

PERSONAL INFORMATION Daniele GANORA



Sex Male | Date and place of birth 15/08/1982, Casale Monferrato (Italy) | Nationality Italian

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Researchgate https://www.researchgate.net/profile/Daniele_Ganora

Google Scholar <https://scholar.google.com/citations?hl=it&user=7ur0INUAAAAJ>

CURRENT POSITION

2021/12 – today

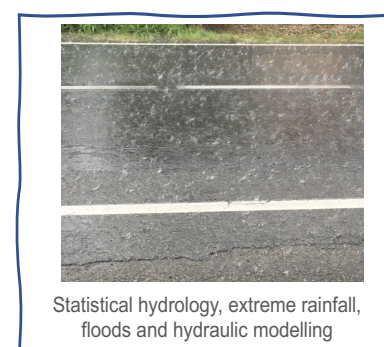
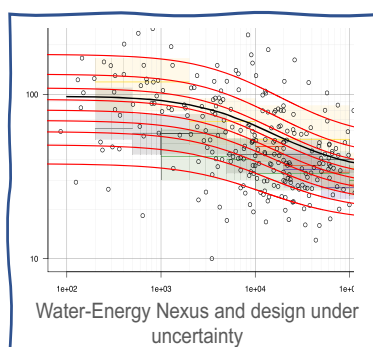
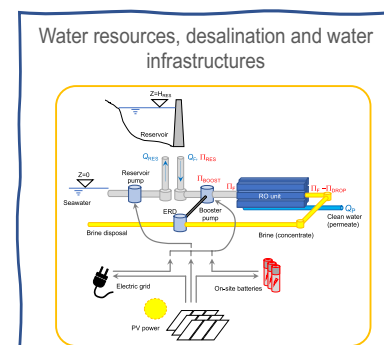
Associate Professor of Water Engineering

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

ABSTRACT and
RESEARC INTERESTS

Daniele Ganora is associate professor of hydrology and water engineering at the Politecnico di Torino, Italy. After his degree magna cum laude in Civil Engineering (2007) from Politecnico di Torino, he obtained the PhD (2010) in Water Engineering from the same university. He has been post-doc associate (2010-2015) and junior assistant professor (2015-2017) at the Politecnico di Torino, working on hydrological extremes and water resources. He has been scientific officer (2018) at the Joint Research Center of the European Commission and (2019-2021) tenured assistant professor in Torino, working on the water-energy nexus, with particular focus on energy use in the water industry and large-scale desalination. In 2019, he visited the Institute for Water, Environment and Health of the United Nations University in Hamilton (Canada) within the Erasmus+ program.

Daniele is also involved in the development and use of large-scale databases of water-related variables; in this context he has recently co-authored a nation-wide database of Italian flood discharge values, a nation-wide database of Italian rainfall extremes and a research on flood trends in Europe.



DETAILED CV

PAST POSITIONS

2018/12-2021/12 **Tenured Assistant Professor**

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

2018/2-2018/12 **Scientific project officer**

Joint Research Centre – European Commission, Ispra (Italy)
Directorate “Sustainable Resources”, Water and Marine Resources Unit

2015/10-2018/2 **Junior Assistant Professor**

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

2011 – 2015 **Post-doc** at the Politecnico di Torino, Turin, Italy

EDUCATION AND TRAINING

2007 – 2009 **PhD in Engineering for Water and land Management** at the Politecnico di Torino, Italy
2009 visiting student at University of Arizona, AZ, USA

2004 – 2006 **Master Degree in Civil Engineering** at the Politecnico di Torino, Italy
graduated Magna Cum Laude
2006 visiting student at Duke University, NC, USA

2001 – 2004 **Bachelor Degree in Civil Engineering** at the Politecnico di Torino, Italy

FELLOWSHIPS, AWARDS,
INVITED TALKS

2020 – ongoing **Associate Editor** for Frontiers in Earth Science (hydrosphere section)

2019 **ERASMUS+ Training Mobility at United Nations University** - Institute for Water, Environment and Health (UNU-INWEH) and McMaster University

National Scientific Habilitation as Associate Professor (ASN 2016-2018 IV Quadrimestre; S.C. 08/A1)

2010 – ongoing **Member of the CINID** (Italian University Consortium for Hydrology) and **EGU** (European Geosciences Union)

2013 – ongoing **Member of the Working Group** “Anthropogenic and climatic controls on water availability (ACCuRACy)” IAHS - Panta Rhei

2015 **Invited speaker** at the “Symposium on Regional Floods: Regional effects of changes in the river system” in Vienna (Austria) organized by prof. G. Bloeschl Talk titled “Flood statistics and river works: moving from a local to an along-stream approach”

