

GIOVANNI MICHELE PORTA

Curriculum vitae

PERSONAL INFORMATION

Place and date of birth: Milano, 29/10/1981

Phone: +39 0223996256

Email: giovanni.porta@polimi.it

Orcid: <https://orcid.org/0000-0002-0636-373X>

SUMMARY

I am currently an Associate Professor at the Department of Civil and Environmental Engineering of Politecnico di Milano, Italy. My research is focused on developing new models and methods to improve our current understanding of flow and transport processes in porous media. I develop and apply mathematical modelling and statistical techniques that can improve our understanding of critical water and energy resources residing in aquifers and subsurface reservoirs. Specific topics of research include upscaling of reactive transport and mixing processes in porous media, contaminant transport in soil and aquifers, environmental risk assessment, model reduction techniques, uncertainty propagation and inverse modelling methodologies, application of machine learning to large scale geological models.

EMPLOYMENT HISTORY

2019: Visiting Professor at School of Civil Engineering, The University of Sydney, Australia.

From 2018: **Associate professor** Department of Civil and Environmental Engineering, Politecnico di Milano.

2015-18: **Assistant professor**, Dept. of Civil and Environmental Engineering, Politecnico di Milano.

2010-15: **Research associate**, Dept. of Civil and Environmental Engineering, Politecnico di Milano.

2013-15: **Adjunct professor**, School of Industrial and Information Engineering, Politecnico di Milano.

EDUCATION

2007-2010: **PhD in Hydraulic Engineering** at DIAR, Politecnico di Milano (with honours).

Thesis title: Anisotropic Mesh Adaptation for Shallow Water Modelling.

2006: **Master Degree in Civil Engineering**, at Politecnico di Milano.

RESEARCH PROJECTS

I have led five industrially funded research project as Principal Investigator or Co-PI:

1. **DionisosCalib: Development and validation of a methodology for uncertainty quantification and stochastic model calibration of forward stratigraphic models in carbonate environments.** Funded by Eni SpA, 12/2019-12/2020.
 2. **Development of a work-flow for the calibration of 3D Gravity Flow.** Funded by Eni SpA, 7/2019-3/2020.
 3. **Development of a modelling approach for the modelling of geochemical and mechanical compaction processes in the presence of glaciations.** Funded by Eni SpA, 9/2016-12/2018.
 4. **TANKS Integrity and soil contamination monitoring.** Funded by Eni SpA, 6/2018-12/2018.
 5. **Validation of models for generation of non-hydrocarbon components in sedimentary basins.** Funded by Eni SpA, 7/2016-6/2017.
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I have participated in more than **15 research projects** including industrial and national/international research projects, having the following key topics: environmental modeling, uncertainty quantification, statistical modelling of geological systems, data analysis, contaminants in soil and groundwater, flow and transport in porous media.

VISITING

5/2011-8/2011: Institut Pprime, CNRS, Futuroscope Cedex, France (3 months)

8/2017 and 1/2018: School of Civil Engineering, The University of Sydney, Australia (2 months)

7/2019-2/2020: School of Civil Engineering, The University of Sydney, Australia (6 months)

AWARDS and SPECIAL PROFESSIONAL ACTIVITIES

2019: Nominated outstanding reviewer by the AGU Journals Editors.

2019: Junior Marchi Lecturer, awarded from GII (Gruppo Italiano di Idraulica), association of Italian Academics in the field of Hydraulic Engineering.

2019: InterPore Rosette, awarded for special services within the International Society for Porous Media.

Member of Editorial Board (Associate Editor) of Stochastic Environmental Research and Risk Assessment (from 9/2016), Hydrogeology Journal (from 2017-2021, 3 years appointment renewed for an additional year upon appreciation of the Editor in Chief). **Reviewer** for more than 20 international journals.

Member of the Communication Committee of the International Society for Porous Media (InterPore).

Member of Scientific and Organizing Committee of scientific meetings and conference sessions (e.g., SIAM Uncertainty Quantification, SIAM Geosciences).

ADVISOR and EXAMINER OF PhD CANDIDATES

I was advisor of 5 PhD students which completed their PhD at Politecnico di Milano. Currently I am supervising or co-supervising 3 PhD candidates. **External Examiner**, within PhD Evaluation Committee at Imperial College London, UK (2015) and Universitat Politecnica de Catalunya, Spain (2017).

TEACHING

2019: Unit lecturer of the Master course **Advanced Water Resources Engineering**, School of Civil Engineering, The University of Sydney (Australia).

From 2011: **Tenure of courses of Fluid Mechanics**, School of Industrial Engineering, Politecnico di Milano. **Tenure of the course of Hydraulics and Applied Hydraulics**, School of Building Engineering, Politecnico di Milano.

PUBLICATIONS AND CONFERENCE PRESENTATIONS

I have published 40 paper in international journals. All my publications can be accessed online through my [ORCID](#) and [Google Scholar](#) profiles.

I delivered six invited presentations at national and international conferences and I regularly present my work at international conferences.