



TULLIA BONOMI

Date of birth: 14/08/1964 | **Nationality:** Italian | **Gender:** Female |
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Piazza della Scienza 1, 20126, Milano, Italy

WORK EXPERIENCE

2010 – CURRENT – Milano, Italy

ASSOCIATE PROFESSOR – UNIVERSITÀ DEGLI STUDI MILANO-BICOCCA

Main responsibilities:

- she teaches the three-year degree course "Scienze e Tecnologie per l'Ambiente", Principi di Scienze della Terra, and in the master's course "Scienze e Tecnologie per l'Ambiente e il Territorio", Idrogeologia, Idrogeologia Applicata e Didattica della geologia
- she leads an environmental hydrogeology group with 2 researchers, post-doc students, PhD students
- she is responsible for the quality (AQ) of the Bachelor's Degree in Science and Technology for the Environment
- she participates in the didactic planning commission of the three-year degree course in "Scienze e Tecnologie per l'Ambiente"

2000 – 2009 – Milano, Italy

RESEARCHER IN HYDROGEOLOGY – UNIVERSITÀ DEGLI STUDI MILANO-BICOCCA

The main research aspects are:

- Hydrogeology and water management
- Groundwater flow and transport modelling
- Geostatistical reconstruction
- Water balance between surficial water and groundwater
- Hydrogeological database.

EDUCATION AND TRAINING

1991 – 1995 – Italy

PHD – Università degli Studi di Milano

Field(s) of study

- Hydrogeology and hydrogeological Modeling

Thesis: Thesis on hydrogeological flow and transport modelling, for the quantitative and qualitative evaluation of the groundwater resources.

1986 – 1991 – Italy

MASTER IN EARTH SCIENCE – Università degli Studi di Milano

Thesis: Thesis on hydrogeological flow modeling in a plain area.

110/100 cum laude

MANAGEMENT AND LEADERSHIP SKILLS

Managerial skills

Leadership currently responsible for a team of 6 people: Ph.D. students and Research Fellows; coordinator of research units in several projects. Many years of experience in tutoring ungraduated graduated and Ph.D. students

PUBLICATIONS

58 Scopus peer review papers, HI 12, Author ID: 6603660361

Only the papers published in the last 5 years are reported below. Compleat list see the link below.

<https://boa.unimib.it/handle/10281/244958>

2022

Zanotti C., Caschetto M., Bonomi T., Parini M., Cipriano G., Fumagalli L., Rotiroti M. (2022). Linking local natural background levels in groundwater to their generating hydrogeochemical processes in Quaternary alluvial aquifers. *SCIENCE OF THE TOTAL ENVIRONMENT*, vol. 805, 150259, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2021.150259

2020-2021

Filippini, Maria, Zanotti, Chiara, Bonomi, Tullia, Sacchetti, Vito G., Amorosi, Alessandro, Dinelli, Enrico, Rotiroti, Marco (2021). Deriving Natural Background Levels of Arsenic at the Meso-Scale Using Site-Specific Datasets: An Unorthodox Method. *WATER*, vol. 13, 452, ISSN: 2073-4441, doi: 10.3390/w13040452

Leoni B., Zanotti C., Nava V., Rotiroti M., Stefania G. A., Fallati L., Soler V., Fumagalli L., Savini A., Galli P., Bonomi T. (2021). Freshwater system of coral inhabited island: Availability and vulnerability (Magoodhoo Island of Faafu Atoll – Maldives). *SCIENCE OF THE TOTAL ENVIRONMENT*, vol. 785, 147313, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2021.147313

Rotiroti, M, Bonomi, T, Sacchi, E, McArthur, JM, Jakobsen, R, Sciarra, A, Etiope, G, Zanotti, C, Nava, V, Fumagalli L, Leoni, B (2021). Overlapping redox zones control arsenic pollution in Pleistocene multi-layer aquifers, the Po Plain (Italy). *SCIENCE OF THE TOTAL ENVIRONMENT*, vol. 758, 143646, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2020.143646

