



Giulia Evangelista

Hydraulic Engineer, Ph.D., currently Post-doc @ Politecnico di Torino

Age: 30 yo

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ResearchGate: <https://www.researchgate.net/profile/Giulia-Evangelista>

Research Experience

Vienna University of Technology (Austria), Institute of Hydraulic Engineering and Water Resources Management

Research topic: Non-linear flood attenuation effects of dams

Visiting Post-doc

May 2024

Politecnico di Torino (Italy), Dept. of Environment, Land and Infrastructure Engineering

Research topic: Assessment of hydrological and hydraulic hazard in small watersheds in Italy, with a focus on large infrastructures and river intersections

Post-doc

Mar 2024 - now

Politecnico di Torino (Italy), Dept. of Environment, Land and Infrastructure Engineering

Research topic: Support for the creation of a water infrastructure inventory in Italy

Research fellow

Nov 2023 – Mar 2024

University of Bristol (UK), Dept. of Civil Engineering

Research topic: Identification of dominant controls on basin response times in UK

Visiting Ph.D. Student

Feb 2023 – May 2023

Professional Experience

CINID (Consorzio Interuniversitario per l'IDrologia)

Update and revision of the hydraulic risk scenarios of the Mazzeno river (Noli, SV, Italy)

Consultant

Jun 2022 – Sep 2022

Hydrological studies for the purposes of hydraulic risk mitigation in Vezza d'Alba (CN, Italy)

Consultant

Oct 2021

Hydrological and hydraulic assessment and review of the Civil Protection planning tools for the town of Noli (SV, Italy) - [Civil Protection plan](#)

Consultant

Apr 2021 – Dec 2022

Teaching Experience

MSc course in Environmental Engineering, Politecnico di Torino (Italy)

Climatology & Hydrology

Teaching Assistant

2024-2025

MSc course in Environmental Engineering, Politecnico di Torino (Italy)

Climatology & Hydrology

Teaching Assistant

2023-2024

MSc course in Environmental Engineering, Politecnico di Torino (Italy)

Operative Hydrology

Teaching Assistant

2022-2023

Transversal skills and Orientation Project, Politecnico di Torino (Italy)

Digital Tech for Natural Hazards

Tutor

2021-2022

MSc course in Environmental Engineering, Politecnico di Torino (Italy)

Civil Protection

Tutor

2021-2022

MSc course in Environmental Engineering, Politecnico di Torino (Italy)

Operative Hydrology

Tutor

2021-2022

Tutoring

PhD's

- PhD in Civil and Environmental Engineering, Politecnico di Torino (Italy)
Bogoni P. - 40th cycle

Co-tutor

2024

Master Theses

- Master Thesis in Environmental Engineering, Politecnico di Torino (Italy)
Della Corte R. - The 'Mississippi River Delta Transition Initiative': Assessing the impacts of sea-level rise and seawater intrusion on the hydrology of coastal wetlands and estuarine marshes in the Mississippi Delta Region

Co-supervisor

2024

- Master Thesis in Environmental Engineering, Politecnico di Torino (Italy)
Tranchini C. - The 'Mississippi River Delta Transition Initiative': An Eco-hydrological model to assess the impacts of extreme droughts and salt-water intrusion in the Mississippi River Delta Region **Co-supervisor**
2024
- Master Thesis in Civil Engineering, Politecnico di Torino (Italy)
Chiaro M. - Characterization of flood discharges in high-elevations basins in the Italian Alps **Co-supervisor**
2023
- Master Thesis in Civil Engineering, Politecnico di Torino (Italy)
Ruggeri C. – Empirical estimates of rational method annual runoff coefficients **Co-supervisor**
2023
- Master Thesis in Environmental Engineering, Politecnico di Torino (Italy)
Bogoni P. – Direct estimation of characteristic response times of Piedmont basins by using event analysis **Co-supervisor**
2023
- Master Thesis in Environmental Engineering, Politecnico di Torino (Italy)
Mcdowell M. - The influence of wildfires on the occurrence of shallow landslides and related triggering mechanisms **Co-supervisor**
2023
- Master Thesis in Environmental Engineering, Politecnico di Torino (Italy)
Demateis Raveri M. - Calibration of the FloodAlp model on basins in the north-western Alps
Awarded with the "Premio di Laurea Magistrale Andrea Gambi" on water resources management **Co-supervisor**
2022