2012 **Invited speaker** at the Hydrology Days 2012 “Sustainability of water resources use and flood protection”, Naples, Italy Talk titled “The value of hydrometric data in regional flood frequency analysis”

TEACHING ACTIVITIES

2020 **co-Lecturer**, topic: Climate change adaptation, Master Degree in Environmental Engineering, Politecnico di Torino, Italy

2019 – ongoing **Lecturer**, topic: Flood risk management, Master Degree in Environmental Engineering, Politecnico di Torino, Italy

2019 – ongoing **co-Lecturer**, topic: Design of hydraulic infrastructures, Master Degree in Environmental Engineering, Politecnico di Torino, Italy

2009 – 2019 **teaching assistant**, topics: Flood risk management, Hydrology and Hydraulic Infrastructures, Master Degree in Environmental and Civil Engineering, Politecnico di Torino, Italy

2019 **Lecturer**, Short Course “Where there is little data: How to estimate design variables in poorly gauged basins” UNESCO-IHE Institute for Water Education

2019 **lecturer** International Winter School on Hydrology “Data rich hydrology”, UNESCO World Water Assessment Program (WWAP) & University for Foreigners of Perugia

2015 **lecturer** “Statistical Hydrology” in Flood Risk for the post-lauream II level Master Course, Università di Cagliari, Italy

2013-2015-2016 **lecturer** “Evaluation of Water Needs for Multiple Uses” for the post-lauream II level Master Course in Water Engineering for Civil and Industrial Use, Politecnico di Torino, Italy

2012 **lecturer** “Statistical and Numerical Analysis” for the post-lauream II level Master Course in Expert for Evaluation/Prevention of Hydrologic Risk, Università della Calabria, Italy

OTHER ACADEMIC ACTIVITIES

supervisor of 1 Research Assistant, topic: large scale desalination; co-supervisor of many research assistants.

co-supervisor of 2 PhD students: Silvia Cordero (completed 2020), Muhammad Uzair Qamar (completed 2015); **Supervisor or co-supervisor** for 40+ master thesis

Convener/co-convener of the session “Catchment Organisation, Similarity, and Evolution” session at the EGU conference since 2017

Co-convener IDRA 2014 (Bari) – Session B21 “Analisi idraulico-idrologiche in bacini non strumentati - Vulnerabilità all'inquinamento dei suoli e delle acque sotterranee”

Member of the organising committee of the EGU Leonardo Conference 2012 “Hydrology and Society”

Referee for the following journals: Water Resources Research; Journal of Hydrology; Hydrological Sciences Journal; Hydrology and Earth System Science; Hydrological Processes; Natural Hazard and Earth System Science; Stochastic Environmental Research and Risk Assessment; Journal of Hydrologic Engineering; Journal of Water Resources Planning and Management; Journal of Hydroinformatics

Author of the software package “hydroApps” for the R environment (<https://cran.r-project.org/web/packages/hydroApps/index.html>)

