ANNA CANDOTTI

Languages

German – native
Italian – native
English – C1

Skills

- Programming languages: R (advanced), Python (intermediate), JavaScript (basic)
- (Geo)statistical analysis and data visualization
- Collection, pre-processing and processing of optical (advanced), lidar (advanced) and radar (basic) satellite and UAV remotely sensed data
- Software: QGIS, ArcGIS, Grass, IDL, Envi, Terrset, Snap, Cloud Compare, Agisoft Metashape, EddyPro, LiDAR360
- GNSS and total station survey techniques
- Use of Spectroradiometers
- Analysis of eco-physiological data from IoT devices

Profile

Geographer and forest ecology PhD student with a background in the areas of remote sensing, cartography and geoinformatics and a particular interest in forest disturbance ecology and monitoring by means of close-range and remotely sensed data.

Professional Experience

Present Appointment: Forest Ecology PhD, Free University of Bolzano (IT), 2022 – ongoing

Thesis title: Rise and fall of a Spruce Bark Beetle Infestation: Advanced Techniques for Early Stress Detection, Infestation Spread Prediction, and Post-damage Forest Management

Research abroad

-Forschungszentrum Jülich (Jülich (DE)), Institute of Bio- and Geosciences (IBG), Plant Sciences, Shoot Dynamics Group, Visiting period, February 2025- March 2025

- Max Planck Institute for Biogeochemistry, Dept. of Biogeochemical Integration / Climate Ecosystem Disturbance Interactions Group (Jena (DE)), Visiting period, February 2024- March 2024

- University of Graz, Institute of Geography and Regional Science/ Geospatial Technologies Group (Graz (AT)), Visiting period, January 2024

Academic teaching assistant, Free University of Bolzano (IT

-Course in *Forest Inventories,* academic years 2022-2023, 2023-2024, 2024-2025
-Course in *Management of Mountain Forests,* academic years 2023-2024, 2024-2025

Education

Master in Geography and Territorial Processes, Università di Bologna (IT), Sep 2019 – May 2022

110/110 cum laude

Presentations at international conferences

-*Disentangling Norway Spruce Responses to Bark Beetle Infestation and Drought Stress by Continuous Eco-Physiological Monitoring and Field Spectroscopy*. **Candotti** et al. Oral presentation at the XXVI World Congress of the International Union of Forest Research Organizations (IUFRO), 23-29 June 2024, Stockholm (SWE)

Presentations at workshops

-*Bark beetle caused spruce physiology changes: preliminary results from a manipulation experiment.* **Candotti** et al. Oral presentation at the First international workshop on Norway spruce – bark beetle interactions at the Study Centre for the Alpine Environment L. Susmel, San Vito di Cadore, 30 Sep – 01 Oct 2024

Co-author of presentations at national or international conferences

-*Vaia, bostrico e pericolosità incendi: come sta cambiando l'infiammabilità a scala di popolamento e a scala territoriale: l'esempio della Provincia di Bolzano.* Passamani, *Candotti*, Gamba, Ellecosta, Pietrogiovanna, Tomelleri, Ascoli. Oral presentation at the XIV Congresso SISEF, Padova, 09-12 Sep, 2024

-*Forest structure effects on microclimate in beech forests: results from a multi-year monitoring transect across the Italian peninsula.* Tomelleri, *Candotti*, Alvites, Antonucci, Battipaglia, Belelli Marchesini, Castaldi, Cocozza, Da Ros, Gianelle, Hoshika, Lamantia, Massari, Sala, Santopuoli, Tognetti, Yates, Valentini. Oral presentation at the Microclimate Ecology and Biogeography Conference, Helsinki, 26-29 Aug, 2024

Peer-reviewed publications

-Candotti, A.; De Giglio, M.; Dubbini, M.; Tomelleri, E. A Sentinel-2 Based Multi-Temporal Monitoring Framework for Wind and Bark Beetle Detection and Damage Mapping. *Remote Sens.* **2022**, *14*, 6105. https://doi.org/10.3390/rs14236105

Other publications

-Candotti, A., Tomelleri, E., Borkenkäfer und Ökophysiologie der Fichte, Agrar- & Forstbericht 2023, Autonome Provinz Bozen - Abteilung Landwirtschaft