Research Projects

FRISBEE (National funding)

Flood pRediction In Small ungauged Basins of Italy through Enhanced runoff coefficient assessment

Task: Runoff coefficient estimation through historical data and regionalization

Collaborator
Sep 2023 - now

RETURN (EU funding)

Multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate

Task: Leader of Action A.3.2.1 – Homogeneous hydrological hazard assessment over Italian Large Dams

Action Leader
Apr 2023 - now

RESBA (EU funding)

REsilienza agli SBArramenti - RESiliencedesBArrages

Task: Flood volumes estimation

Collaborator
Nov 2020

Project Reports

Lavalle L., Villani M.L., Patriarca T., Bazzurro N., Serale G., Cova P., Converso R., Delsoldato G., Piramide V., Ghillani A., Adorni M., De Giovanni M., Fiorini M., Freni G., Torregrossa M., Giovannini G., Mauro A., Agostini I., Ceresara M., Carpanese P., Saler E., Donà M., Badin L., Follador V., da Porto F., Claps P., Mazzoglio P., **Evangelista G.**, Cammarata G., Zani G., Lombardi M., Berardi D., Ridolfi E., De Girolamo P., Codato C., Toth E., Bragalli C. (2023). Inventory, Description and Classification of Interdependent Infrastructures and their Critical Assets. RETURN PNRR project Deliverable D6.2.1.

Education

Politecnico di Torino (Italy), Dept.of Environment, Land and Infrastructure Engineering

Thesis: Flood hazard sensitivity on infrastructures in small ungauged watersheds

Final grade: Ph.D. degree *cum laude*

Ph.D. Student
Nov 2020 – Jan 2024

University of Palermo (Italy)

Summer School on Ecohydrology and Global Environmental Change

Participant
Jul 2023

University of Birmingham (UK)

Catchment Science Summer School

Participant
Aug 2022

Lake Como School of Advanced Studies (Como, Italy)

Summer School on quantitative approaches to soil system dynamics

Participant
Sep 2021

Politecnico di Torino (Italy)

Thesis: Methodological and numerical analysis of groundwater flows effects on shallow landslides, in the presence of topographical discontinuities

Final grade: 110/110

Master Student
Oct 2017 – Oct 2020

Università Politecnica delle Marche (Italy)

Thesis: An approach to develop a water distribution networks control system aimed at reducing hydraulic unavailability and leakages

Final grade: 103/110

Undergraduate Student
Sep 2013 – Jul 2017

Publications

In preparation

1. **Evangelista, G.**, Bogoni, P., Ganora, D., Claps, P. Large-scale reconstruction of historical flood runoff coefficients to support basin classification. **2024**. In preparation.

Submitted

1. **Evangelista, G.**, Monforte, I., Claps, P. Elevation and morphological controls on flood quantiles in a warming climate in the Alps. **2024**. Submitted to *Water Resour. Res.*
2. **Evangelista, G.**, Mazzoglio, P., Ganora, D., Pianigiani, F., Claps, P. Features of the Italian Large Dams and their upstream catchments. **2024**. Submitted to *Earth Syst. Sci. Data*.

Published/Accepted for publication

1. Claps, P., **Evangelista, G.**, Ganora, D., Mazzoglio, P., and Monforte, I.: FOCA: a new quality-controlled database of floods and catchment descriptors in Italy, *Earth Syst. Sci. Data*, 16, 1503–1522, <https://doi.org/10.5194/essd-16-1503-2024>, **2024**.
2. **Evangelista, G.**, Ganora, D., Mazzoglio, P., Pianigiani, F., Claps, P.: Flood attenuation potential of Italian dams: sensitivity on geomorphic and climatological factors. *Water Resour. Manag.*, 37, 6165–6181, <https://doi.org/10.1007/s11269-023-03649-z>, **2023**.
3. **Evangelista, G.**, Woods, R., Claps, P.: Dimensional analysis of literature formulas to estimate the characteristic flood response time in ungauged basins: a velocity-based approach, *J. Hydrol.*, 627, 130409, <https://doi.org/10.1016/j.jhydrol.2023.130409>, **2023**.
4. Demateis Raveri, M., **Evangelista, G.**, Monforte, I.: Taratura del modello FloodAlp su bacini dell'arco alpino nord- occidentale, *L'Acqua*, 4, 99-108, **2023** (in Italian).
5. Ganora, D., **Evangelista, G.**, Cordero, S., Claps, P.: Design flood hydrographs: a regional analysis based on flood reduction functions, *Hydrol. Sci. J.*, 68(2), 325-340, <https://doi.org/10.1080/02626667.2022.2153051>, **2023** - Selected as HSJ Featured Article 2023.