PEER-REVIEWED JOURNAL
PUBLICATIONS

- Grasso, S.; Claps, P.; **Ganora, D.**; Libertino, A. (2021) A Web - based Open - source Geoinformation Tool for Regional Water Resources Assessment. *WATER RESOURCES MANAGEMENT*. DOI: 10.1007/s11269-020-02750-x
- Pistocchi, A.; Bleninger, T.; Breyer, C.; Caldera, U.; Dorati, C.; **Ganora, D.**; Millan, M. M.; Paton, C.; Poullis, D.; Herrero, F. Salas; Sapiiano, M.; Semiat, R.; Sommariva, C.; Yuce, S.; Zaragoza, G. (2020) Can seawater desalination be a win-win fix to our water cycle?. *WATER RESEARCH*. DOI: 10.1016/j.watres.2020.115906
- Blöschl, G.; et Al. (2019) Changing climate both increases and decreases European river floods. *NATURE*. DOI: 10.1038/s41586-019-1495-6
- Libertino, A.; **Ganora, D.**; Claps, P. (2019) Evidence for increasing rainfall extremes remains elusive at large spatial scales: the case of Italy. *GEOPHYSICAL RESEARCH LETTERS*. DOI: 10.1029/2019GL083371
- Ganora, D.**; Hospido, A.; Husemann, J.; Krampe, J.; Loderer, C.; Longo, S.; Moragas B., Lucas; O., Nathan; P., Enrico; Stanev, S.; Váci, L.; Pistocchi, A. (2019) Opportunities to improve energy use in urban wastewater treatment: a European scale analysis. *ENVIRONMENTAL RESEARCH LETTERS*. DOI: 10.1088/1748-9326/ab0b54
- Ganora, D.**; Dorati, C.; Huld, T. A.; Udias, A.; Pistocchi, A. (2019) An assessment of energy storage options for large-scale PV-RO desalination in the extended Mediterranean region. *SCIENTIFIC REPORTS*. DOI: 10.1038/s41598-019-52582-y
- Qamar, M.U.; **Ganora, D.**; Claps, P.; Azmat, M.; Shahid, M.A.; Khushnood, R.A. (2018) Flow duration curve regionalization with enhanced selection of donor basins. *JOURNAL OF APPLIED WATER ENGINEERING AND RESEARCH*. DOI: 10.1080/23249676.2016.1196621
- Libertino, A.; **Ganora, D.**; Claps, P. (2018) Space–time analysis of rainfall extremes in Italy: clues from a reconciled dataset. *HYDROLOGY AND EARTH SYSTEM SCIENCES*. DOI: 10.5194/hess-22-2705-2018
- Botto, A.; **Ganora, D.**; Claps, P.; Laio, F. (2017) Design flood under hydrological uncertainty. *HYDROLOGY AND EARTH SYSTEM SCIENCES*. DOI: 10.5194/hess-21-3353-2017
- Qamar, M.U.; Azmat, M.; Shahid, M.A.; **Ganora, D.**; Ahmad, S.; Cheema, M.J.M.; Faiz, M.A.; Sarwar, A.; Shafeeqe, M.; Khan, M.I. (2017) Rainfall Extremes: a Novel Modeling Approach for Regionalization. *WATER RESOURCES MANAGEMENT*. DOI: 10.1007/s11269-017-1626-5
- Ganora, D.**; Isacco, S.; Claps, P. (2017) Framework for Enhanced Stormwater Management by Optimization of Sewer Pumping Stations. *JOURNAL OF ENVIRONMENTAL ENGINEERING*. DOI: 10.1061/(ASCE)EE.1943-7870.0001220
- Ganora, D.**; Laio, F.; Masoero, A.; Claps, P. (2016) Spatially-smooth regionalization of flow duration curves in non-pristine basins. *Proceedings IAHS*. Copernicus Publications. DOI: 10.5194/piahs-373-73-2016
- Ceola, S. et Al. (2016) Adaptation of water resources systems to changing society and environment: a statement by the International Association of Hydrological Sciences. *HYDROLOGICAL SCIENCES JOURNAL*. DOI: 10.1080/02626667.2016.1230674

- Ganora, D.;** Laio, F. (2016) A comparison of regional flood frequency analysis approaches in a simulation framework. *WATER RESOURCES RESEARCH*. DOI: 10.1002/2016WR018604
- Qamar, M.U.; **Ganora, D.;** Claps, P.; Azmat, M.; Shahid, M.A.; Khushnood, R.A. (2015) Monthly Runoff Regime Regionalization Through Dissimilarity-Based Methods. *WATER RESOURCES MANAGEMENT*. DOI: 10.1007/s11269-015-1087-7
- Ganora, D.;** Laio, F. (2015) Hydrological Applications of the Burr Distribution: Practical Method for Parameter Estimation. *JOURNAL OF HYDROLOGIC ENGINEERING*. DOI: 10.1061/(ASCE)HE.1943-5584.0001203
- Botto A; **Ganora D;** Laio F; Claps P (2014) Uncertainty compliant design flood estimation. *WATER RESOURCES RESEARCH*. DOI: 10.1002/2013WR014981
- Ganora, D.;** Laio, F.; Claps, P. (2013) An approach to propagate streamflow statistics along the river network. *HYDROLOGICAL SCIENCES JOURNAL*. DOI: 10.1080/02626667.2012.745643
- Laio F.; **Ganora D.;** Claps P.; Galeati G. (2011) Spatially smooth regional estimation of the flood frequency curve (with uncertainty). *JOURNAL OF HYDROLOGY*. DOI: 10.1016/j.jhydrol.2011.07.022
- Ganora, D.;** Claps, P.; Laio, F.; Viglione, A. (2009) An approach to estimate nonparametric flow duration curves in ungauged basins. *WATER RESOURCES RESEARCH*. DOI: 10.1029/2008WR007472

BOOKS (Author)

