

# FRANCESCO CAVALLERI

PhD in Environmental Sciences | MSc and BSc in Physics

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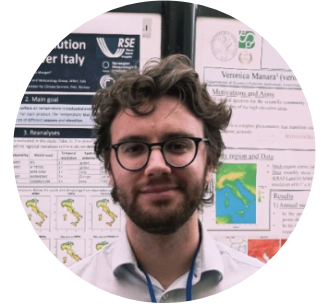
📍 Via Virgilio 13, 22100 Como, Italy

in [www.linkedin.com/in/fcavalleri](https://www.linkedin.com/in/fcavalleri)

📄 <https://github.com/fcavalleri>

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*"Do not hold a position,  
but generate processes"*

## WORK

Research fellow

Istituto di scienze dell'atmosfera e del clima (ISAC) del  
Consiglio Nazionale delle Ricerche (CNR)

📅 2026 – Present

📍 Bologna, Italy

My research is focused on regional reanalyses and extreme weather events.

Research collaborator

Istituto sostenibilità applicata all'ambiente costruito (ISAAC) della  
Scuola universitaria professionale della Svizzera italiana (SUPSI)

📅 2026 – present

📍 Mendrisio, Switzerland

I am involved in the INTERREG project ARVICA (Adaptment and Resilience to Live in Urban Heat Islands).

PhD in Environmental Sciences

Università degli Studi di Milano,  
Ricerca sul Sistema Energetico (R.S.E.),  
Norwegian Meteorological Institute

📅 2022 – 2026

📍 Milan, Italy & Oslo, Norway

I obtained a PhD *cum laude* with a research work focused on the inter-comparison and validation of meteorological reanalyses, considering temperature, precipitation fields and extreme weather events. I have been a visiting researcher at the Norwegian Meteorological Institute. Supervisor: prof. Maurizio Maugeri.

Research collaborator

SUPSI - ISAAC Institute

📅 Sept 2022 – Oct 2022

📍 Mendrisio, Switzerland

I have contributed to the final guidelines of the European project E.V.A., on electric and autonomous vehicles: <https://evaproject.eu/>.

High School Professor

Liceo Scientifico Statale "Paolo Giovio"  
Liceo Scientifico Paritario "Collegio Gallio"

📅 Sept 2021 – Jul 2022

📍 Como, Italy

I taught Physics and Mathematics, then Physics and ICT across three distinct classes. I served as a member of the final exam commission.

Teaching assistant

Università degli studi dell'Insubria, Università degli Studi di Milano

📅 May 2020 – Sept 2023

📍 Como & Milan, Italy

I served as a tutor for courses in Relativity, Mechanics, and Physics.

## ACADEMIC STUDIES

Master Degree in Physics

Università degli studi dell'Insubria

📅 2019 – 2022

📍 Como, Italy

- Final grade of 110/110 *cum laude*. Thesis titled: *Towards a Simple Microscopic Model of Fibrin Aggregation Early Phases*. Advisors: Prof. Ginelli, Prof. Ferri.

Bachelor Degree in Physics

Università degli studi dell'Insubria

📅 2016 – 2019

📍 Como, Italy

- Final grade of 110/110 *cum laude*. Thesis titled: *A model of epidemic spread: the statistical mechanics of zombies*. Advisor: prof. Artuso;
- Student delegate for the Physics Board and the General Board of Students.

## PROGRAMMING

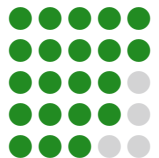
R

Climate Data Operators

Python

MatLab

C/C++



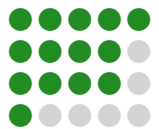
## LANGUAGES

Italian (mothertongue)

English C1 (IELTS 7.0)

Spanish C1 (SIELE 838)

Norwegian (Bokmål)



## FURTHER STUDIES

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### Erasmus+ Traineeship

#### The Norwegian Meteorological Institute (MET)

📅 Oct 2023 – Jul 2024      📍 Oslo, Norway

I completed a six-month visiting period in the Division for Climate Services of MET, focusing on the validation of reanalysis precipitation fields. From January to April, I continued the collaboration remotely.

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### 24 ECTS Project

#### Università degli Studi dell'Insubria

📅 March 2022 - Sept 2022      📍 Como, Italy

I attended classes covering didactic and ICT methodologies, cultural anthropology, psychology of development and pedagogy of inclusion.

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### Erasmus+ Study Exchange

#### International School of Post-Graduate Studies of Granada

📅 Jan 2021 – July 2021      📍 Granada, Spain

I spent a semester at the University of Granada, focusing on complex networks, biomathematics, kinetic theories and stochastic processes.

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### Interdisciplinary Degree

#### Scuola di Como College

📅 Oct 2016 – Dec 2019      📍 Como, Italy

I earned a three-year scholarship to participate in a program that included acting classes, fundraising, marketing, and communication.

