

Curriculum Vitae - Claudia Guidi

Personal data

Name, first name	Guidi, Claudia
Title	PhD

Education

04.2011- 03.2015	PhD Degree, Forest, Nature and Biomass, Faculty of Science, University of Copenhagen Thesis: <i>Soil organic carbon responses to forest expansion on mountain grasslands</i> Supervisors: Prof. Lars Vesterdal, Dr. Mirco Rodeghiero
10.2008- 10.2010	M.Sc. Crop Production and Protection, University of Pisa, grade 110/110 cum laude
10.2005- 10.2008	B.Sc. Agricultural Sciences, University of Pisa, grade 110/110 cum laude
10.2005- 12.2010	Honors Degree, Sant'Anna School of Advanced Studies Pisa. Major: Agronomy, Soil Science

Work Experience

04.2025- present	Scientific Staff Member, Forests Soils and Biogeochemistry, WSL. Project Leader RootForC, funded by SNSF. Use of stable isotopes and radiocarbon to unravel forest soil carbon dynamics under global changes
03.2023- 03.2025	Scientific Staff Member, Forest Resources and Management, WSL. Horizon Project PathFinder.
04.2021- 09.2019	Post-doctoral researcher, Forests Soils and Biogeochemistry, WSL. Marie Curie Individual Fellowship, Project DRY SOM.
02.2015- 05.2019	Biodata Manager, Bayer CropScience, Italy. Applied product development with inspection of field trials, trainings to field technicians, writing, data analysis
04.2011- 01.2015	PhD research fellow, University of Copenhagen and Fondazione Edmund Mach. Field soil sampling, soil fractionation, soil chemical and thermal analysis

Publications in international peer-reviewed journals

- (11) **Guidi, C.**, Gosheva-Oney, S., Didion, M., Flury, R., Walthert, L., Zimmermann, S., Viskari T., Oney, B.J., Niklaus, P.A., Viskari, T., Liski, J., Hagedorn, F. (2025) Drivers of soil organic carbon from temperate to alpine forests: a model-based analysis of the Swiss forest soil inventory with Yasso20. *Biogeosciences*, 22, 4107–4122, 2025
- (10) Moreno Duborgel, M., Gosheva-Oney, S., Gonzalez-Dominguez, B., Brühlmann, M., Minich, L., Haghipour, N., Flury, R., **Guidi, C.**, Brunmayr, A., Abiven, S., Eglinton, T., Hagedorn, F. (2025). Shifting carbon fractions in forest soils offset ¹⁴C-based turnover times along a 1700 m elevation gradient. *Global Change Biology*, 2025; 31:e70326.