Sartirana, D., Rotiroti, M., Zanotti, C., Bonomi, T., Fumagalli, L., De Amicis, M. (2020). A 3D Geodatabase for Urban Underground Infrastructures: Implementation and Application to Groundwater Management in Milan Metropolitan Area. *ISPRS INTERNATIONAL JOURNAL OF GEO-*

G.A Stefania, M. Bigoni, C. Zanotti, M. Rotiroti, F. Simonetto, P. Capodaglio, L. Fumagalli, T. Bonomi (2020). Assessment of the groundwater quantitative status in the Aosta Plain (North-West Italy): applicability of the national guidelines defined by ISPRA. *ACQUE SOTTERRANEE*, vol. 9, p. 25-37, ISSN: 1828-454X, doi: 10.7343/as-2020-446

Nava V., Patelli M., Bonomi T., Stefania G. A., Zanotti C., Fumagalli L., Soler V., Rotiroti M., Leoni B. (2020). Chloride Balance in Freshwater System of a Highly Anthropized Subalpine Area: Load and Source Quantification Through a Watershed Approach. *WATER RESOURCES RESEARCH*, vol. 56, e2019WR026024, ISSN: 0043-1397, doi: 10.1029/2019WR026024

Serri, L, Colle, L, Vitali, B, Bonomi, T. (2020). Floating Offshore Wind Farms in Italy beyond 2030 and beyond 2060: Preliminary Results of a Techno-Economic Assessment. *APPLIED SCIENCES*, vol. 10, 8899, ISSN: 2076-3417, doi: 10.3390/app10248899

Fumagalli, L., Stefania, G., Zanotti, C., Sartirana, D., Di Martino, G., Perosa, A., Valentini, P., Rotiroti, M., Bonomi, T. (2020). Multivariate statistical analysis and numerical modelling for the hydrogeological and hydrochemical characterization of a closed MSW landfill: the case study of Vizzolo-Predabissi. *ACQUE SOTTERRANEE*, vol. 9, p. 7-16, ISSN: 2280-6458, doi: 10.7343/as-2020-43

Zanotti C., Rotiroti M., Sterlacchini S., Cappellini G., Fumagalli L., Stefania G. A., Nannucci M. S., Leoni B., Bonomi T. (2019). Choosing between linear and nonlinear models and avoiding overfitting for short and long term groundwater level forecasting in a linear system. *JOURNAL OF HYDROLOGY*, vol. 578, 124015, ISSN: 0022-1694, doi: 10.1016/j.jhydrol.2019.124015

Zanotti, C, Rotiroti, M, Fumagalli, L, Stefania, GA, Canonaco, F, Stefenelli, G, Prévôt, ASH, Leoni, B, Bonomi, T (2019). Groundwater and surface water quality characterization through positive matrix factorization combined with GIS approach. *WATER RESEARCH*, vol. 159, p. 122-134, ISSN: 0043-1354, doi: 10.1016/j.watres.2019.04.058

Stefania, G. A, Rotiroti, M., Buerge, Ignaz J, ZANOTTI, C., NAVA, VERONICA, Leoni, B., Fumagalli, L., Bonomi, T. (2019). Identification of groundwater pollution sources in a landfill site using artificial sweeteners, multivariate analysis and transport modeling. *WASTE MANAGEMENT*, vol. 95, p. 116-128, ISSN: 0956-053X, doi: 10.1016/j.wasman.2019.06.010

Rotiroti, M., Bonomi, T., Sacchi, Elisa, McArthur, John M, Stefania, G. A, Zanotti, C., Taviani, S., Patelli, M., Nava, V., Soler, Valentina, Fumagalli, L., Leoni, B. (2019). The effects of irrigation on groundwater quality and quantity in a human-modified hydro-system: The Oglio River basin, Po Plain, northern Italy. *SCIENCE OF THE TOTAL ENVIRONMENT*, vol. 672, p. 342-356, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2019.03.427

