

Cotrozzi, L., Lorenzini, G., Nali, C., Pellegrini, E., Saponaro, V., Hoshika, Y., ... & Paoletti, E. (2020). Hyperspectral reflectance of light-adapted leaves can predict both dark-and light-adapted chl fluorescence parameters, and the effects of chronic ozone exposure on date palm (*Phoenix dactylifera*). *International Journal of Molecular*

Sciences, 21(17), 6441. <https://doi.org/10.3390/ijms21176441>

Saponaro, V., De Cáceres, M., Dalmonech, D., D'Andrea, E., Vangi, E., & Collalti, A. (2024). Assessing models' sensitivity to the effects of forest management and climate change on carbon and water fluxes in European beech forests. *bioRxiv*, 2024-08. <https://doi.org/10.1101/2024.08.20.608827>

Saponaro V., Dalmonech D., Vangi E., Puchi F.P., Rezaie N., D'Andrea E., Tomelleri E., Collalti A. (2025). Climate change, not management, drives short- and long-term changes in iWUE in a sub-Alpine beech forest. [DOI: 10.1007/s11676-025-01942-8](https://doi.org/10.1007/s11676-025-01942-8)

Cucina M., Massaccesi L., Garfí M., Saponaro V., Muñoz M. A., Escalante H., Castro L. (2025) Application of digestate from low-tech digesters for degraded soil restoration: Effects on soil fertility and carbon sequestration. <https://doi.org/10.1016/j.scitotenv.2025.178854>

Collalti, A., Dalmonech, D., Vangi, E., Marano, G., Puchi, P.F., Morichetti, M., Saponaro, V., Orrico, M.R., Grieco, E., 2024. Monitoring and Predicting Forest Growth and Dynamics. CNR Edizioni, Roma. DOI: 10.32018/ForModLab-book-2024 ISBN: 978-88-8080-655-4

Further data

Conferences:

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

Auditor at the XIII SISEF Congress *Tree-Forest-Biodiversity - New Green Deal and Farm to Fork Strategy*. **Link:** <https://congressi.sisef.org/xiii-congresso/>

[27/09/2022 – 28/09/2022] Rome

Poster at the Conferenza ICOS Modelling the effect of environment on the-coupling between carbon assimilation and growth at four Eddy-Covariance sites. Daniela Dalmonech, Marta Galvagno, Vincenzo Saponaro, Carlo Trotta, Alessio Collalti. **Link:** <https://www.icos-italy.it/conferenza-icos-italy-2022/>

[19/06/2023 – 23/06/2023] Davos, Switzerland

International Tree Regeneration Workshop A lot of effort has been devoted to the modeling of the vegetation carbon balance arising from photosynthesis and respiration. Much less effort was spent on demographic processes, although they are pivotal for determining the response of the biosphere to climate change as well. A particularly under-represented field is the modeling of tree regeneration. An international workshop that focuses on the benchmarking of a wide range of vegetation models from the stand across the landscape to the global scale. **Link:** <https://www.nfz-forestnet.eu/collaborative-events/tree-regeneration-modeling-workshop>

[04/09/2023 – 08/09/2023] Leipzig, Germany

Poster at the European Conference on Ecological Modelling (ECEM) Environmental factors affecting natural regeneration process in a beech forest in Italian peninsula. Vincenzo Saponaro, Daniela Dalmonech, Alessio Collalti. **Link:** <https://ecem23.eu>

[23/06/2024 – 29/06/2024] Stockholm, Sweden

Poster at the IUFRO World Congress Publication Preview Source Assessing the impact of climate change on natural forest regeneration dynamics in Italy. Vincenzo Saponaro, Daniela Dalmonech, Alessio Collalti. **Link:** <https://iufro2024.com>

[02/06/2025 – 05/06/2025] Participation in the Fluxcom-X workshop and presentation of research activities on the spatialization of outputs obtained from process-based model simulations using machine learning algorithms (short talk), Ziegenrück, Germany.

Courses:

[27/03/2023 – 29/03/2023]

Introduction to Scientific and Technical Computing in C
CINECA (BO)

Dr. Luca Ferraro

[03/05/2023 – 05/05/2023]

Introduction to Scientific and Technical Computing in C++
CINECA (BO)

Dr. Maurizio Cremonesi

[17/06/2023]

Linguaggio C, il corso PREMIUM con esercizi svolti 2023

Udemy

Prof. Mirco Baragiani

[12/06/2023 – 16/06/2023]

Data Science - teoria e applicazioni in Python

University of Insubria Prof. Gabriella Fanali

Prof. Marco Chierici

Statement of interest

As a candidate with substantial experience in forest modeling, remote sensing and the use of observational data, particularly from eddy covariance towers, I am confident in my ability to contribute meaningfully to the research activities within the FORMA project framework, which addresses forest vulnerability to climate change and forest resilience and management.

My background in forest dynamics and climate interactions positions me to actively support the project's objectives of understanding and mitigating the impacts of climate change on forest ecosystems. I have worked extensively with process-based models to simulate forest growth, carbon sequestration, and ecosystem responses to environmental stressors, including variations in temperature and precipitation. I have also applied remote sensing data and machine learning (ML) algorithms to predict carbon and water cycles as proxies for forest health. This expertise will be critical for assessing forest vulnerability and resilience in the context of shifting climate patterns.

In addition to my modeling expertise, my experience in collecting field data provides a robust foundation for the empirical validation of models. The integration of these observational data allows for more accurate predictions of forest carbon dynamics, energy fluxes, and overall ecosystem health.

Furthermore, my collaborative work in interdisciplinary environments will facilitate knowledge sharing and integration across research areas. Through this position, I look forward to leveraging my expertise to help strengthen the University's research capacity in environmental science and forestry.

**Language
competence**

English

Listening C1

Reading C1

Writing C1

Speaking C1

Spanish

Listening B2

Reading B2

Writing B2

Speaking B2