Luca DA ROS

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WORK EXPERIENCE

Free University of Bolzano - *Research Assistant*   Apr 2022 – Present
Bolzano (Italy)
Industrial research and experimental development on smart-forestry (IoT devices), forest carbon stocks, climate change monitoring, mountain health and safety, technology transfer.

EDUCATION

Ph.D. in Mountain Environment and Agriculture   Nov 2018 – Jul 2022
Investigating the biogeochemical cycling of nitrogen and carbon, quantifying stocks in temperate forests
Co-founded by Free University of Bolzano / Fondazione Edmund Mach (Italy)

Fulbright Visiting Student Researcher fellowship   Feb 2021 – Aug 2021
Flagship international academic exchange program sponsored by the U.S. government
Cornell University – Ithaca, New York (USA)

M.Sc. in Management of Agro-territorial, Forest and Landscape Ecosystems   Sep 2015 – Sep 2017
Graduated with honors (110/110 cum laude)
University of Bologna (Italy)

Qualité de l'Environnement et Gestion des Ressources (Erasmus+ scholarship)   Aug 2016 – Feb 2017
Institute National Polytechnique de Toulouse - ENSAT (France)

Bachelor in Natural Sciences   Sep 2011 – Dec 2014
University of Bologna (Italy)

INVOLVEMENT IN PROJECTS

TREETALKER NETWORK: continuous large-scale monitoring of tree functional traits and vulnerabilities to climate change (ItTREEnet)
Free University of Bolzano (Bolzano, Italy) – Research assistant (SSD AGR-05)

National Science Foundation: Terrestrial Denitrification and Environmental Change
Hubbard Brook (New Hampshire, USA) / Cornell University (Ithaca, NY, USA) – Fulbright VSR fellowship

INSIDE : Stable Isotopes Techniques in Trees
Free University of Bolzano / Fondazione Edmund Mach (Italy) – PhD fellowship

ANR TRAM project : trace metal legacy in mountain environments
EcoLab (Toulouse, France) - ERASMUS + traineeship

GLOCHARID : Global Change in Arid Zones
Universidad de Almeria (Spain) – LLP/ERASMUS PLACEMENT

TEACHING & CAPACITY BUILDING

Lecture in "Forestry as a tool for rural and touristic development"   Oct 2023
Polytechnic of Milan (Italy)

Teaching assistant in "Management of Mountain forests"   Oct 2022 – Jan 2023
Free University of Bolzano (Italy)

Teaching assistant in "Wood anatomy and productive silviculture"   Oct 2019 – Jan 2020
Free University of Bolzano (Italy)   Oct 2020 – Jan 2021

LANGUAGES & SKILLS

- **Languages: Italian** (native proficiency), **English** (IELTS 8.0/9.0), **Spanish** (C1), **French** (B2+), **German** (A1.2)
- **Computer:** Data Scientist with R (Datacamp), FARO Scene, CloudCompare, Word and Excel (advanced), QGIS (Grass, SAGA), Adobe InDesign, Adobe Illustrator, AutoCAD, Solidworks 3D, Rhinoceros, Lantek Expert
- **Environmental sensing technologies:** professional experience with carbon stock calculation, IoT-TreeTalkers network maintenance and data gathering/data treatment – Dry and wet deposition sampling/monitoring – Terrestrial laser scanner field and computer operations – satellite data gathering and treatment
- **Others:** Driving license (B1), Certified in climbing and working on eddy covariance towers

TRAINING

Training school on "Joint effects of climate Extremes and Atmospheric deposition on European forests"
Lisbon (Portugal), 6-9 May 2024
3DForEcoTech Training school: 3D forest ecosystem monitoring by terrestrial based technologies
Helsinki (Finland), 18-22 July 2022
ISOCAMP 2021 – *Summer school on Stable Isotopes Techniques*
University of New Mexico - Center for Stable Isotopes - Albuquerque (New Mexico), USA, 3-14 August 2021
Master the Art of Public Speaking – *Advanced course*
NOI Techpark, Bolzano (BZ), Italy, 21-22 September 2021
IRSAE Summer School - *Applied Ecology*
Hòlar, Iceland, 2-9 July 2019
CLIMO Training School - *Multiscale monitoring tools for a smart management of mountain forests*
San Michele all'Adige (TN), Italy, 1-3 July 2019

AFFILIATIONS & VOLUNTEERING

International Research School in Applied Ecology – **IRSAE** (Elverum, Norway): *Board commission - PhD representative*

Bicycle social cooperative "**PedaleRadicale**" (Bolzano, Italy): *Founder and volunteer*

PUBBLICATIONS AND ESSAYS

<u>L. Da Ros</u>, E. Tomelleri **(2024)**: *Specific Response of Norway Spruce to Drought Conditions in the Italian Alps.* IUFRO 26th World Congress.

