

PERSONAL INFORMATION

Ilaria Gnecco

University of Genoa
Department of Civil, Chemical and Environmental Engineering
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Sex | Date of birth | Nationality

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
<input type="checkbox"/> Mid-Management Level	<input checked="" type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

ICAR/02 – HYDRAULIC STRUCTURES, MARITIME ENGINEERING AND HYDROLOGY

WORK EXPERIENCE

From 09/01/2016 to date

Associate Professor of Hydraulic Structures and Hydrology (ICAR/02)

Dept. of Civil, Chemical and Environmental Engineering, University of Genoa, Genoa, IT

Italian Scientific Habilitation to become a Full professor (September 2019)

Research activities in the field of urban hydrology to investigate and promote urban resilience to climate change (including experimental studies and modelling related to urban stormwater runoff, Sustainable Drainage Systems, rainwater harvesting, impact of uncertainties in the operational condition of the surface drainage system on pluvial flood hazard) and watershed management (including analysis of extreme hydrologic variables, impact of the rainfall event structures on the hydrologic response on small ungauged catchments, hydrological modelling to support the hydropower management strategies.). The research activity is supported by more than 120 scientific papers published on refereed Journals, edited Books, Manuals and Conference Proceedings.

Teaching activities in the field of Hydrology and Hydraulic structures (20 CFU) for BEng and MSc/MPhil in Civil Engineering, Environmental Engineering and Building and Architectural Engineering since 2016.

Managing duties [including Orientation Delegate for the Polytechnic School (2019-present), Scientific Coordinator of the DICCA Hydraulic Laboratory (2021-present)]

From 11/02/2008 to 08/31/2016

Assistant Professor of Hydraulic Structures and Hydrology (ICAR/02)

Dept. of Civil, Chemical and Environmental Engineering, University of Genoa, Genoa, IT

Italian Scientific Habilitation to become an Associate professor (December 2013)

Research activities mainly in the field urban hydrology related to the transport of pollutant associated to runoff and the related impact on the receiving water body.

Teaching activities [Urban hydraulic Infrastructures for MSc/MPhil in Safety engineering for transport, logistics and production since 2013, Water resources management for MSc/MPhil in Civil and Environmental Engineering]

From 04/01/2007 to 10/31/2008

Post-doc fellow

University of Genoa, Genoa, IT

EDUCATION AND TRAINING

From 11/2003 to 03/2007

PhD in Civil and Environmental Engineering - Methods for Environmental Monitoring

Interuniversity PhD Program: University of Basilicata - University of Genoa, Italy)

- Dissertation title: Hydrologic processes and pollutants transport in storm water runoff.
- 5 months (June-October 2006) at the University of Florida as visiting PhD student in the research group under the supervision of Prof. J.J. Sansalone

From 11/199 to 03/2007

M.S. and B.Eng (Hons) in Environmental Engineering

University of Genoa, Genoa, Italy

- Dissertation title: Stormwater runoff management in the urban area of Genoa; monitoring campaign and experimental data analysis

WORK ACTIVITIES

Main projects

She has participated to several national and European research projects, in particular as Principle Investigator of UNIGE research unit in the following projects:

- 01-12-2019 to date: **CCC-CATAPULT** - Challenging the Climate Crisis: Empowering Children's Agency to Tackle Policy Underpinned by Learning for Transformation. *JPI Climate - SOLSTICE 2019*. Project Funds. Value: € 1.382.860,00 of which 146.300,00 € to UNIGE-DICCA.
- 01-03-2017 to 31-12-2020: **TRIG-Eau** - Cross-border resilience innovation and governance for hydrogeological risk prevention. *EU Interreg Cross-border Maritime Italy-France 2014-2020* Project Funds. Value: € 2,091,370 of which 176.850,95 € to UNIGE-DICCA; The capitalization project **ReS-Eau** - Strategic network for flood risk reduction through green infrastructure and the creation of climate-resilient communities has been founded under the EU Interreg Cross-border Maritime Italy-France Project Funds (V Call).
- 01-01-2012 to 31-12-2014: **AQUA-ADD** – Deploying the added value of water in local and regional development. *EU Interreg IVc* Project Funds. Value: € 1,815,439.81 of which 124.127,68 to UNIGE-DICCA.
- 01-03-2010 to 01-03-2014: Project manager of **ECOMAWARU** – ECO-sustainable MAnagement of WAterland wastewater in RUral communities (LIFE 08 ENV/IT/000390) Life+2008 Program. Project Funds. Value: € 960.122,00 of which 471.186,00 € to UNIGE-DICHEP.

Participation to the following national and European research projects (more recent/relevant):

- Starting up to 19/05/2025: **URCAI** – Urban Resilience to Climate Change: to Activate participatory mapping and decision support tool for enhancing the sustainable urban drainage. PRIN2020 Project. Value: € 830,349 of which 193,298 € to UNIGE-DICCA.
- 01-03-2017 to 01-03-2021: **Concert-Eaux** – Cross-border consultation of the Roia Valley for climate change adaptation strategies. *EU Interreg Alcotra* Project Funds. Value: € 1,998,634.
- 01-09-2016 to 01-03-2018: Integrated and sustainable water-energy cycle management service for urban drainage systems. National Funding Programma Operativo Nazionale "Ricerca e Competitività 2007-2013" PON-REC Project Funds.
- 01-10-2011 to 30-09-2014: Feasibility study for the estimation of the mini-hydroelectric potential (MHP) on the Liguria Region. National Funding - Liguria POR-FERS "Industrial research and experimental development" Project Funds. Value: € 354,738.34.

