

## PERSONAL INFORMATION **Mario Lloyd Virgilio MARTINA**

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## WORK EXPERIENCE

Academic roles	2021 – now	Full Professor in Hydrology at IUSS Pavia
	2017 – 2021	Associate Professor in Hydrology at IUSS Pavia
	2014 – 2017	Researcher in Hydrology at IUSS Pavia
	2010 – 2012	Research Fellow in Flood Risk Modelling at University of Bologna
Research projects (Selection of the most recent)	2023 – now	PI of “Risk-based design of Infrastructures” (6.7 Mln €), funded by Ministry of University and Research Dipartimenti di Eccellenza
	2022 – now	Unit leader of “MEDIATE - Multi-hazard and risk informed system for Enhanced local and regional Disaster risk management” (250 k€) funded by EU Commission, Horizon Europe
	2019 – 2021	PI of “SMART - A Statistical, Machine Learning Framework for Parametric Risk Transfer” (200 k€) funded by World Bank and UK Department of International Development
	2019 – 2021	Unit leader of “NOCTUA Landscape monitoring. For Everyone. From space” (900 k€) funded by Regione Lombardia
	2017 – 2018	PI of “Risk Appetite Index based on Machine Learning Techniques, RATIONAL” funded by the Allianz Global Corporate Solution, Munich (D)
	2020 – 2026	Coordinator of the Project “PhD in Sustainable Development and Climate change (PhD-SDC)” (20.5 Mln€) funded by the Minister of University and Research and 52 Italian Universities
	2020 – 2023	PI of the Project “IUSS Data Center High Performance Computer” (3.4 Mln€) funded by the Regione Lombardia
	2020 – 2021	PI of “Climate change impact in economy”, funded by IRPET – Istituto Regionale per la Programmazione Economica della Toscana
	2022 – 2024	WP leader of “Multi-hazard and Risk-informed system for Enhanced Local and Regional Disaster risk management”, Horizon-EU
Academic appointments	2021 – now	Coordinator of Inter-University PhD Course in Sustainable Development and Climate Change
	2021 – now	Prorector for the International Relationships, IUSS Pavia
	2021 – now	Director of the IUSS Data Center of High Performance Computing
	2014 – now	Member of the Scientific Board of the PhD in Understanding an Managing the Risk
	2018 – 2023	Head of the Department of Science, Technology and Society, IUSS
	2018 – 2023	Member of the Academic Senate, IUSS
	2017 – 2018	Head of the Research Center on Uncertainty and Risk Assessment
Prizes	2018	Honorary Associate Professor at Department of Mathematics at the University of Exeter

## EDUCATION AND TRAINING

2000 – 2004 PhD in Natural hazard risk assessment, University of Bologna

1999 – 2000 MSc in Risk Engineering and Loss Adjustment, CINEAS - Polytechnic of Milan

1995 – 2000 MSc in Civil Environmental Engineering, University of Bologna

**PERSONAL SKILLS**

Mother tongue(s) Italian  
 Other language(s) English (C2)

**PUBLICATIONS**

(Selection of 1 most recent publications)

- 1) Cesarini, L., Gonçalves, R., Martina, M., Romão, X., Monteleone, B., Pereira, F. L., & Figueiredo, R.. Comparison of deep learning models for milk production forecasting at national scale. *Computers and Electronics in Agriculture*, 221, 2024
- 2) Figueiredo, R., Rangel-Parra, R., Bussi, G., Ceresa, P., Coccia, G., & Martina, M. L. V.. A semi-quantitative multi-hazard risk assessment framework for European coastal urban areas. *Geomatics, Natural Hazards and Risk*, 15(1), 2024
- 3) Monteleone, B., Borzi, I., Arosio, M., Cesarini, L., Bonaccorso, B., & Martina, M., Modelling the response of wheat yield to stage-specific water stress in the Po Plain. *Agricultural Water Management*, 287, 108444, 2023
- 4) Monteleone, B., Giusti, R., Magnini, A., Arosio, M., Domeneghetti, A., Borzi, I., Martina, M. L., Estimations of Crop Losses Due to Flood Using Multiple Sources of Information and Models: The Case Study of the Panaro River. *Water*, 15(11), 1980, 2023
- 5) Monteleone, B., Borzi, I., Bonaccorso, B., Martina M., Quantifying crop vulnerability to weather-related extreme events and climate change through vulnerability curves. *Nat Hazards* 116, 2761-2796, 2023
- 6) Bateni, M.M., Martina, M.L.V. & Arosio, Multivariate return period for different types of flooding in city of Monza, Italy. *Nat Hazards* 114, 811-823, 2022
- 7) Monteleone B, Borzi, Bonaccorso B, Martina M., Developing stage-specific drought vulnerability curves for maize: the case study of the Po River basin., *Agric Water Manage* 269(107):713, 2022
- 8) Cesarini, L., Figueiredo, R., Romão, X., Martina, M., Exposure modelling of transmission towers using street-level imagery and a deep learning object detection model. In *Proceedings of the International Conference on Natural Hazards and Infrastructure*, 2022
- 9) Arosio, M., Cesarini, L., & Martina, M. L., Assessment of the Disaster Resilience of Complex Systems: The Case of the Flood Resilience of a Densely Populated City. *Water*, 13(20), 2830, 2021
- 10) Arosio, M., Arrighi, C., Cesarini, L., & Martina, M. L. V., Service accessibility risk (SAR) assessment for pluvial and fluvial floods in an urban context. *Hydrology*, 8(3), 142, 2021
- 11) Cesarini, L., Figueiredo, R., Monteleone, B., Martina, M.L.V., The potential of machine learning for weather index insurance. *Natural Hazards And Earth System Sciences*, vol. 21, p. 2379-2405, ISSN: 1684-9981, doi: 10.5194/nhess-21-2379-2021, 2021
- 12) Vecere, A., Martina, M.L.V., Monteiro, R., Galasso, C., Satellite precipitation-based extreme event detection for flood index insurance. *International Journal of Disaster Risk Reduction*, vol. 55, ISSN: 2212-4209, doi: 10.1016/j.ijdrr.2021.102108, 2021

Bibliographic Indicators

SCOPUS: Documents/Citations/h-index = 41/1174/16  
 Google SCHOLAR: Documents/Citations/h-index = 212/1809/20  
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Mario Martina