

## **Monica Riva, PhD**

Professor

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### **Education and Professional Career**

1989-1995 Bachelor + Master in Civil Engineering, PoliMi, Milano, Italy

1996-2000 Doctoral Degree in Hydraulic Engineering, PoliMi, Milano, Italy

2016- Professor, PoliMi, DICA

2011 – 2016 Associate Professor, PoliMi, DICA

2002 – 2011 Assistant Professor, PoliMi, Dept. of Environmental, Hydraulic, Infrastructures and Surveying Engineering (DIAR)

1999-2002 Assistant Researcher, PoliMi, DICA

2013, 2014: Professeur Invité at the University of Strasbourg, France.

2011, 2012: Visiting Professor at the Dept. of Hydrology and Water Resources, The University of Arizona, Tucson, Arizona, USA.

2008 Visiting Scientist at the CNRS/INSU, Poitiers (France). Program: HTHS, Hydrodynamic and Transfers in Hydrogeological Systems

1999, 2006: Visiting Scientist at Dept. of Hydrology and Water Resources, The University of Arizona, Tucson, Arizona, USA.

### **Commitment, Appointments and Scientific Volunteer Jobs**

2020- today Rector's delegate for International Networks, PoliMi.

2019- today Deputy-Director of the PhD Programme in Environmental and Infrastructure Engineering, at DICA-PoliMi.

2018-today Editor of the International Journal Encyclopedia of Geosciences

2016-2021 Chair of the Subsurface Hydrology and Groundwater sub-division at EGU (European Geophysical Union)

2014-2016 Member of the international development strategy committee of DICA-PoliMi

2013-today Adjunct Professor at the Department of Hydrology and Atmospheric Sciences of the University of Arizona

2013- today Editor of the International Journal HESS - Hydrology and Earth System

2010-today Associate Editor of the International Journal Water Resources Research

2009- today Council Member of Interpore (International Society for Porous Media)

2004-2009 Associate Editor of the International Journal Reviews of Geophysics

2004 – 2010: Member of the scientific committee of the European Conference on Geostatistics for Environmental Applications (GeoENV)

Professional Societies: Interpore American Geophysical Union; National Groundwater Association, Board of Engineers (Italy).

### **Professional Awards, Offers and Recognitions**

Outstanding Editor Award, Hydrology and Earth System Sciences (HESS), EGU, 2022.

Mercator Fellowship (DFG, German Research Foundation), 2020

### **Most important Publications (maximum 10)**

[1] Riva M., A. Guadagnini, D. Fernandez-Garcia, X. Sanchez-Vila, T. Ptak, Relative importance of geostatistical and transport models in describing heavily tailed breakthrough curves at the

- Lauswiesen site, *J. Contam. Hydrol*, 101, 1-13, 2008.
- [2] Riva M., M. Panzeri, A. Guadagnini, S. P. Neuman, (2011), Role of model selection criteria in geostatistical inverse estimation of statistical data- and model-parameters, *Water Resour. Res.*, 47, W07502, doi:10.1029/2011WR010480.
- [3] Siena M., Riva M., Hyman J. D., Winter C. L. and A. Guadagnini (2014) Relationship between pore size and velocity probability distributions in stochastically generated porous media, *Physical Review E*, 89(1), 013018, doi: 10.1103/PhysRevE.89.013018
- [4] Porta G.M., L. Tamellini, V. Lever, M. Riva (2014) Inverse modeling of geochemical and mechanical compaction in sedimentary basins through Polynomial Chaos Expansion, *Water Resour. Res.*, 50, 12, 9414-9431,doi: 10.1002/2014WR015838.
- [5] Ranaee E., G. M. Porta, M. Riva, M. J. Blunt, A. Guadagnini (2015), Prediction of three-phase oil relative permeability through a sigmoid-based model. *J. Petrol.Sci. Eng.*, 126, 190-200, doi: 10.1016/j.petrol.2014.11.034
- [6] Riva M., S. P. Neuman, A. Guadagnini (2015), New scaling model for variables and increments with heavy-tailed distributions, *Water Resour. Res.*, 51, 4623-4634, doi:10.1002/ 2015WR016998.
- [7] Dell'Oca A., M. Riva, A. Guadagnini (2020) Global Sensitivity Analysis for Multiple Interpretive Models with Uncertain Parameters, *Adv. Water Res*, 56, e2019ER025754, doi: 10.1029/2019WR025754.
- [8] La Cecilia D., G.M. Porta, F.H.M. Tang, M. Riva. F. Maggi (2020) Probabilistic indicators for soil and groundwater contamination risk assessment, *Ecological Indicators*, 115, 1006424, doi: 10.1016/j.ecolind.2020.1064
- [9] Knabe D., A Guadagnini, M. Riva, I. Engelhardt (2021) Uncertainty analysis and identification of key parameters controlling bacteria transport within riverbank filtration scenario, *Water Resour. Res.*, 57, e2020WR027911, doi: 10.1029/2020WR027911.
- [10] Ceresa L., A. Guadagnini, G.M. Porta, M. Riva (2021) Formulation and probabilistic assessment of reversible biodegradation pathway of Diclofenac in groundwater, *Water Research*, 204, 117466, <https://doi.org/10.1016/j.watres.2021.117466>