

Valentina Ciriello

Curriculum Vitae

Research Interests

Reduced-order models. Scientific Machine Learning. Uncertainty quantification. Flow and transport in porous media. Water-Food-Energy Nexus. Biomedical applications.

Academic Employment

- Sept 2019 - **Associate Professor** of Civil and Environmental Engineering. University of Bologna.
- Dec 2013 **Assistant Professor** of Civil and Environmental Engineering. University of Bologna.
- May-Sept 2013 **Adjunct Professor** MSc in Civil Engineering, University of Bologna.
- Jul-Dec 2013 **Postdoctoral Researcher**. University of Bologna.

Education and Visiting Positions

- May 2013 **PhD in Hydraulic Engineering** (Excellent, with Honors), University of Bologna.
- Oct 2011-Feb 2012 **Visiting Scholar** at Department of Geotechnical Engineering and Geosciences, Universitat Politecnica de Catalunya, Barcelona Tech.
- Dec 2009 **Professional Master** in Natural Disaster Risk Management, University of Bologna.
- Jul 2008 **MSc in Environmental Engineering** (Summa Cum Laude), University of Bologna.

Institutional Responsibilities

- 2025- **Faculty Member & Coordinator Delegate for Learning Activities**, PhD Programme in *Civil, Chemical, Environmental and Materials Engineering*, University of Bologna.
- 2021- **Member of the Research Committee**, Dept. DICAM, University of Bologna.
- 2019- **Member of the Degree Programme Quality Assurance Committee**, BSc and MSc in Civil Engineering, University of Bologna.
- 2017-2025 **Faculty Member**, PhD Programme in *Engineering and Information Technology for Structural and Environmental Monitoring and Risk Management*, University of Bologna.
- 2015-2018 **Member of the Admission Board** MSc in Civil Engineering and International MSc in Civil Engineering, University of Bologna.
- 2015-2018 **Member of the Transfer Committee** BSc in Civil Engineering, University of Bologna.

Honors, Fellowships and Awards

- 2026 Anneliese Niethammer Lecture, SFB 1313, University of Stuttgart, Germany
- 2017 Outstanding Contribution in Reviewing, by the Editors of *Advances in Water Resources*
- 2017 Alma Idea Grant for Research [20k€], University of Bologna
- 2013 Special Mention for PhD dissertation, awarded by the Italian Group of Hydraulics
- 2011 Scholarship “Marco Polo mobility for research” [$\approx$ 2k€], University of Bologna
- 2009 Best Female Graduate Students in the School of Engineering and Industrial Chemistry

Organisation of Scientific Meetings

- 2026 **Chair:** XXVI International CMWR Conference.

- 2024-2026 **Organizer:** Mini-symposium, INTERPORE, Annual Meeting.
- 2020-2026 **Organizer:** Session, International CMWR Conference.
- 2020 **Scientific Committee:** XXIII International CMWR Conference.
- 2016 **Organizing Committee:** XXXV National Congress of Hydraulics.

Editorial activities

- 2026- **Associate Editor:** *ARC Geophysical Research*, ARC Alliance
- 2024- **Associate Editor:** *Journal of Computing in Civil Engineering*, ASCE
- 2024- **Associate Editor:** *J. of Machine Learning for Modeling and Computing*, Begell House
- 2021- **Associate Editor:** *Journal of Hydrology*, Elsevier
- 2016- **Associate Editor:** *Stochastic Environmental Research and Risk Assessment*, Springer

Membership of Scientific Societies

European Geosciences Union - EGU. American Geophysical Union - AGU. International Society for Porous Media - InterPore. Society for Industrial and Applied Mathematics - SIAM.

Research Projects

- 2023-2026 PRIN 2022 *Predictive forecasting and risk assessment for CO₂ transport in pipelines*, funded by the Italian Ministry of University and Research (MUR). [Principal Investigator]
 - 2022-2026 MAR2PROTECT *Preventing groundwater contamination related to global and climate change through a holistic approach on managed aquifer recharge*, EU Horizon.
 - 2022-2025 StopUP *Protecting the aquatic environment from urban runoff pollution*, EU Horizon.
 - 2019-2023 PRIN 2017 *Fluid dynamics of hearts at risk of failure*, Italian Ministry of Education, Universities and Research (MIUR). [Unit Leader]
 - 2020-2023 WATERGY *Energy efficiency of the Integrated Water Service*, funded by National Operational Programme on Research and Innovation.
 - 2016-2020 BRIGAIID *Bridging the Gap for Innovations in Disaster Resilience*, EU H2020 Programme.
 - 2016-2019 FALDA *Monitoring network management of the hypodermic aquifer*, EU Rural Development.
 - 2016-2018 GST4Water *Green-Smart Technology for the sustainable use of Water in buildings and urban areas*, European Regional Development Fund.
 - 2011-2015 TRUST *Transitions to the Urban Water Services of Tomorrow*, EU FP7 Programme.
- Research Contracts funded by private companies: Multiutility HERA SpA, Multiutility IREN Group.

Teaching and Mentoring

Thirteen years of teaching experience at the University of Bologna. Courses AY 2026-27:

Advanced Models and Methods for Water Security, International Curriculum in Earth Resources Engineering - MSc in Environmental Engineering, language: English. Hydraulics, BSc in Civil Engineering, language: Italian. Environmental Hydraulics, MSc in Civil Engineering, language: Italian.

Mentoring of 35 undergraduate (BSc) and 23 graduate (MSc) theses in Civil and Environmental Engineering, 5 PhD students, 4 postdoctoral researchers, 5 master's students.

Scientific Publications

ORCID <https://orcid.org/0000-0002-1670-6740>
[Google Scholar](#)