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## ADVANCED SCHOOLS

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### Data Driven Modeling and Predictions of the Earth System

#### CMCC, FERS

📅 Dec 2024      📍 Bologna, Italy

2 weeks winter school. Program: <https://11nq.com/yFNVL>.

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### The challenge of precipitation prediction

#### ISAC-CNR, UNIVPM

📅 July 2023      📍 Lecce, Italy

1 week summer school. Program: <https://shorturl.at/pJ1FY>.

## EXPERIENCES

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### Climate Activist

📅 2019 – present      📍 Como, Italy

- In June 2023, I co-authored a book titled *Is Good Politics Still Possible?*, written in collaboration with a focus on sustainable policies;
  - Organized talks on climate change at my university, featuring distinguished guests.
  - Engaged in discussions with my municipality and university board to enhance efforts in reducing local emissions.
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### Scout Educator

#### A.G.E.S.C.I. Como 3°

📅 2016 – 2023      📍 Como, Italy

Involved in the Scout movement since the age of 8, I took on the role of Cubs (8-12 year-old children) educator, taking part in training camps and leading weekend and holiday activities. In 2022/2023, I took on the position of the head of my scout group.

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### Social Event Organiser

#### Arte Migrante

📅 2016 – 2019      📍 Italy

In Como, I spearheaded the *Arte Migrante* project, aiming to foster inclusive gatherings and equal interactions among diverse individuals, including the homeless and migrants, through the use of arts, theatre and music.

## LIST OF PUBLICATIONS

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Cavalleri, F. et al., (2026) *Hourly Precipitation Patterns and Extremization over Italy using convection-permitting reanalysis data*, *Natural Hazards Earth Systes Sciences*, 26, 279–297, <https://doi.org/10.5194/nhess-26-279-2026>.

Stocchi, P., Cavalleri, F. et al. (2025) *MORE: MOLOCH-downscaled ERA5 REanalysis – Validation and Applications in Weather, Climate, and Hydrology*, submitted to *Earth System Science Data*, *essd-2025-587*.

Cavalleri, F. et al., (2025). *Meteorological reanalyses: an effective tool for studying the evolution of temperature and precipitation across Italy*, *Rivista di Meteorologia Aeronautica 2/2025*, <https://www.meteoam.it/rivista-di-meteorologia-aeronautica/edizione-aprilelugno-2025>.

Cavalleri, F. et al., (2024) *Multi-scale assessment of high-resolution reanalyses precipitation fields over Italy*, *Atmospheric Research*, Vol. 312, 107734, <https://doi.org/10.1016/j.atmosres.2024.107734>.

Viterbo, F., Cavalleri, F. et al. (2024) *MERIDA HRES: a new High-RESolution reanalysis dataset for Italy*, *Meteorological Applications*, 31(6), e70011, <https://doi.org/10.1002/met.70011>.

Cavalleri, F. et al. (2024) *Inter-comparison and validation of high-resolution surface air temperature reanalysis fields over Italy*, *International Journal of Climatology*, 44(8), 2681–2700, <https://doi.org/10.1002/joc.8475>.

Lussana, C., Cavalleri, F. et al. (2024) *Evaluating long-term trends in annual precipitation: a temporal consistency analysis of ERA5 data in the Alps and Italy*, *Atmospheric Sciences Letters*, 25(9), e1239, <https://doi.org/10.1002/asl.1239>

Cavalleri F., et al. (2023) *È ancora possibile una buona Politica? Stili e Obiettivi*, Paoline Editoriale Libri, ISBN: 978-8831555944.

## LIST OF CONFERENCES

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Shaping climate services for the future - Data management workshop

**EUMETNET**

📅 Nov 2025

📍 Oslo, Norway

European Conference for Applied Meteorology and Climatology

**European Meteorological Society**

📅 Sept 2025

📍 Ljubljana, Slovenia

10th International Conference on Meteorology and Climatology of the Mediterranean (MetMed)

**AISAM, ACAM, Tethys, UIB**

📅 May 2025

📍 Toulouse, France

Intersecting Climate Science and Geostatistics: Conference on Spatio-Temporal Interpolation

**EU Commission - Joint Research Centre**

📅 Feb 2025

📍 Ispra, Italy

European Conference for Applied Meteorology and Climatology

**European Meteorological Society**

📅 Sept 2024

📍 Barcelona, Spain

Invited to the *Spatial Climatology* session.

5th AISAM National Congress

**AISAM, UNILE, ISAC-CNR**

📅 Feb 2024

📍 Lecce, Italy

European Conference for Applied Meteorology and Climatology

**European Meteorological Society**

📅 Sept 2023

📍 Bratislava, Slovakia

9th International Conference on Meteorology and Climatology

of the Mediterranean (MetMed)

**AISAM, ACAM, Tethys, UIB**

📅 May 2023

📍 Genoa, Italy