



Martina Perez

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Home: xxx, (Italy)

WORK EXPERIENCE

Post-doc researcher

CMCC Foundation - Euro-Mediterranean Center on Climate Change [02/04/2024 – Current]

Address: Via Igino Garbini,51, 01100 Viterbo (Italy)

Analysis of maps, data and models for the definition of land use, related greenhouse gas emissions and carbon sequestration, and the productivity of agricultural and forest ecosystems, in the context of climate policies (IAFES Division).

Coordination of orientation courses

Sapienza University of Rome [05/02/2024 – 16/02/2024]

City: Rome

Orientation courses coordination of to be held at institutes in the Lazio region as part of the "Next Generation Orientation - University of Lazio - Sapienza" project.

Junior Research Fellow for Life Project NL4DL

Sapienza University of Rome [06/2021 – 10/2021]

City: Rome

- Climate data reconstruction and analysis;
- Estimation and evaluation of Mediterranean forests aridity, climate trend analyses and drought indices evaluation;
- Identification of changes in vegetation dynamics;
- Contribution to reports and deliverables writing.

EDUCATION AND TRAINING

PhD

Sapienza University of Rome [01/11/2020 – 29/01/2024]

City: Rome | **Field(s) of study:** Environmental Biology, Climate Change | **Thesis:** Climate change and co-occurring disturbance effects on the Mediterranean forest ecosystems

- Climate time series analysis, advanced statistical techniques to detect abrupt changes and alterations in trends (i.e. change point detection, Bayesian models, Wavelet analysis), advanced forecasting models (ARIMA).
- Analysis of geospatial data using GIS software (QGIS, ArcGIS, SNAP) and geospatial datasets Google Earth Engine (GEE).
- Analysis and validation of global climate datasets (NOAA, ERA5, CHELSA, NASA POWER, CHIRPS).

- Elaboration of EO data and derived products for studying processes related to status and changes in land cover, vegetation health and drought.
- EO data pre and post- processing and sensor's harmonization.
- Quantification of the impact of Climate Change on processes regulating forest health.

Professional qualification - Biologist Sect.A

Aldo Moro University of Bari [12/11/2022]

Final grade: The State Exam to qualify as a Biologist

Master's Degree in Ecobiology

Sapienza University of Rome [09/2017 – 10/2020]

City: Rome | Country: Italy | Field(s) of study: Environmental Biology | Final grade: 110/110 cum Laude | Thesis: Impact of air pollution on the biodiversity of herbaceous and shrub communities in Italian forests

- Management and analysis of floristic databases using TurboVeg software;
- Application of spatial interpolation techniques for generating biodiversity maps across the Italian national territory;
- Analysis of NetCDF products of environmental pollution and correlation analysis with biodiversity indices;
- Basic and advanced statistical analysis: calculation of biodiversity indices, geostatistical interpolation techniques, Regression Models, Random Forest.

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PUBLICATIONS

[2024]

Wavelet coherence analysis to assess cross-correlation of Mediterranean vegetation and drought condition at local scale.

[2023]

Landsat-7 ETM+, Landsat-8 OLI, and Sentinel-2 MSI Surface Reflectance Cross-Comparison and Harmonization over the Mediterranean Basin Area

[2022]

Nature Based Solutions e telerilevamento nelle attività di ripristino di aree degradate:l'approccio del progetto NewLife4Drylands

[2022]

Is the Current Modelling of Litter Decomposition Rates Reliable under Limiting Environmental Conditions Induced by Ongoing Climate Change?

CONFERENCES AND SEMINARS

[06/11/2023 – 08/11/2023] Pisa, Italy

IEEE MetroAgriFor Oral Presentation : Wavelet Coherence Analysis to assess cross-correlation of Mediterranean vegetation and drought condition at local scale

[28/09/2022 – 29/09/2022] Rome, Italy

Integrated Carbon Observation System ICOS Submitted Poster : Integrazione di modelli a diversa scala spaziale per quantificare l'impatto del cambiamento climatico locale sui processi che regolano il ciclo del carbonio di foreste miste mediterranee: il caso del Bosco di Palo Laziale.

Link: <https://iris.uniroma1.it/handle/11573/1672796>

[30/05/2022 – 02/06/2022] Orvieto, Italy

XIII Congresso SISEF Submitted Poster: Ricostruzione e analisi di serie storiche e sviluppo di modelli predittivi climatici per valutare il cambiamento climatico a scala locale su aree forestali degradate mediterranee: il caso del Bosco di Palo Laziale

Link: <https://congressi.sisef.org/xiii-congresso/?id=poster>

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and Interpersonal Skills

- Strong ability to work in a dynamic research environment, fostering effective communication and teamwork. This proficiency is enriched by hands-on experience in the NL4DL life project and active participation in both national and international conferences.
- Problem-solving and troubleshooting skills, thanks to the rigorous demands of the PhD program and LIFE projects, showcasing resilience and agility in meeting deadlines.
- Proficient in writing scientific articles, research papers, project deliverable and project proposals reflecting a commitment to precision and clarity in conveying complex information.

PROFESSIONAL SKILLS

Professional Skills

Possessing a strong foundation in analytical skills, I demonstrate proficiency in utilizing statistical analysis software and exhibit meticulous attention to detail when handling complex datasets.

In particular, my knowledge and experience encompass:

- **Statistical software and programming language:** Expert in using R, MATLAB, Java and STATISTICA (StatSoft) for advanced statistical analysis.
- **Geographic Information Systems and Geospatial analysis platform:** Proficient in utilizing QGIS, Google Earth Engine (GEE), ArcGIS, SNAP to analyze and visualize spatial data
- **Database Management and Analysis :** Skilled in database management and analysis using Excel, Access, TurboVeg.
- **Visual Programming for System Dynamics Modeling:** Application of visual programming software, including proficiency in STELLA, for dynamic system modeling.
- **Microsoft Office Suite:** Possessing professional proficiency in the comprehensive use of Microsoft Office Suite, ensuring seamless integration and execution of tasks.

AWARDS AND FUNDING

[2023]

Winner of "Progetto per Avvio alla Ricerca - Tipo 2" at Sapienza University of Rome

Title of the research project: **Evaluation of soil water content using ground depth probes in a mixed Mediterranean forest: Implications for water balance and integration for the development of an optimized water balance model.**

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