- (9) Vitali, V., Schuler, P., Holloway-Phillips, M., D'Odorico, P., **Guidi, C.**, Klesse, S., Lehmann, M.M., Meusburger, K., Schaub, M., Zweifel, R., Gessler, A., Saurer, M. (2024). Finding balance: Tree-ring isotopes differentiate between acclimation and stress-induced imbalance in a long-term irrigation experiment. *Global Change Biology* 30, e17237.
- (8) **Guidi, C.**, Lehmann, M.M., Meusburger, K., Saurer, M., Vitali, V., Peter, M., Brunner, I., Hagedorn, F. (2023). Tracing sources and turnover of soil organic matter in a long-term irrigated dry forest using a novel hydrogen isotope approach. *Soil Biology and Biochemistry*, 109113.
- (7) Zhang, Y., Hagedorn, F., **Guidi, C.**, Yang L. (2022). Limited soil carbon storage under long-term organic fertilization in solar greenhouses. *Soil Use and Management*, 38, 1614–1627.
- (6) **Guidi, C.**, Frey, B., Brunner, I., Meusburger, K., Vogel, M. E., Chen, X., Stucky, T., Gwiazdowicz, D. J., Skubała, P., Bose, A. K., Schaub, M., Rigling, A., & Hagedorn, F. (2022). Soil fauna drives vertical redistribution of soil organic carbon in a long-term irrigated dry pine forest. *Global Change Biology*, 28(9), 3145-3160.
- (5) Bose, A. K., Rigling, A., Gessler, A., Hagedorn, F., Brunner, I., Feichtinger, L., Bigler, C., Egli, S., Etzold, S., Gossner, M. M., **Guidi, C.**, Lévesque, M., Meusburger, K., Peter, M., Saurer, M., Scherrer, D., Schleppi, P., Schönbeck, L., Vogel, M. E., von Arx, G., Wermelinger, B., Wohlgemuth, T., Zweifel, R., & Schaub, M. (2022). Lessons learned from a long-term irrigation experiment in a dry Scots pine forest: Impacts on traits and functioning. *Ecological Monographs* 92(2): e1507.
- (4) Titus, B. D., Brown, K., Helmisaari, H.-S., Vanguelova, E., Stupak, I., Evans, A., Clarke, N., **Guidi, C.**, Bruckman, V. J., & Varnagiryte-Kabasinskiene, I. (2021). Sustainable forest biomass: A review of current residue harvesting guidelines. *Energy, Sustainability and Society*, 11(1), 1-32.
- (3) **Guidi, C.**, Cannella, D., Leifeld, J., Rodeghiero, M., Magid, J., Gianelle, D., & Vesterdal, L. (2015). Carbohydrates and thermal properties indicate a decrease in stable aggregate carbon following forest colonization of mountain grassland. *Soil Biology and Biochemistry*, 86, 135-145.
- (2) **Guidi, C.**, Magid, J., Rodeghiero, M., Gianelle, D., & Vesterdal, L. (2014). Effects of forest expansion on mountain grassland: changes within soil organic carbon fractions. *Plant and Soil*, 385(1), 373-387.
- (1) **Guidi, C.**, Vesterdal, L., Gianelle, D., & Rodeghiero, M. (2014). Changes in soil organic carbon and nitrogen following forest expansion on grassland in the Southern Alps. *Forest Ecology and Management*, 328, 103-116.

Published in other peer-reviewed journals

Hagedorn, F., Etzold, S., Zimmermann, S., **Guidi, C.**, Kohlenstoffdynamik in Schweizer Waldböden – Vorrat und Auswirkung von Trockenheit. *Schweizerische Zeitschrift für Forstwesen (SZF)*.

Teaching experience

2020	Teaching assistant. Forest Soils in a Changing Environment (701-1337-00L - 2020). Led and designed group work on “ <i>Stable isotope ecology</i> ”. Course led by Dr. F. Hagedorn. MSc in Environmental Sciences, ETH Zurich
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Supervision of students

2023-2024	V. Vasilica – MSc student, University Bayreuth. Training for Bayesian mixing models application. Main supervisor Prof. Johanna Pausch.
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2022-2023	M. Horvath - MSc thesis. Université de Lausanne and Neuchâtel. <i>Main supervisor</i> for soil sampling, soil functions and chemical analysis, direction Dr P. Vollenweider.
2021-2022	Y. Zhang - PhD student, WSL and Shenyang Agricultural University. Practical supervision for ingrowth cores preparation. Main supervisor Dr. Frank Hagedorn.
2020	J. Imboden - MSc internship, ETH. <i>Main supervisor</i> . Coordinated and designed soil priming experiment in laboratory conditions.
2020	C. Heim - BSc student, ETH. Practical supervision for root separation and classification. Main supervisor Dr. Frank Hagedorn.

