy. *Hydrogeology Journal* <https://doi.org/10.1007/s10040-018-1910-3>

Piscopo V, Di Luca S, Dimasi M, Lotti F (2018) Sustainable Yield of a Hydrothermal Area: From Theoretical Concepts to the Practical Approach. *Groundwater* doi: 10.1111/gwat.12833

Baiocchi A, Lotti F, Piscopo V, Sammassimo V (2018) Hard-rock aquifer response to pumping and sustainable yield of wells in some areas of Mediterranean Region. *Geological Society, London, Special Publications* 479

Viaroli S, Mastrocillo L, Lotti F, Paolucci V, Mazza R (2018) The groundwater budget: A tool for preliminary estimation of the hydraulic connection between neighboring aquifers. *Journal of Hydrology* 556, 72-86

Piscopo V, Baiocchi A, Lotti F, Ayan EA, Biler AR, Ceyhan HA, Cüylan M, Dişli A, Kahraman S, Taşkın M (2017) Estimation of rock mass permeability using variation in hydraulic conductivity with depth: experiences in hard rocks of western Turkey. *Bull Eng Geol Environ*. DOI 10.1007/s10064-017-1058-8

Lotti F, Doherty J (2016) The role of numerical models in environmental decision-making. *Acque Sotterranee - Italia Journal of Groundwater*. DOI 10.7343/as-2016-231

Baiocchi A, Lotti F, Piscopo V (2016) Occurrence and flow of groundwater in crystalline rocks of Sardinia and Calabria (Italy): an overview of current knowledge. *Acque Sotterranee - Italian Journal of Groundwater*. DOI 10.7343/as-2016-195

Fazi S, Crognale S, Casentini B, Amalfitano S, Lotti F, Rossetti S (2016) The arsenite oxidation potential of native microbial communities from arsenic rich freshwaters. *Microbial Ecology* - DOI: 10.1007/s00248-016-0768-y

Baiocchi A., Lotti F., Piscopo V. (2016) Reply to Comment on "Impact of groundwater withdrawals on the interaction of multi-layered aquifers in the Viterbo geothermal area (central Italy)": report published in *Hydrogeology Journal* (2013) 21:1339–1353, by Antonella Baiocchi, Francesca Lotti and Vincenzo Piscopo. *Hydrogeol J* DOI 10.1007/s10040-016-1374-2

Baiocchi A., Dragoni W., Lotti F., Piacentini S.M., Piscopo V. (2015) A Multi-Scale Approach in Hydraulic Characterization of a Metamorphic Aquifer: What Can Be Inferred about the Groundwater Abstraction Possibilities. *Water* 2015, 7, 4638-4656; doi:10.3390/w7094638

Lotti F. (2015) Modelli al servizio dell'Idrogeologia o Idrogeologia al servizio dei Modelli? *Acque Sotterranee - Italian Journal of Groundwater*; ASr13078:69-70, DOI 10.7343/AS-112-15-0139

Fazi S., Amalfitano S., Casentini B., Davolos D., Pietrangeli B., Crognale S., Lotti F., Rossetti S. (2015) Arsenic removal from naturally contaminated waters: a review of methods combining chemical and biological treatments. *Rend. Fis. Acc. Lincei*, DOI 10.1007/s12210-015-0461-y

