

## PERSONAL INFO



## Angelo Campanale

✉ [angelo.campanale@cmcc.it](mailto:angelo.campanale@cmcc.it)

🌐 [linkedin.com/in/angelo-campanale-](https://linkedin.com/in/angelo-campanale-757600122)

757600122

Gender Male | Nationality Italian

## WORK EXPERIENCE

## Mar. 2022 – Today Postdoctoral researcher

CMCC, Euro-Mediterranean Center on Climate Change, REMHI Division, Caserta, Italy

▪ Conducting various research activities related to high-resolution regional climate modeling.

▪ Sector Research

## Jan. 2022 – Feb. 2022 Project engineer

ZF group, Ostellato, Ferrara

▪ Utilized computational fluid dynamics models to simulate lubrication conditions of radial piston pumps for automotive applications.

▪ Sector Industrial

## Apr. 2021 – Dec. 2021 Postdoctoral researcher

Polytechnic of Bari, Bari, Italy

▪ The primary goal of this postdoctoral fellowship was to develop a numerical model to study lubricated contact between viscoelastic surfaces.

▪ Sector Academic

## Jan. 2020 – Aug. 2020 Visiting PhD Researcher

University of Liège, Liège, Belgium

▪ Conducted research on nonlinear vibrations and fluid-structure interaction

▪ Sector Academic

## EDUCATION

## Nov. 2017 – Jan. 2021 PhD in Mechanical Engineering (Applied Mechanics and Computational Fluid Dynamics)

Polytechnic of Bari, Bari, Italy

▪ Thesis title: "Linear and nonlinear fluid-structure interaction problems in engineering applications: theory and experiments", supervised by Prof. G. Carbone, Prof. C. Putignano, and Prof. L. Soria.

## Dec. 2014 – Jun. 2017 Master's Degree in Mechanical Engineering

Polytechnic of Bari, Bari, Italy

▪ Mechanical Engineering (110/110 with honors), supervised by Prof. G. Carbone. Thesis in cooperation with Bosch Bari.

## Oct. 2011 – Sep. 2014 Bachelor's Degree in Mechanical Engineering

Polytechnic of Bari, Bari, Italy

▪ Mechanical Engineering (110/110), supervised by Prof. G. Florio

### PERSONAL SKILLS

Mother tongue: Italian

Other language(s):

|         | Comprehension |         | Speaking         |                   | Writing |
|---------|---------------|---------|------------------|-------------------|---------|
|         | Listening     | Reading | Oral interaction | Spoken production |         |
| English | C2            | C2      | C2               | C2                | C2      |

Digital skills

| Self-evaluation        |                  |                  |                  |                 |
|------------------------|------------------|------------------|------------------|-----------------|
| Information processing | Communication    | Content creation | Safety           | Problem solving |
| Expert user            | Independent user | Independent user | Independent user | Expert user     |

Levels: Basic User – Independent User – Expert user

Self-assessment grid

- Proficient in the Office suite (word processing, spreadsheets, presentation software).
- Strong knowledge of C, Fortran, C++, Shell Scripting, Unix-like systems, MATLAB, Simulink, COMSOL, Ansys, Mathematica, Python, CDO, NCO, NetCDF, and LaTeX.
- Expertise in regional earth system modeling: ICON, COSMO.

Driving License B

### Additional Informations

Publications

- L. Loprieno, M. Raffa, **A. Campanale**, M. Adinolfi, P. Mercogliano, *Comparative study of the COSMO and ICON models performances over Italy: key insights from the impactful year 2023*, submitted to Atmospheric Research, Under Review
- **A. Campanale** et al., *Investigating urban heat islands over Rome and Milan during a summer period through the TERRA\_URB parameterization in the ICON model*, Urban Climate, Volume 60, 2025, 102335, ISSN 2212-0955, <https://doi.org/10.1016/j.uclim.2025.102335>.
- **G. S. Langendijk**, et al., *Towards better understanding the urban environment and its interactions with regional climate change - The WCRP CORDEX Flagship Pilot Study URB-RCC*, Urban Climate, Volume 58, 2024, 102165, ISSN 2212-0955, <https://doi.org/10.1016/j.uclim.2024.102165>.
- **A. Campanale** et al., *Evaluating the implementation of the new urban parameterization for the ICON atmospheric model: results over Italy*, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-15826, <https://doi.org/10.5194/egusphere-egu24-15826>, 2024.
- **A. Campanale** et al., *A new urban parameterization for the ICON atmospheric model: first results over Italy*, EMS Annual Meeting Abstracts, Vol. 20, EMS2023-461, 2023, <https://doi.org/10.5194/ems2023-461>.
- J. P. Schulz, ..., **A. Campanale**, ..., et al., *A new urban parameterisation for the ICON atmospheric model*, EMS Annual Meeting Abstracts, Vol. 19, EMS2022-501, 2022, <https://doi.org/10.5194/ems2022-501>.
- S. De Carolis, **A. Campanale**, C. Putignano, L. Soria, G. Carbone, *A methodology for vibro-acoustical Operational Modal Analysis of microsystems*, Mechanical Systems and Signal Processing, 2023, 184,109627

- C. Putignano, **A. Campanale**, *Squeeze lubrication between soft solids: a numerical study*, Tribology International 2022, 176, 107824.
- **A Campanale**, C Putignano, S De Carolis, P Patimisco, M Giglio, L Soria, *A theoretical-experimental framework for the analysis of the dynamic response of a QEPAS tuning fork device immersed in a fluid medium*, Mechanical Systems and Signal Processing, 2021, 149, 107298.
- **A Campanale**, L Soria, G Dimitriadis, G Kerschen, *Modelling the limit cycle oscillations of flat plate wings using inextensible plate theory and the vortex lattice method*, International Conference on Noise and Vibration Engineering, ISMA 2020.

