

CV of Giovanni Battista Chirico

**FULL PROFESSOR OF AGRICULTURAL HYDRAULICS
AND HYDRAULIC-FOREST SYSTEMS FOR WATERSHED RESTORATION**

Current Affiliation

Department of Agricultural Sciences
Division for Agricultural, Forest and Biosystems Engineering
University of Napoli Federico II

Condensed academic career

2022 – Full Professor at the University of Naples Federico II
2015 – 2022 Associate Professor at the University of Naples Federico II
2003 – 2015 Assistant Professor at the University of Naples Federico II
2002 – 2002 Post-doc at the Hydraulic Institute of Vienna University of Technology - Austria
2000 – 2002 Research Fellow at The Department of Civil and Environmental Engineering of
The University of Melbourne Australia

Education

Ph.D. 2002 University of Naples Federico II, Hydraulic Engineering
M.Sc. 1996 University of Salerno, Civil Engineering, with a major in Hydraulics

Awards and academic recognitions for research activities

2019 – Scientific habilitation as full professor for Agricultural Hydraulics
2016 – Certificate of Outstanding Contribution in Reviewing - Journal of Hydrology
2016 – Best Poster Award by the Italian Hydrological Society
2015 – Award "Innovation for sustainable agro-food systems" Milano Expo 2015
2014 – Scientific habilitation as full professor for Agricultural Hydraulics
2014 – Scientific habilitation as associate professor for Agricultural Hydraulics
2013 – Scientific habilitation as associate professor for Hydraulic Engineering
2000 – Outstanding Paper Award - Hydrology Section 2000 Fall Meeting, EOS Trans. AGU,
Volume 82, No. 15, pag.176-177, April 10 2001

Main research achievements

Forecasting system of crop water requirement based on the integration of satellite images
and numerical weather forecast
Data assimilation techniques for soil hydrological predictions
A hydrological distributed model for catchment hydrology
Alert system for hydrological risk prevention in Campania Region

Main projects

ERC LIFE www.life.polimi.it/the-team
PIRAM PSR 2007-2013 Regional Rural development funds
SUPER EU FP7 Program Super-fp7.eu
REWARD EU FP7 Program

International research collaborations

Günter Blöschl – Hydraulic Institute of Vienna University of Technology
Andrew Western – Department of Civil and Environmental Engineering of the University of Melbourne
Hanoi Medina – Agrarian University of La Habana (now Auburn University)

Professional activities as expert

Expert Reviewer of ERANETMED project funded for the European Commission
Expert Reviewer of PRIN project funded by the Italian Ministry for University and Research
Expert Reviewer of PRIMA project funded by the European Commission
Expert Reviewer for the Romanian Executive Agency for Higher Education and Research
Member of the Technical Program Committee of the 2019 IEEE Workshop of Metrology for Agriculture and Forestry
Editorial Board Member of Remote Sensing
Guest Editor of Geosciences (MPDI Journal)
Guest Editor of Sensors (MPDI Journal)

Teaching accomplishments and research supervision

Appointed as professor at University of Naples Federico II for the following courses: watershed restoration; agricultural and forest hydrology; precision irrigation systems and sensing technology
Supervisors of several PhD and Master Students

Publication records

Orcid <http://orcid.org/0000-0002-9536-4741>
Scopus <https://www.scopus.com/authid/detail.uri?authorId=7006993805>
Google scholar <https://scholar.google.it/citations?user=6F6r8SEAAAJ&hl=it>

Selected journal papers

Blöschl, G., Hall, J., Viglione, A., Perdigão, R.A.P., Parajka, J., Merz, B., Lun, D., Arheimer, B., Aronica, G.T., Bilibashi, A., Boháč, M., Bonacci, O., Borga, M., Čanjevac, I., Castellarin, A., Chirico, G.B., Claps, P., Frolova, N., Ganora, D., Gorbachova, L., Gül, A., Hannaford, J., Harrigan, S., Kireeva, M., Kiss, A., Kjeldsen, T.R., Kohnová, S., Koskela, J.J., Ledvinka, O., Macdonald, N., Mavrova-Guirguinova, M., Mediero, L., Merz, R., Molnar, P., Montanari, A., Murphy, C., Osuch, M., Ovcharuk, V., Radevski, I., Salinas, J.L., Sauquet, E., Šraj, M., Szolgay, J., Volpi, E., Wilson, D., Zaimi, K., Živković, N.

Changing climate both increases and decreases European river floods
(2019) **Nature**, 573 (7772), pp. 108-111.

Errico, A., Lama, G.F.C., Francalanci, S., Chirico, G.B., Solari, L., Preti, F.

Flow dynamics and turbulence patterns in a drainage channel colonized by common reed (*Phragmites australis*) under different scenarios of vegetation management
(2019) **Ecological Engineering**, 133, pp. 39-52.

