

PERSONAL INFORMATION



Tommaso Chiti

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Sex Male | Date of birth 24/02/1975 | Nationality Italian

WORK EXPERIENCE

2021 Nov-Ongoing

Associate Professor in Soil Science at University of Tuscia, Dept. for Innovation in Biological, Agro-food and Forest system (DIBAF). Main topics: Land use change, SOC dynamics, support to National GHG inventory for the LULUCF sector, Carbon farming practices, Forest management. **Business or sector:** Research/Public institution

2022 Jan-Ongoing

Soil Expert consultant for the TÜV-NORD company, Germany. Activity: Assessment of soil carbon methodologies that use SOC models (ISO 14064:2 – Models: RothC, Yasso). **Business or sector:** Consultant private sector

2022 Aug-2023 May

LULUCF Expert consultant for Exergia company within the framework of the European Environment Agency LULUCF emission inventory improvement activity. **Business or sector:** Research/ Private institution

2019-2020

Soil Expert consultant for Carbonsink Group s.r.l. for the development of a REDD+ project in Mozambique.

2013 Jan- 2021 Nov

Researcher at University of Tuscia, Dept. for Innovation in Biological, Agro-food and Forest system (DIBAF). Main topic: Land use change, SOC dynamics, support to National GHG inventory for the LULUCF sector, Forest management. **Business or sector:** Research/Public institution

2016 Sept- 2017 Aug

Researcher Far Eastern Federal University (FEFU) of Vladivostock (Russia). Main topic: Land use change, SOC dynamics, SOC modelling. **Business or sector:** Research/Public institution

2008 -2015

Soil sampling responsible within the ERC (Africa-GHG) projects Sites located in Ghana, Cameroun, Congo, Gabon, Sierra Leone and Kenya **Business or sector:** Research/Public institution

2011 – Ongoing

Soil Expert consultant for the TÜV-SUD company TÜV-SUD company, Germany. Activity: Assessment of soil carbon methodologies within the framework of the Verified Carbon Standard (VCS - Models: Century, RothC). **Business or sector:** Consultant private sector

2008-2012

Research assistant (Post-doc) at University of Tuscia, Dept. for Innovation in Biological, Agro-food and Forest system (DIBAF) Research activities on “Analysis and modelling of C in forests and agricultural soils” and “SOC dynamics in primary forests” within the ERC project “Africa-GHG”. **Business or sector:** Research/Public institution

2006-2010

Soil expert under the European program COST 639: “Greenhouse gas budget of soils under changing climate and land use” (Burn out); Working Group 3: Monitoring, statistics, simulation models.

2007 Feb-Dec

Research Grant at University of Florence Dept. for Soil Science and Plant Nutrition (DSSNP). Research activities on “Isotopic analysis and soil organic carbon fractionation in pools at different stability. **Business or sector:** Research/Public institution

EDUCATION AND TRAINING

- 2004 - 2007 **PhD course on Soil Science and Climatology** at University of Florence (Italy), Faculty of Forestry and Environmental Science. Supervisors: Prof Ugolini FC and Dr. PhD Certini G. Thesis: "Soil organic matter characterization in Alpine forests, grasslands and Mediterranean forests of Italy by the use of ¹³C NMR and isotopes analysis".
- 2007 March **Grant from the European Science Foundation (ESF)**, Centrum voor IsotopenOnderzoek (CIO), University of Groningen The Netherlands. Topic "Contribution of the most recalcitrant part of the soil organic matter to total soil respiration". Supervisor: Neubert R.E.M
- 2006 Sept **Summer-school on "Experimental assessment of changes in soil organic matter pools in mountain forests"** Obergurgl, Austria. Organized by the Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BFW), Wien.
- 2006 March **Grant from the European Science Foundation (ESF)** Centrum voor IsotopenOnderzoek (CIO), University of Groningen. The Netherlands. Topic "Isotopic characterization and soil flux partition in different soils under the footprint of a coastal CO₂-eddy-flux tower. Supervisor: Neubert R.E.M.
- 2005 Sep-Oct. **Grant from the European Science Foundation (ESF)**, Max Planck Institute for Biogeochemistry, Jena, Germany. Topic "Carbon budget and CO₂ efflux from the soil". Supervisor: Schulze E.D.
- 2005 June-July **Exchange student** at the Centrum for IsotopenOnderzoek (CIO), University of Groningen, The Netherlands Topic "Isotopic characterization of Dutch soils". Supervisor: Neubert R.E.M
- 2004 Sept **Summer-school on integrated methodology on soil carbon flux measurements.** Trento, Italy. Organized by the European Science Foundation (ESF).
- 2004 July **Course of "Rocks macroscopic recognition"** Milan, Italy. Organized by the University of Bicocca, Department of Environmental Sciences and Land Resources.
- 2003 September **Master degree/laurea in Forestry and Environmental Science (5 year course), Grade 105/110** at the University of Florence (Italy), Faculty of Forestry and Environmental Science. Supervisor: Prof. Sanesi G. Thesis: " Characterization of soil organic matter in afforestation on spoil banks".
- 2003 Jul-Aug **Apprenticeship at the "Istituto Agronomico per l'Oltremare" (IAO)**, on supporting activities on data entries. Florence, Italy.
- 2000 Jan.-June **Erasmus-Socrates program** Finland. University of Helsinki. Faculty of Forestry Science.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user [Common European Framework of Reference for Languages](https://doi.org/10.1016/j.jenman.2024.122882)