Conference Proceedings

1. Ganora D., **Evangelista G.**, Mazzoglio P., Claps P. **2024**. Hydrological models and datasets to support flood flow estimation at river-bridge intersections. In: *Procedia Structural Integrity*, 62, 653-660. [Proceeding](#)
2. **Evangelista, G.**, Woods, R., Claps P. **2024**. Towards robust operational estimation of the time of concentration in ungauged basins. In: *Proceedings of the XXXIX Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, 15th-18th September 2024, Parma (Italy). [Proceeding](#)
3. Monforte, I.; **Evangelista, G.**; Claps, P. **2022**. Flooding Risk from Global Warming in Alpine Basins: An Estimate along a Stream Network. In: *Environmental Sciences Proceedings*. [Proceeding](#)
4. Monforte, I., **Evangelista, G.**, Ganora, D., Mazzoglio, P., Claps, P. **2022**. Nuovi open-data per nuove stime idrologiche alla scala di distretto. Il caso del Po. In: *Proceedings of the XXXVIII Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, 4th-7th September 2022, Reggio Calabria (Italy). [Proceeding](#)
5. **Evangelista, G.**, Ganora, D., Cordero, S., Claps, P. **2022**. Stime regionali di idrogrammi di piena da una nuova banca dati nel nord ovest italiano. In: *Proceedings of the XXXVIII Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, 4th-7th September 2022, Reggio Calabria (Italy). [Proceeding](#)
6. **Evangelista, G.**, Mazzoglio, P., Pianigiani, F. and Claps, P. **2022**. Towards the assessment of the flood attenuation potential of Italian dams: first steps and sensitivity to basic model features. In: *Proceedings of the 39th LAHR World Congress*, 19th-24th June 2022, Granada (Spain). [Proceeding](#)
7. **Evangelista, G.**, Barbero, M., Butera, I., Castelli, M., Claps, P., and Tamea, S. **2021**. Calibrating soil cohesion and saturated conductivity in rainfall induced landslides in the Langhe area (1994). In: *Proceedings of the 2nd LAHR Young Professionals Congress*, Online, 30th November-2nd December 2021. [Proceedings](#)

Conference Abstracts

1. **Evangelista, G.**, Woods, R., and Claps, P. **2024**. Providing help in estimating the time of concentration in ungauged basins. *AGU Annual Meeting 2024*, 9th-13th December 2024, Washington, DC (US) [poster presentation].
2. **Evangelista, G.**, Mazzoglio, P., Ganora, D., Pianigiani, F., Claps, P. **2024**. A new knowledge resource on Italian Large Dams and their upstream basins. *RETURN Dissemination Workshop "New perspectives for multi-risk assessment and management under climate change – Digital transition, innovative partnership, future challenges"*, 27th-29th November 2024, Bologna (Italy) [poster presentation].
3. Claps, P., **Evangelista, G.**, Ganora, D., Mazzoglio, P., Monforte, I. **2024**. FOCA: the Italian FLOOD and Catchment Atlas. *RETURN Dissemination Workshop "Multi risk models from assessment to validation and implication for decision making"*, 19th-21st June 2024, Bari (Italy) [poster presentation].
4. Claps, P., **Evangelista, G.**, Ganora, D., Mazzoglio, P., Monforte, I. **2024**. FOCA: a new quality-controlled collection of floods and catchment attributes in Italy. *EGU General Assembly 2024*, 14th-19th April 2024, Vienna (Austria). [Abstract](#)
5. Woods, R., Yin, Y., **Evangelista, G.**, Claps, P., Giani, G., Zheng, Y., Coxon, G., Quaglia, R., Han, D., Rico-Ramirez, M. A fresh start for flood estimation in ungauged catchments. **2024**. *EGU General Assembly 2024*, 14th-19th April 2024, Vienna (Austria). [Abstract](#)
6. **Evangelista, G.**, Woods, R., Claps, P. How to avoid unreliable formulas for time of concentration in ungauged basins. **2024**. *EGU General Assembly 2024*, 14th-19th April 2024, Vienna (Austria). [Abstract](#)
7. **Evangelista, G.**, Ganora, D., Mazzoglio, P., Pianigiani, F., Claps, P. **2024**. Key elements for a homogeneous flood hazard assessment on Large Dams in Italy. *RETURN Dissemination Workshop*, 1st-2nd February 2024, Torino (Italy). [Poster](#)