- Magagna, D.; Hidalgo González, I.; Bidoglio, G.; Peteves, S.; Adamovic, M.; Bisselink, B.; De Felice, M.; De Roo, A.; Dorati, C.; **Ganora, D.;** Medarac, H.; Pistocchi, A.; Van De Bund, W. and Vanham D. (2019) Water – Energy Nexus in Europe. ISBN: 978-92-76-03385-1, 978-92-76-03386-8. Publications Office of the European Union. Luxembourg
- Claps, P.; **Ganora, D.;** Apostolo, A.; Brignolo, I.; Monforte, I. (2020) Catalogo delle Piene dei Corsi d'acqua Italiani Vol.1 (Italian Atlas of Floods). ISBN: 978-88-945568-0-3. CINID. Italy
- Claps, P.; **Ganora, D.;** Apostolo, A.; Brignolo, I.; Monforte, I. (2020) Catalogo delle Piene dei Corsi d'acqua Italiani Vol.2 (Italian Atlas of Floods). ISBN: 978-88-945568-2-7. CINID. Italy
- Claps, P.; **Ganora, D.;** Apostolo, A.; Brignolo, I.; Monforte, I. (2020) Catalogo delle Piene dei Corsi d'acqua Italiani Vol.3 (Italian Atlas of Floods). ISBN: 978-88-945568-4-1. CINID. Italy

PROJECTS (responsible or co-responsible)

- 2020 - ongoing Co-leader of a project on hydraulic hazard mapping for the Po river basin authority (~130 k€)
- 2020 - ongoing Responsible of the project on Unconventional Water Resources (UWR) funded by the Clean Water Centre at Politecnico di Torino
- 2016 -2018 & 2019-2021 Starting Grant funding from the Politecnico di Torino
- 2017 Consultant (Consulente Tecnico Procura della Repubblica presso il Tribunale di Torino), with il prof. Francesco Laio for the October 2016 flood event in Moncalieri and Torino.
- 2015 Operational responsible for the POR FESR 2007/2013 – Misura I.1.3 Regione Piemonte project “GT-Pro2 GeoTools avanzati per la valutazione di producibilità idroelettrica sul territorio”
- 2017 co-leader of the consultancy "Studio e moderazione idrologica e idraulica del Torrente Terdoppio a monte

di Novara" for CIM s.p.a. Interporto di Novara

PROJECTS (collaborations)

2007-2009 PRIN-2006 "Tecniche avanzate per la stima e previsione degli eventi idrologici estremi ed analisi quantitativa dell'incertezza" (coord. prof. Alberto Montanari, Università degli Studi di Bologna). Grant n. 2006089189

2008-2010 PRIN-2007 "Effetti sul rischio di piena della variabilità spaziale dei processi climatici ed idrologici" (coord. prof. Pierluigi Claps, Politecnico di Torino). Grant n. 2007HBTS85.

2009-2010 "POR Calabria - Studio e sperimentazione di metodologie e tecniche per la mitigazione del rischio idrogeologico – Lotto progettuale 7: Stima delle massime portate al colmo di piena – Attività a livello 2: modelli statistici regionali"

2009-2011 Cooperazione territoriale europea Interreg IV Italia-Svizzera 2007-2013 "progetto FLORA: Flood estimation in complex Orographic area for Risk mitigation in Alpine space" (coord. ARPA Piemonte)

2009-2011 PRIN-2008 "Procedure per caratterizzare l'incertezza di osservazioni idrologiche ed effetti sulla stima delle piene di progetto" (coord. prof. Alberto Montanari, Università degli Studi di Bologna). Grant n. 2008KXN4K8.

2009-2012 Cooperazione territoriale europea Italia-Francia 2007-2013 "progetto RISKINAT - Gestione in sicurezza dei territori di montagna transfrontalieri. Attività "B.5 - Piene dei fiumi alpini"

2010-2013 Programma di cooperazione transfrontaliera tra Italia e Francia "Alcotra" 2007-2013 "progetto RENERFOR - Iniziative di cooperazione per lo sviluppo delle fonti di energia rinnovabili (bosco ed acqua) nelle Alpi Occidentali, il risparmio energetico e la riduzione delle emissioni di gas ad effetto serra – Produzione Idroelettrica" (coord. Regione Piemonte)

2013-2015 FIRB-2012 "La rete globale degli scambi di acqua virtuale: implicazioni sociali, economiche ed ambientali (ViWaN)" (coord. prof. Francesco Laio, Politecnico di Torino). Grant n. RBFR12BA3Y.

2015-2020 ERC Consolidator Grant 2014 no. 647473 "CWASI – Coping with water scarcity in a globalized world" (coord. prof. Laio, Politecnico di Torino)

2014-2018 "Studio della rivalutazione della sicurezza idrologica e idraulica delle grandi dighe a livello di bacini idrografici dell'Arco Alpino Occidentale e Centrale" for the Ministero delle Infrastrutture e dei Trasporti - Direzione Generale per le Dighe e le Infrastrutture Idriche ed Elettriche.

2014 "Derivazioni idriche: stima del potenziale idroelettrico teorico in sezioni di interesse della PA valutato sulla base di una ricostruzione uniforme della disponibilità idrica in presenza di diversi scenari di rilascio" for the Regione Piemonte – Direzione Ambiente – Settore Tutela Quantitativa e Qualitativa delle Acque

Torino, 01/01/2022