- Armiento G., Baiocchi A., Cremisini C., Crovato C., Lotti F., Lucentini L., Mazzuoli M., Nardi E., Piscopo V., Proposito M., Veschetti E. (2015) An Integrated Approach to Identify Water Resources for Human Consumption in an Area Affected by High Natural Arsenic content. *Water* 2015, 7, 5091-5114; doi:10.3390/w7095091
- Baiocchi A., Dragoni W., Lotti F., Piscopo V. (2014) Sustainable yield of fractured rock aquifers: the case of crystalline rocks of Serre Massif (Calabria, southern Italy). *IAH Selected Papers, Fractured Rock Hydrogeology*, CRC Press-Taylor&Francis Group, 386 pp; ISBN 978-1-138-00159-6.
- Baiocchi A., Lotti F., Piacentini S.M., Piscopo V. (2013) Comparison of pumping at constant head and at a constant rate for determining the sustainable yield of a well. *Environ Earth Sci* 72:989-996 DOI 10.1007/s12665-013-3016-5
- Baiocchi A., Lotti F., Piacentini S. M. (2013) Numerical simulation of groundwater flow to determine the sustainable yield of a well. *Rendiconti Online della Società Geologica Italiana*, 24:19-21.
- Baiocchi A., Lotti F., Piscopo V. (2013) "Impact of groundwater withdrawals on the interactions between overlapping aquifers in the Viterbo geothermal area (Central Italy). *Hydrogeology Journal*, 21:1339-1353, DOI: 10.1007/s10040-013-1000-5.
- Baiocchi A., Coletta A., Esposito L., Lotti F., Piscopo V. (2013) "Sustainable Groundwater Development in a Naturally Arsenic-contaminated Aquifer: the Case of the Cimino-Vico Volcanic Area (Central Italy)". *Italian Journal of Engineering Geology and Environment*, 1:5-18 DOI: 10.4408/IJEGE.2013-01.O-01.
- Baiocchi A., Lotti F., Piscopo V. (2012) "Conceptual Hydrogeological Model and Groundwater Resource Estimation in a Complex Hydrothermal Area: The Case of the Viterbo Geothermal Area (Central Italy)". *Journal of Water Resource and Protection*, 4, 231-247.
- Lotti F., Baiocchi A., D'Onofrio S., Piscopo V. (2012) "Caratterizzazione idrogeologica di rocce calcareo-silico-marnose attraverso rilievi di superficie delle discontinuità e prove di pompaggio", *Acque Sotterranee*, 1:27-36. DOI 10.7343/AS-002-12-0002.
- Valigi D., Di Matteo L., Dragoni V.U., Frondini F., Cambi C., Boscherini A., Checcucci R., Lotti F. (2012) Carta Idrogeologica del Monte Cucco (Umbria Nord-Orientale). Bilancio idrogeologico dei complessi giurassici e cretacico inferiori. Carta idrogeologica stampata dalla Regione dell'Umbria nell'ambito del "Progetto Regione Umbria: Piano Ambientale 2006 (DAP 2006-2008). DPCM 13.11.2000".
- Cambi C.; Di Matteo L.; Dragoni V.U.; Frondini F.; Valigi D.; Boscherini A.; Checcucci R.; Lotti F. (2012) Carta Idrogeologica dei Monti di Gualdo (Umbria Nord-Orientale). Bilancio idrogeologico dei complessi giurassici e cretacico inferiori. Carta idrogeologica stampata dalla Regione dell'Umbria nell'ambito del "Progetto Regione Umbria: Piano Ambientale 2006 (DAP 2006-2008). DPCM 13.11.2000".
- Baiocchi A., Lotti F., Piscopo V. (2011) "Influence of hydrogeological setting on the arsenic occurrence in groundwater of the volcanic areas of central and southern Italy", *AQUA Mundi* 2(2):131-142.
- Baiocchi A., Di Paola A., Lotti F., Piscopo V., Spaziani F. (2010) "Intrusione marina negli acquiferi carbonatici: il caso del fronte sorgivo di Castellammare di Stabia (Napoli)", *Italian Journal of Engineering Geology and Environment* 2:33-48.
- Baiocchi A., Lotti F., Piscopo V., Rocchetti I. (2008) "Interazioni tra acque sotterranee e fiume Marta (Italia centrale) e problematiche connesse con la determinazione del deflusso minimo vitale", *Italian Journal of Engineering*

Geology and Environment, 1:37-55.

Dragoni W., Piscopo V., Di Matteo L., Gnucci L., Leone A., Lotti F., Melillo M., Petitta M. (2006) "Risultati del progetto di ricerca PRIN "Laghi 2003-2005"" Giornale di Geologia Applicata Vol.3/2006, p. 39-46.

Baiocchi A., Di Paola A., Frascchetti A., Lotti F., Piscopo V. (2005) "Valutazione delle risorse idriche in un'area urbanizzata: l'esempio del bacino dell'Urcionio", Giornale di Geologia Applicata Vol.2/2005, p. 393-398.

Baiocchi A., Lotti F., Piscopo V., Chiochini U., Madonna S., Manna F. (2005) "Hydraulic Interactions between aquifers in the Viterbo area (Central Italy)"; Matthias Eiswirth Memorial Volume IAH, p. 223-238, Ken Howard ed., Toronto

Baiocchi A., Dragoni W., Lotti F., Luzzi G., Piscopo V. (2005) "Outline of the Hydrogeology of the Cimino and Vico Volcanic Area and of the Interaction between Groundwater and Lake Vico (Lazio Region, Central Italy)" Bollettino della Società Geologica Italiana, p. 187-202.

Piscopo V., Baiocchi A., Fantucci R., Lotti F. (2005) "La risposta al pompaggio di acquiferi vulcanici: alcuni esempi delle aree napoletana e viterbese", Italian Journal of Engineering Geology and Environment, vol. 1, p. 21-35.

Lotti F., Prota A., Vulcano G. (2002) "Il bilancio idrologico del bacino del Rio Fratta (Viterbo-Lazio): implicazioni per un uso sostenibile delle risorse idriche", Geologia Tecnica & Ambientale, vol. 3, p. 49-58.

Baiocchi A, Lotti F, Piscopo V (2015) Occurrence and flow of groundwater in crystalline rocks of Sardinia and Calabria (Italy): an overview of current knowledge. AQUA2015 - 42nd IAH International Congress - 13-18 September 2015 Rome.

Baiocchi A, Lotti F, Di Luca S (2014) Hydrogeological scheme and steady-state flow model of Vico Lake basin. Abstract Vol. IAH National Meeting on Hydrogeology – Flowpath 2014; DEB – Università della Tuscia; 175 pp, ISBN 978-88-907553-4-7.