Oral presentations at international conferences (delivered by the applicant)

2025	FORECOMON 2025, Dresden, Germany, May 2025. Talk: "Modelling soil carbon stocks across European forests using forest monitoring data".
2024	IUFRO World Congress 2024, Stockholm, Sweden, June 2024. Session S1.3 Forests in a changing world
2024	IUFRO World Congress 2024, Stockholm, Sweden, June 2024. Session T5.34 The new age of forest monitoring
2024	EGU General Assembly 2024, Vienna, Austria, April 2024. https://doi.org/10.5194/egusphere-egu24-12463
2023	International Meeting of the German Association for Stable Isotope Research GASIR 2023, Bayreuth, Germany, September 2023. Invited by Prof. J. Pausch
2023	EGU General Assembly 2023, Vienna, Austria, April 2023. https://doi.org/10.5194/egusphere-egu23-5557
2022	WORLD BIODIVERSITY FORUM, Davos, Switzerland, July 2022.
2022	EGU General Assembly 2022, Vienna, Austria, May 2022. https://doi.org/10.5194/egusphere-egu22-4828
2021	EGU General Assembly 2021, April 2021. Highlight presentation . https://doi.org/10.5194/egusphere-egu21-3380
2021	FORECOMON - The 9th Forest Ecosystem Monitoring Conference WSL, Birmensdorf, Switzerland, June 2021
2014	EGU General Assembly 2014, Vienna, Austria, April-May 2014. Geophysical Research Abstracts Vol. 16, EGU2014-7151
2013	SOIL CARBON SEQUESTRATION CONFERENCE, Reykjavik, Iceland, May 2013. Invited by European Commission JRC

Presentations at national events (delivered by the applicant)

2025	Swiss Forest Lab workshop 40 years of the Sanasilva Inventory and 30 years of the LWF Programm, WSL, June 2025
2023	Swiss Forest Lab Science Day 2023, ETH Zurich, October 2023
2022	FORSCHUNGSFORUM UZH, Invited by Prof. M. Schmidt . Department of Geography, UZH, November 2022
2020	PFYNWALD WORKSHOP 2020, WSL, Birmensdorf, Switzerland

Poster presentations at international conferences (delivered by the applicant)

2021	EUROSOIL 2021 Online, August 2021
2014	EGU General Assembly 2014, Vienna, Austria, May 2014
2013	EGU General Assembly 2013, Vienna, Austria. <i>Outstanding Student Poster Award</i>
2012	EUROSOIL 2012, Bari, Italy, June 2012
2011	INTERNATIONAL SYMPOSIUM ON SOIL ORGANIC MATTER 2011, Leuven, Belgium

Convener of Sessions for Scientific Conferences

2025	EGU 2025, <i>Soils and Climate Change</i> session (300 preparation), Co-Convener
2024	EGU 2024, <i>Soils and Climate Change</i> session (300 participants), Co-Convener
2023	EGU 2023, <i>Soils and Climate Change</i> session (250 participants), Lead Convener

Peer-Reviewing Activities for the following international journals:

Nature Ecology & Evolution, Global Change Biology, Soil Biology and Biochemistry, Biogeosciences, Geoderma, Environmental Science & Technology, European Journal of Forest Research, PlosOne, Science of the Total Environment, Plant and Soil, Forests, Catena, Applied Vegetation Science Journal

Outreach activities

01.2024	Feature article in « <i>Horizon, the EU Research and Innovation Magazin</i> », with outcomes of Marie-Curie DRYSON project. Link to article «Sifting through forest soils to fight climate change» published 23.01.2024
02.2023	Article for the <i>WSLIntern</i> : «Workshop for women in academia»
05.2022	Contributed to WSL Press release for article published in <i>Global Change Biology</i> . Link to article «Drought impedes carbon sequestration by earthworms», 31.05.2022. Large media coverage in Swiss and German news, i.e. Canal9 and 3sat
12.2020	Article for the <i>WSLIntern</i> : «Introducing the Women's Peer Mentoring Group»
10.2013	Contribution to the blog Division on Soil System Sciences (SSS), EGU, 2013

Languages

Italian: native

English: C2 / German: B1 / French: B1 / Spanish: A2