Communication skills: Good communication skills gained through my experience as visiting scientist in many international research institutions, presentations to workshops and conferences, organization and participation as lecturer in several training programs in Italy and abroad and.

Organisational / managerial skills: Good managerial and organizational skills gained through project coordination and participation in several EU founded projects

Computer skills: Solid knowledge of Windows OS, Mac, Microsoft Office™ and WWW research tools. Knowledge of R software and models for soil organic carbon dynamics

RELEVANT PUBLICATIONS

Chiti, T., Benilli, N., Mastrodonardo, G., Certini, G. (2024). The potential for an old-growth forest to store carbon in the topsoil: A case study at Sasso Fratino, Italy. *Journal of Forestry Research*, 35(1), 10. <https://doi.org/10.1007/s11676-023-01660-z>

Antoniella, G., Kumar, A., Chiarabaglio, P. M., Mugnozza, G. S., **Chiti, T. (2024).** Do poplar plantations enhance organic carbon stocks in arable soils? A comprehensive study from Northern Italy. *Journal of Environmental Management*, 370, 122882. <https://doi.org/10.1016/j.jenman.2024.122882>

- Petersson T, Antoniella, G, Chiriaco MV, Perugini L, **Chiti T** (2024). The misconception of soil organic carbon sequestration notion: When do we achieve climate benefit? *Soil Use and Management*. <https://doi.org/10.1111/sum.13009>
- Chiti T**, Blasi E, Chiriaco MV (2024) Carbon sequestration in a bamboo plantation: a case study in a Mediterranean area. *J. For. Res.* 35, 51. <https://doi.org/10.1007/s11676-024-01696-9>
- Kahn MD Z, **Chiti T** (2022). Soil carbon stocks and dynamics of different land uses in Italy using the LUCAS soil database. *Journal of Environmental Management* 306: 114452
- Chiti T**, Certini G, Marzaioli F, D'Acqui LP, Forte C, Castaldi S, Valentini R (2019). Composition and turnover time of organic matter in soil fractions with different magnetic susceptibility. *Geoderma* 349: 88–96
- Chiriaco MV, Belli C, **Chiti T**, Trotta C, Sabbatini S (2019). The potential carbon neutrality of sustainable viticulture showed through a comprehensive assessment of the greenhouse gas (GHG) budget of wine production. *Journal of Cleaner Production* 225: 435–450
- Pellis G, **Chiti T**, Rey A Curiel Yuste J, Trotta C, Papale D (2019). The ecosystem carbon sink implications of mountain forest expansion into abandoned grazing land: The role of subsoil and climatic factors. *Science of the Total Environment* 672: 106–120
- Chiti T**, Rey A, Jeffery K, Lauteri M, Mihindou V, Malhi Y, Marzaioli F, White LJT, Valentini R (2018a) Contribution and stability of forest-derived soil organic carbon during woody encroachment in a tropical savanna. A case study in Gabon. *Biology and Fertility of Soils* 54:897–907
- Chiti T**, Blasi E, Pellis G, Perugini L, Chiriaco MV, Valentini R (2018b) Soil organic carbon pool's contribution to climate change mitigation on marginal land of a Mediterranean montane area in Italy. *Journal of Environmental Management* 218: 593-601.
- Chiti T**, Díaz-Pinés E, Butterbach-Bahl, Marzaioli F, Valentini R (2018c) Soil organic carbon changes following degradation and conversion to cypress and tea plantations in a tropical mountain forest of Kenya. *Plant and Soil* 422:527–539
- Marconi S, **Chiti T**, Nolè A, Valentini R, Collalti A (2017) The Role of Respiration in Estimation of Net Carbon Cycle: Coupling Soil Carbon Dynamics and Canopy Turnover in a Novel Version of 3D-CMCC Forest Ecosystem Model. *Forests*, <https://doi.org/10.3390/f8060220>