8. Claps, P., **Evangelista, G.**, Ganora, D., Mazzoglio, P., Monforte, I. **2024**. The Italian FIOod and Catchment Atlas (FOCA). *RETURN Dissemination Workshop*, 1st-2nd February 2024, Torino (Italy). [Poster](#)
9. Claps, P., **Evangelista, G.**, Ganora, D., Mazzoglio, P., Monforte I. **2023**. FOCA: FIOod and Catchment Atlas for 631 gauged watersheds in Italy. *AGU Annual Meeting 2023*, 11th-15th December 2023, San Francisco (US). [Abstract](#)
10. **Evangelista, G.**, Demateis Raveri, M., Monforte, I., Claps, P. **2023**. How global warming can modify hydrological extremes in the Italian Alps. *AGU Annual Meeting 2023*, 11th-15th December 2023, San Francisco (US). [Abstract](#)
11. **Evangelista, G.**, Demateis Raveri, M., Monforte, I., Claps, P. **2023**. Flood risk in the Alps: implications of rainfall and temperature variations on hydrological extremes. *SISC (Società Italiana per le Scienze del Clima) 11th Annual Conference*, 22nd-24th November 2023, Milan (Italy) [poster presentation].
12. **Evangelista, G.**, Claps, P., Barbero, M., Castelli, M. **2023**. A simple procedure to calibrate soil parameters for slope stability modelling: the Langhe (1994) case study. *6th World Landslide Forum*, 14th-17th November 2023, Florence (Italy). [Abstract](#)
13. Claps, P., **Evangelista, G.**, Ganora, D., Mazzoglio, P., Monforte, I. **2023**. FOCA (Italian FIOod and Catchment Atlas): l'atlante italiano delle piene e dei descrittori dei bacini idrografici. *Giornate dell'idrologia della Società Idrologica Italiana 2023*, 13th-15th September 2023, Matera (Italy).
14. **Evangelista, G.**, Ruggeri, C., Claps, P. **2023**. Stima dei coefficienti di deflusso in piccoli bacini italiani mediante l'uso di dati storici. *Giornate dell'idrologia della Società Idrologica Italiana 2023*, 13th-15th September 2023, Matera (Italy).
15. **Evangelista, G.**, Ganora, D., Mazzoglio, P., Pianigiani, F., Claps, P. **2023**. Sensitivity of Italian dams' flood mitigation capacity to the combined effect of morphological and climatological factors. *LAHS-AISH Scientific Assembly 2023*, 12th-16th July 2023, Berlin (Germany). [Abstract](#)
16. **Evangelista, G.**, Monforte, I., Demateis Raveri, M., Claps, P. **2023**. Relationship between rainfall and flood frequency curves in high elevation areas. *EGU General Assembly 2023*, 24th-28th April 2023, Vienna (Austria). [Abstract](#)
17. Claps, P., **Evangelista, G.**, Mazzoglio, P. **2022**. Nubifragi "anormali" da Bitti (2020) a Cantiano (2022) e spunti per un ripensamento delle fasi di prevenzione e protezione. *Giornate dell'idrologia della Società Idrologica Italiana 2022*, 9th-11th November 2022, Genova (Italy). [Abstract](#)
18. **Evangelista, G.**, Mazzoglio, P., Pianigiani, F., Claps, P. **2022**. Primi passi verso la valutazione del potenziale di laminazione delle grandi dighe italiane. *Giornate dell'idrologia della Società Idrologica Italiana 2022*, 9th-11th November 2022, Genova (Italy). [Abstract](#)
19. **Evangelista, G.**, Claps, P. **2022**. Dimensional analysis and intercomparison of the basin time of concentration formulas. *EGU General Assembly 2022*, 23rd-27th May 2022, Vienna (Austria). [Abstract](#)
20. Claps, P., Brunetto, M., **Evangelista, G.**, Mazzoglio, P., Monforte, I. **2022**. FaBI: A new collection of flood data and attributes of basins in Italy. *EGU General Assembly 2022*, 23rd-27th May 2022, Vienna (Austria). [Abstract](#)
21. Monforte, I., **Evangelista, G.**, Claps, P. **2022**. Along-stream assessment of mountain flood dependence on global warming. *SnowHydro 2022*, 3rd International Conference on snow hydrology, 31st January-3rd February 2022 [online].
22. **Evangelista, G.**, Barbero, M., Butera, I., Castelli, M., Claps, P., and Tamea, S. **2021**. Parameter's calibration in rainfall induced landslides in the Langhe area (1994). *EGU General Assembly 2021*, 3rd-8th April 2021 [online]. [Abstract](#)