## Conferences

- ICUC 12<sup>th</sup>, 12th International Conference on Urban Climate, Rotterdam, 7-11 July 2025
- ICCARUS conference, Offenbach, 10-14 March 2025
- EURO-CORDEX General Assembly, Hamburg, 22-25 January 2025
- CLM-Community Assembly 2024, Oberpfaffenhofen, 22-25 October 2024
- 26th COSMO • General Meeting, Offenbach, 2-5 September 2024
- Med-CORDEX Workshop, Rome, 14-16 May 2024
- EGU 2024, Vienna, Austria & Online | 14–19 April 2024
- ICCARUS meeting 2024, 04 to 08 March, 2024, Offenbach
- CLM-Community Assembly 2023, Leuven, Belgium, 19-22 September 2023.
- 25th COSMO • General Meeting, Danzica, 11-15 September 2023.
- EMS Annual Meeting 2023, European Meteorological Society annual meeting, Bratislava, Slovakia, 3-8 September 2023.
- MetMed 2023, 9th International Conference on Meteorology and Climatology of the Mediterranean, Genoa (Italy) on May 22-24, 2023.
- CLM-Community Assembly 2022, Online meeting, 19-23 September 2022.
- 24th COSMO • General Meeting, Athens, 12-16 September 2022.
- EMS Annual Meeting 2022, European Meteorological Society annual meeting, Bonn, Germany, September 2022.
- ESMC 2022, 11th European Solid Mechanics Conference, Galway, Ireland, July 2022.
- ISMA 2020, International Conference on Noise and Vibration, Leuven, Belgium, September 2020.
- ICONSOM 2019: International conference on non-linear solid mechanics, Rome, Italy, June 2019.

## Citations

- Scopus: 6 documents, 21 citations, 2 h-index, Scopus Identifier 57219392853, ORCID (<https://orcid.org/0000-0003-2369-5514>)
- Researchgate: 12 documents, 32 citations, 4 h-index, ([https://www.researchgate.net/profile/Angelo-Campanale?ev=hdr\\_xprf](https://www.researchgate.net/profile/Angelo-Campanale?ev=hdr_xprf))
- Google Scholar: 11 documents, 32 citations, 3 h-index.

## Projects and international collaborations

- **EURO-CORDEX**: Activities aimed at analyzing various regional climate models over the EURO-CORDEX domain (12 km) for both historical/evaluation periods and climate projections.
- **FPS-CORDEX**: Pilot studies within the CORDEX community addressing different aspects of regional modeling. For example, **FPS-LUCAS** focuses on the use of time-varying land use datasets, while **FPS URB-RCC** deals with the implementation and testing of urban parameterizations in regional climate models.
- **PP CITTA'**: Porting activities for the **TERRA\_URB** urban module, which addresses urban center interactions in the new regional atmospheric model **ICON** (Icosahedral Nonhydrostatic Weather and Climate). This project is carried out in collaboration with **DWD** (Deutscher Wetterdienst).
- **CMIP6 Converter**: Development of a tool for preparing the data required for downscaling the global model **CMCC-CM-SR2** using regional-scale models (e.g., **COSMO** or **ICON**). This activity is essential for CMIP6 downscaling.

- **PNRR-HPC Spoke 4:** National research project on High-Performance Computing for climate and weather modeling.
- **GLORI:** Research project for the development of a digital twin of the ICON atmospheric model at very-high resolution (below 1 km).
- **GLORI4DE (WP leader):** Research project on the interoperability between digital twins, specifically the GLORI twin, based on the ICON model, and the DESTINE twin, based on the IFS model.
- **COPAT2:** Research project within the **CLM** community aimed at optimizing the configuration of **COSMO** and **ICON** over the **EURO-CORDEX** domain (12.5 km resolution) for use in **CMIP6** downscaling.
- **CARMINE (task leader):** Project focused on providing climate change-resilient development pathways for metropolitan regions in Europe, offering impact-based decision-support services and a multi-level climate governance framework to support local adaptation.
- **WG Atmosphere Ice Ocean (deputy):** in the framework of the CLM community, the WG Atmosphere Ice Ocean (AIO) aims to build up regional Earth system models by coupling the atmosphere with other components of the climate system.

#### Advanced Courses

- **Training on YAC/ComIn for ICON model,** Hamburg, July 17-18, 2024, DKRZ.
- **ICON-ART Training Course,** online, May 11-12, 2023, organized by the Karlsruhe Institute of Technology.
- **DWD Numerical Model Training,** Offenbach, Germany, March 2023.
- **PhD Summer School "Collective Intelligence: Theories and Applications",** Polytechnic University of Bari, Bari, Italy, September 2019.
- **PhD Summer School "Tribology Summer School",** Polytechnic University of Milan in collaboration with SKF, Milan, Italy, August 2019.
- **PhD Research School "Laser Micro/Nanostructuring and Surface Tribology",** Department of Physics Michelangelo Merlin, Bari, October 2018.
- **Matlab Applications,** Polytechnic University of Bari, Bari, July 2018.
- **PhD Summer School "27th Summer School on Parallel Computing",** Cineca, Rome, July 2018.

#### Seminars and Lecturer activity

- **CMCC online Webinar:** *Advancing urban modelling in regional atmospheric models: insights, challenges and applications*, 24 March 2025.
- **Lecture at Parthenope University:** Online seminar on urban parameterizations in atmospheric models, December 2023.
- **Seminar titled "Urban Parameterization"** for the course *Dynamic Models for Weather and Climate Prediction*, Vanvitelli University, January 2023.
- **Lecturer for the course "Applied Mechanics"** in the *Industrial Engineering* program at the University of Foggia, Academic Year 2021-2022.