- van Asperen H, Warneke T, Sabbatini S, Höpker M, Nicolini G, **Chiti T**, Papale D, Böhm M, Notholt J (2017) Diel variation in isotopic composition of soil respiratory CO₂ fluxes: The role of non-steady state conditions. *Agricultural and Forest Meteorology* 234–235: 95–105
- Chiti T**, Mihindou V, Jeffery KJ, Yadvinder M, Oliveira F, White LJT, Valentini R (2017) Impact of woody encroachment on soil organic carbon storage in the Lopè National Park, Gabon. *Biotropica*. <https://doi.org/10.1111/btp.12369>
- Chiti T**, Perugini L, Vespertino D, Valentini R (2016) Effect of selective logging on soil organic carbon dynamics in tropical forests in central and western Africa. *Plant and Soil*, 399:283-294
- Chiti T**, Certini G, Forte C, Papale D, Valentini R (2016) Radiocarbon-Based Assessment of Heterotrophic Soil Respiration in Two Mediterranean Forests. *Ecosystems*, 19:62-72
- Chiti T**, Grieco E, Perugini L, Rey A, Valentini R (2014) Effect of the replacement of tropical forests with tree plantations on soil organic carbon levels in the Jomoro district, Ghana. *Plant and Soil*. <https://doi.org/10.1007/s11104-013-1928-1>
- Collalti A, Perugini L, Santini M, **Chiti T**, Nolè A, Matteucci G, Valentini R (2013) A process-based model to simulate growth in forests with complex structure: evaluation and use of 3D-CMCC Forest Ecosystem Model in a deciduous forest in Central Italy. *Ecological Modelling*, <https://doi.org/10.1016/j.ecolmodel.2013.09.016>
- Castaldi S, Bertolini T, Valente A, **Chiti T**, Valentini R (2013) Nitrous oxide emissions from a soil of an African rain forest in Ghana. *Biogeosciences*, 10: 4179-4187
- Chiti T**, Diaz-Pinez E, Rubio A (2012a) Soil organic carbon stocks of conifers, broadleaf and evergreen broadleaf forests of Spain. *Biology and Fertility of Soils*. DOI 10.1007/s00374-012-0676-3
- Chiti T**, Gardin L, Perugini L, Quarantino R, Vaccari FP, Miglietta F, Valentini R (2012b). Soil organic carbon stock assessment for the different cropland land uses in Italy. *Biology and Fertility of Soils*. <https://doi.org/10.1007/s00374-011-0599-4>
- Chiti T**, Neubert REM, Janssens IA, Curiel Yuste J, Sirignano C, Certini G (2011). Radiocarbon based assessment of soil organic matter contribution to soil respiration in a pine stand of the Campine region, Belgium. *Plant and Soil*, 344:273-282.
- Chiti T**, Certini G, Perugini L, Mastrodonato G, Valentini R (2011). Soil carbon dynamics in a Mediterranean forest during the Kyoto Protocol commitment periods. *Regional Environmental Changes*. <https://doi.org/10.1007/s10113-010-0141-5>
- Chiti T**, Papale D, Smith P, Dalmonch D, Matteucci G, Yeluripati J, Rodeghiero M, Valentini R (2010a). Predicting changes in soil organic carbon in Mediterranean and Alpine forests during the Kyoto Protocol commitment periods using the CENTURY model. *Soil Use and Management*, 26:475-484.
- Chiti T**, Certini G, Grieco E, Valentini R (2010b). The role of soil in storing carbon in tropical rainforests: the case of Ankasa park, Ghana. *Plant and Soil*, 331:453-461.
- Chiti T**, Neubert REM, Janssens IA, Certini G, Curiel Yuste J, Sirignano C (2009). Radiocarbon dating reveals different past management of two adjacent forest soils in the Campine region, Belgium. *Geoderma*, 149:137-142.
- Chiti T**, Certini G, Puglisi A, Sanesi G, Capperucci A, Forte C (2007). Effects of associating a N-fixer species to monotypic oak plantations on the quantity and quality of organic matter in minesoils. *Geoderma*, 138: 162-169.

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Viterbo, 22nd October 2024