Talks and Other Presentations

1. **Evangelista, G.**, Ganora, D., Mazzoglio, P., Pianigiani, F., Claps, P. **2024**. Efficacia delle grandi dighe italiane nella mitigazione delle portate di piena. In: *Opere idrauliche e territorio: importanza, obsolescenza, adattamento*, 22nd March 2024, Torino (Italy) [poster presentation].
2. Claps, P., **Evangelista, G.**, Mazzoglio, P. **2024**. Cambiamento climatico e rischio idrogeologico: indicazioni tecniche e direzioni di approfondimento. In: *Dall'emergenza alla cultura della prevenzione: la centralità del rischio idrogeologico per la gestione del territorio*, 6th February 2024, Torino (Italy).
3. Claps, P., **Evangelista, G.**, Demateis Raveri, M. **2023**. Alluvioni nelle Alpi in tempi di riscaldamento globale. In: *Le Azioni del Politecnico e del Territorio per la Crisi Climatica*, 13th October 2023, Torino (Italy) [poster presentation].
4. Claps, P., **Evangelista, G.**, Mazzoglio, P. **2023**. Caratteristiche statistiche e idrologiche di recenti eventi alluvionali significativi e possibili risposte della Missione 4.2 del PNRR. In: *Eventi estremi nell'ambito dei cambiamenti climatici – Le conseguenze idrologiche ed idrauliche*, 21st September 2023, Bergamo (Italy).
5. Claps P., **Evangelista G.**, Mazzoglio P. **2023**. Coherence vs. Novelty: which directions towards rainstorm and flood hazard assessment for the Infrastructures in Italy? Insights from the RETURN project. In: *International Workshop "Novel concepts for the mitigation of flood and drought risk – Science progress and engineering practice"*, 11th September 2023, Bologna (Italy).
6. **Evangelista, G.**, Woods, R., Claps, P. **2023**. Valutazione della robustezza di formule di letteratura per la stima del tempo di risposta caratteristico di bacino: analisi dimensionale basata sulle velocità medie. In: *PhD Days del Gruppo Italiano di Idraulica*, 11th-12th September 2023, Matera (Italy) [poster presentation].
7. Claps, P., Ganora, D., **Evangelista, G.** **2023**. Considerazioni sulla pubblicazione dei dati disponibili. In: *Workshop "Linee guida per la ricostruzione degli idrogrammi di piena massimi annui"*. ITCOLD, 21st March 2023, Milano (Italy).
8. **Evangelista, G.** **2023**. (Re)Discovering empirical formulas to estimate the watershed response time. In: second webinar of the "Gotta catch'em all – A catchment by catchment hydrological adventure" serie organized by BHS, YHS, YHS-IT and EGU-HS, 21st February 2023 [online].

Invited talks

1. Podcast interview, *A Climate of Change*, 13th March 2024 [online].
2. IAHR Italy Young Professional coffee breaks, 20th June 2023 [online].

Community involvement

Frontiers in Earth Science
Hydrology
Scientific Reports
Water
Water Resources Research

Reviewer

IAHR Italy Young Professionals Network
ITCOLD Young Professionals Network

Member