Baiocchi A, Barbieri M, Battistel M, Delfanti LMP, Lotti F, Madonna S, Piscopo V (2014) The role of perched aquifers and dome-impounded groundwater in drinking water supply in the cimino-vico volcanoes (central Italy). Abstract Vol. IAH National Meeting on Hydrogeology – Flowpath 2014; DEB – Università della Tuscia; 175 pp, ISBN 978-88-907553-4-7.

Lotti F, Baiocchi A, Pagano G, Piscopo V (2014) Sustainable groundwater withdrawals in the geothermal area of Viterbo (central Italy). Abstract Vol. IAH National Meeting on Hydrogeology – Flowpath 2014; DEB – Università della Tuscia; 175 pp, ISBN 978-88-907553-4-7.

Lotti F, Baiocchi A, Tavilli U, Romani F (2014) Determining a site-specific sustainable yield through numerical simulations. Abstract Vol. IAH National Meeting on Hydrogeology – Flowpath 2014; DEB – Università della Tuscia; 175 pp, ISBN 978-88-907553-4-7.

Piscopo V, Baiocchi A, Lotti F (2013). Hydrogeological approach in sustainable management of thermal waters: two examples from Italian volcanic aquifers. In: Proceedings of the IAH Central European Groundwater Conference 2013. SZEGED:University of Szeged, ISBN: 978-963-306-217-3, Morahalom, Hungary, May 8-10, 2013.

Piscopo V, Baiocchi A, Cozzolino M, Lotti F, Summa G (2012). Analysis of flow data of a well pumped at constant-head to determine the sustainable yield. In: 39th international Association of Hydrogeologists Congress. Niagara Falls, Canada,

September 16-21, 2012.

Dragoni W, Baiocchi A, Lotti F, Piscopo V (2012). Sustainable yield of fractured rock aquifers: the case of crystalline rocks of the Serre Massif (Calabria, southern Italy). In: Hrkal Z, Kovar K. Groundwater in Fractured rocks. p. 14-15, Prague, Czech Republic, 21-24 May 2012.

Baiocchi A., Dragoni W., Lotti F., Piscopo V. Sustainable yield of fractured rock aquifers: the case of crystalline rocks of Serre Massif (Calabria, southern Italy) in Fractured Rock Hydrogeology (Sharp, J.M., Jr., and Troeger, U., eds.): Selected Papers 9, International Association of Hydrogeologists, Taylor & Francis, London, Selected from the 2012 IAH/IASH Conference in Prague.

Baiocchi A., Lotti F. (2012) "Analysis Of The Interactions Between Overlapping Aquifers In The Viterbo Hydrothermal Area (Central Italy) From Pumping Tests" 20- 22 June 2012, Flowpath 2012 - Percorsi di Idrogeologia, Bologna (Italy).

Baiocchi A., Coletta A., Lotti F., Piscopo V. (2011) "Sustainable Groundwater Development in a Naturally Arsenic-contaminated Aquifer: the case of the Cimino-Vico volcanic area (Central Italy)". Poster at Geoitalia 2011, VIII Forum Italiano di Scienze della Terra; 19-23 settembre, Torino.

Piscopo V, Baiocchi A, Lotti F, Minicillo L, Refrigeri P (2010) Criteria for the definition of the protection areas in the Viterbo hydrothermal area (Central Italy).. In: XXXVIII IAH Congress "Groundwater Quality Sustainability". vol. 2, p. 573-574, Silesia:PPHU TOTEM

Baiocchi A., Lotti F., Piscopo V., Spaziani F. (2009) "Influenza dell'assetto idrostratigrafico e idrostrutturale sulla distribuzione dell'arsenico nelle acque sotterranee delle aree vulcaniche dell'Italia centro-meridionale", Atti della 38° Giornata di Studio di Ingegneria Sanitaria-Ambientale "L'Arsenico nelle acque per il consumo umano: aspetti sanitari, tecnologici e gestionali", 10 dicembre, Viterbo; Università degli Studi di Roma Sapienza.

Piscopo V., Baiocchi A., Bicorgna S., Lotti F. (2008) "Hydrogeological support for estimation of the sustainable well yield in volcanic rocks: some examples from Central and Southern Italy" Proc. XXXVI IAH Congress, Toyama, Giappone, p. 1652-1666.

Di Matteo L., Gnucci L., Lotti F. (2005) "Problemi ambientali ed idrogeologici dei principali Laghi dell'Italia Centrale", volume degli atti della "Giornata Mondiale dell'Acqua: lagune, laghi e invasi artificiali italiani" per la collana "Atti dei Convegni dei Lincei", p. 247-257.

Dragoni W., Lotti F., Piscopo V., Sibi A. (2002) "Bilancio idrogeologico del lago di Vico (Lazio – Italia)" Proc. Congresso Internazionale "Residence Time in Lakes: Science, Management, Education", 29 settembre – 3 ottobre, Bolsena; p. 96-104.

Dati personali Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

la sottoscritta dichiara di essere consapevole che il presente *curriculum vitae* sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione "Amministrazione trasparente", nelle modalità e per la durata prevista dal d.lgs. n. 33/2013, art. 15.