A. Candotti, I. Menegaldo, <u>L. Da Ros</u>, E. Tomelleri **(2024)**: *Disentangling Norway Spruce Responses to Bark Beetle Infestation and Drought Stress by Continuous Eco-Physiological Monitoring and Field Spectroscopy.* IUFRO 26th World Congress.

<u>L. Da Ros</u>[1], A. Bortolazzi[1], M. Rodeghiero, M. Ventura, R. Tognetti **(2024)**: *Simulated nitrogen deposition does not affect greenhouse gas emission in a sessile oak stand in Northern Italy.* Submitted (minor revisions) to Forest Ecology and Management

<u>L. Da Ros</u>, M. Rodeghiero, M. Ventura, R. Tognetti, C. L. Goodale, D. Gianelle **(2024)**: *High canopy retention of wet nitrogen deposition in a mountain beech forest: evidence from an isotope tracing study.* Accepted on Tree Physiology

<u>L. Da Ros</u>, M. Rodeghiero, C. L. Goodale, G. Trafoier, P. Panzacchi, F. Giammarchi, G. Tonon, M. Ventura **(2023)**: *Canopy ^{15}N fertilization increases short-term plant N retention compared to ground fertilization in an oak submountain forest.* Forest Ecology and Management, https://dx.doi.org/10.1016/j.foreco.2023.121001

I. Fracasso; C. Zaccone; N. Oskolkov; <u>L. Da Ros</u>; A. Dinella; L. Belelli Marchesini; P. Buzzini; C. Sannino; B. Turchetti; S. Cesco; G. Le Roux; G. Tonon; C. Vernesi; T. Mimmo; M. Ventura; L. Borruso **(2023)**: *Peatlands as ancient DNA archives for paleobiodiversity reconstructions*. Science of the Total Environment.https://doi.org/10.1016/j.scitotenv.2023.168159

G. Vaglio Laurin; A. Cotrina-Sanchez; L. Belelli-Marchesini; E. Tomellieri; G. Battipaglia; C. Cocozza; F. Niccoli; J. Piotr Kabala; D. Giannelle; L. Vescovo; <u>L. Da Ros</u>; R. Valentini **(2024)**: *Integrating ground below-canopy and satellite spectral data for an improved forest phenology monitoring system.* Ecological Indicators. https://doi.org/10.1016/j.ecolind.2023.111328

A. Bortolazzi[1], <u>L. Da Ros</u>[1], M. Rodeghiero, R. Tognetti, G. Tonon, M. Ventura **(2021***), The canopy layer, a biogeochemical actor in the forest N-cycle*, Science of the Total Environment, https://doi.org/10.1016/j.scitotenv.2021.146024

<u>L. Da Ros</u>, M. Ventura, M. Rodeghiero, D. Gianelle, G. Tonon **(2020)**, *Fate of atmospheric nitrogen depositions in two Italian temperate mountain forests assessed by isotopic analysis,* EGU General Assembly 2020. https://doi.org/10.5194/egusphere-egu2020-13067

G. Le Roux, S. V. Hansson, A. Claustres, S.Binet, F. De Vleeschouwer, L. Gandois, F. Mazier, A. Simonneau, R.Teisserenc, D. Allen, T. Rosset, M. Haver, <u>L. Da Ros</u>, D. Galop, P. Durantez, Anne Probst, J. M. Sanchez Perez, S. Sauvage, P. Laffaille, S. Jean, D. Schmeller, L. Camarero, L. Marquer, S. Lofts **(2020)**: *Trace metal legacy in mountain environments: a view from the Pyrenees mountains.* AGU Books. https://doi.org/10.1002/9781119413332.ch9

Master's thesis: "*Which factors influence Pb, As and Sb Concentration in Surface Water of High Mountain Lakes? Human Legacy vs. Geological and Pedological Background*" University of Bologna (Italy), tutor: Prof. Livia Vittori Antisari; co-tutor: Dr. Gael Le Roux

Bachelor's thesis: "*Environmental issues of the karstic acquifer Alto Aguas, Karst en Yesos de Sorbas, Almeria (Spain)*" University of Bologna (Italy), tutor: Prof. Jo De Waele; Co-tutor: Jose Maria Calaforra

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[1] These authors contributed equally.