Allévato, E., Saulino, L., Cesarano, G., Chirico, G.B., D'Urso, G., Falanga Bolognesi, S., Rita, A., Rossi, S., Saracino, A., Bonanomi, G.
Canopy damage by spring frost in European beech along the Apennines: effect of latitude, altitude and aspect
(2019) **Remote Sensing of Environment**, 225, pp. 431-440.

- Medina, H., Tian, D., Marin, F.R., Chirico, G.B.
Comparing GEFS, ECMWF, and postprocessing methods for ensemble precipitation forecasts over Brazil
(2019) **Journal of Hydrometeorology**, 20 (4), pp. 773-790.
- Marta, A.D., Chirico, G.B., Bolognesi, S.F., Mancini, M., D'Urso, G., Orlandini, S., De Michele, C., Altobelli, F.
Integrating sentinel-2 imagery with Aquacrop for dynamic assessment of tomato water requirements in southern Italy
(2019) **Agronomy**, 9 (7), art. no. 404, .
- Errico, A., Pasquino, V., Maxwald, M., Chirico, G.B., Solari, L., Preti, F.
The effect of flexible vegetation on flow in drainage channels: Estimation of roughness coefficients at the real scale
(2018) **Ecological Engineering**, 120, pp. 411-421.
- Hayati, E., Abdi, E., Saravi, M.M., Nieber, J.L., Majnounian, B., Chirico, G.B., Wilson, B., Nazirrad, M.
Soil water dynamics under different forest vegetation cover: Implications for hillslope stability
(2018) **Earth Surface Processes and Landforms**, 43 (10), pp. 2106-2120.
- Hayati, E., Abdi, E., Mohseni Saravi, M., Nieber, J.L., Majnounian, B., Chirico, G.B.
How deep can forest vegetation cover extend their hydrological reinforcing contribution?
(2018) **Hydrological Processes**, 32 (16), pp. 2570-2583.
- Medina, H., Tian, D., Srivastava, P., Pelosi, A., Chirico, G.B.
Medium-range reference evapotranspiration forecasts for the contiguous United States based on multi-model numerical weather predictions
(2018) **Journal of Hydrology**, 562, pp. 502-517.
- Chirico, G.B., Pelosi, A., De Michele, C., Falanga Bolognesi, S., D'Urso, G.
Forecasting potential evapotranspiration by combining numerical weather predictions and visible and near-infrared satellite images: An application in southern Italy
(2018) **Journal of Agricultural Science**, 156 (5), pp. 702-710.
- Pelosi, A., Medina, H., Van den Bergh, J., Vannitsem, S., Chirico, G.B.
Adaptive Kalman filtering for postprocessing ensemble numerical weather predictions
(2017) **Monthly Weather Review**, 145 (12), pp. 4837-4854.
- Blöschl, G., Hall, J., Parajka, J., Perdigão, R.A.P., Merz, B., Arheimer, B., Aronica, G.T., Bilibashi, A., Bonacci, O., Borga, M., Čanjevac, I., Castellarin, A., Chirico, G.B., Claps, P., Fiala, K., Frolova, N., Gorbachova, L., Gül, A., Hannaford, J., Harrigan, S., Kireeva, M., Kiss, A., Kjeldsen, T.R., Kohnová, S., Koskela, J.J., Ledvinka, O., Macdonald, N., Mavrova-Guirguinova, M., Mediero, L., Merz, R., Molnar, P., Montanari, A., Murphy, C., Osuch, M., Ovcharuk, V., Radevski, I., Rogger, M., Salinas, J.L., Sauquet, E., Šraj, M., Szolgay, J., Viglione, A., Volpi, E., Wilson, D., Zaimi, K., Živković, N.
Changing climate shifts timing of European floods
(2017) **Science**, 357 (6351), pp. 588-590.
- Rogger, M., Chirico, G.B., Hausmann, H., Krainer, K., Brückl, E., Stadler, P., Blöschl, G.
Impact of mountain permafrost on flow path and runoff response in a high alpine catchment
(2017) **Water Resources Research**, 53 (2), pp. 1288-1308.
- Pelosi, A., Medina, H., Villani, P., D'Urso, G., Chirico, G.B.
Probabilistic forecasting of reference evapotranspiration with a limited area ensemble prediction system
(2016) **Agricultural Water Management**, 178, pp. 106-118.
- Zocatelli, D., Borga, M., Chirico, G.B., Nikolopoulos, E.I.
The relative role of hillslope and river network routing in the hydrologic response to spatially variable rainfall fields
(2015) **Journal of Hydrology**, 531, pp. 349-359.

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29/11/2022

Prof. Ing. Giovanni Battista Chirico