Other relevant project

Scientific responsible for the research contract stipulated with the Environmental Regional Agency of Liguria - ARPAL concerning the "Evaluation of extreme precipitation regimes of sub-hourly and hourly duration on a regional scale". Amount: 100,000 €. Duration: May - December 2019.

Editorial activity

Guest Editor of Special Issue "Resilient water-wise cities: social, environmental and technical contributions of rainwater harvesting systems and water-reuse techniques" 2019, Water (MDPI).

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English – Advanced; French – Elementary;

Higher Education & Training skills

Member of the Academic Board (Collegio dei docenti) of the PhD program in "Civil, Chemical and Environmental Engineering", University of Genoa from 2017 to date;

Member of the Academic Board (Collegio dei docenti) of the PhD program in "Fluidodinamica e

ADDITIONAL INFORMATION

Publications

total number of publications in peer-review journals (listed on Scopus): 42
1631 citations
H index 17 (Scopus)

- Quaranta, E., Arkar, C., Branquinho, C., ...Zanin, G., Pistocchi, A. (2024). A daily time-step hydrological-energy-biomass model to estimate green roof performances across Europe to support planning and policies. *Urban Forestry and Urban Greening*, 93, 128211.
- Gnecco, I., Pirlone, F., Spadaro, I., ...Pezzagno, M., Palla, A. (2024). Participatory Mapping for Enhancing Flood Risk Resilient and Sustainable Urban Drainage: A Collaborative Approach for the Genoa Case Study. *Sustainability (Switzerland)*, 16(5), 1936.
- Gnecco, I., Palla, A., La Barbera, P., Roth, G., Giannoni, F. (2023). Defining intensity–duration–frequency curves at short durations: a methodological framework. *Hydrological Sciences Journal*, 2023, 68(11), 1499–1512.
- Palla, A. and Gnecco, I. (2021). The web-gis trig eau platform to assess urban flood mitigation by domestic rainwater harvesting systems in two residential settlements in Italy. *Sustainability (Switzerland)* 13(13),7241. DOI: 10.3390/su13137241
- Palla, A. and Gnecco, I. (2020). A continuous simulation approach to quantify the climate condition effect on the hydrologic performance of green roofs. *Urban Water Journal*, 17(7), 609–618. DOI: 10.1080/1573062X.2019.1700287
- Campora, M., Palla, A., Gnecco, I., Bovolenta, R., and Passalacqua R. (2020). The laboratory calibration of a soil moisture capacitance probe in sandy soils. *Soil and Water Research*, 15(2), 75-84. DOI: 10.17221/227/2018-SWR
- Gnecco, I., Palla, A. and Sansalone J.J. (2019). Partitioning of zinc, copper and lead in urban drainage from paved source area catchments. *Journal of Hydrology*, 578, 124128. DOI: 10.1016/j.jhydrol.2019.124128
- Palla, A., Gnecco, I. e La Barbera, P. (2018). Assessing the hydrologic performance of a green roof retrofitting scenario for a small urban catchment. *Water (Switzerland)*, 10(8), 1052. DOI: 10.3390/w10081052
- Gnecco, I., Palla, A. and La Barbera P. (2018). A dimensionless approach for the runoff peak assessment: Effects of the rainfall event structure. *Hydrology and Earth System Sciences*, 22, 943-956. DOI: 10.5194/hess-22-943-2018
- Palla A., Gnecco I e La Barbera P. (2017). The impact of domestic rainwater harvesting systems in storm water runoff mitigation at the urban block scale. *Journal of Environmental Management*, 191, 297-305. DOI: 10.1016/j.jenvman.2017.01.025
- Palla A., Gnecco I, La Barbera P., Ivaldi M., Caviglia D. (2016). An Integrated GIS Approach to Assess the Mini Hydropower Potential. *Water Resources Management*, 30, 2979-2996. DOI: 10.1007/s11269-016-1318-6
- Palla, A., Gnecco, I. (2015). Hydrologic modeling of Low Impact Development systems at the urban catchment scale. *Journal of Hydrology*, 528, 361-368. DOI: 10.1016/j.jhydrol.2015.06.050
- Palla, A., Gnecco, I., Carbone, M., Garofalo, G., Lanza L.G. e Piro, P. (2015). Influence of stratigraphy and slope on the drainage capacity of permeable pavements: laboratory results. *Urban Water Journal*, 12(5), 394-403. DOI: 10.1080/1573062X.2014.900091
- Gnecco, I., Palla, A., Lanza L.G. e La Barbera P. (2013) The Role of Green Roofs as a Source/sink of Pollutants in Storm Water Outflows. *Water Resources Management*, 27(14), 4715-4730. DOI: 10.1007/s11269-013-0414-0

Genoa, 30/01/2025

Ilaria Gnecco