Rotiroti, M, Jakobsen, R, Fumagalli, ML, Bonomi, T. (2018). Considering a threshold energy in reactive transport modeling of microbially mediated redox reactions in an arsenic-affected aquifer. *WATER*, vol. 10, 90, ISSN: 2073-4441, doi: 10.3390/w10010090

Stefania, GA, Zanotti, C, Bonomi, T, Fumagalli, L, Rotiroti, M (2018). Determination of trigger levels for groundwater quality in landfills located in historically human-impacted areas. *WASTE MANAGEMENT*, vol. 75, p. 400-406, ISSN: 0956-053X, doi: 10.1016/j.wasman.2018.01.043

Stefania, GA, Rotiroti, M, Fumagalli, ML, Simonetto, F, Capodaglio, P, Zanotti, C, Bonomi, T (2018). Modeling groundwater/surface-water interactions in an Alpine valley (the Aosta Plain, NW Italy): the effect of groundwater abstraction on surface-water resources. *HYDROGEOLOGY JOURNAL*, vol. 26, p. 147-162, ISSN: 1431-2174, doi: 10.1007/s10040-017-1633-x

Stefania, G., Rotiroti, M., Fumagalli, Maria L., Zanotti, C., Bonomi, T. (2018). Numerical Modeling of Remediation Scenarios of a Groundwater Cr(VI) Plume in an Alpine Valley Aquifer. *GEOSCIENCES*, vol. 8, 209, ISSN: 2076-3263, doi: 10.3390/geosciences8060209

● **PROJECTS**

2000 – CURRENT

The main research projects in progress, or completed, are:

- Nitrati nelle acque sotterranee lombarde (Regione Lombardia- ERSAF) (2021-2023)
- Climate change. impact on groundwater (Acque Bresciane) (2021-2023)
- Water Safety Plan of Brescia (A2A) (2021-2023)
- Water Safety Plan (Acque Bresciane) (2019-2021)
- Natural Background Level of Fe, As, Mn Regione Lombardia (2018-2020)
- Modeling of SIN Polo chimico di Mantova e laghi (ARPA Mantova) (2019-2020)
- Modeling of the Oglio basin, Cariplo project (2015-2018)
- Flow modelling and transport nella piana di Aosta (ARPA VdA) (2011-2017)
- Hydrogeological modeling torrent Spoel, Livigno (SO) (2012-2017).
- Hydrogeological modeling of the landfill of Vizzolo Predabizzi (Municipalità Milano) (2017-2018).
- Modeling the effectiveness of hydraulic confinement in a refinery (2013)
- Modelling in the urban area of Saint Petersburg (Russia) (Life Project) (2009-2012).
- Contamination of arsenic iron and manganese in groundwater (Provincia Cremona) (from 2009-2013).
- Hydrogeological database (since 1998)
- Tangafic hydrogeological database (2014-2017).
- Hydro chemical database (since 2004)
- Three-dimensional reconstructions of the characteristics of the subsoil (since 2000).

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B1	B1	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Informating processing

Microsoft Office | MODFLOW | MT3DMS | Groundwater Vistas | ArcGis 10.8 | Surfer 10

Problem solving

Team-work oriented | Organizational and planning skills | Decision-making | Empathic listener | Good listener and communicator | Responsibility

Modeling skills

Creativity | Strategic Planning | Critical thinking | Reliability | Flexibility

● **REVIEWING AND EDITORIAL ACTIVITIES**

Reviewing, editorial activities and memberships

- Associate Editor of Acque Sotteranee – Italian Journal of Groundwater, ISSN 2280-6458
- Reviewer for more than 20 peer review international journals
- Member of IAH International Association of Hydrogeology.
- Member of AIGA Associazione Italiana Geologia Applicata e Ambientale