

Alessio Collalti, Ph.D.



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Sex M | Date of birth 04 July 1979 | Nationality Italian

Work Experience

1 January 2021 – ongoing

Senior Researcher (II level, permanent position)

National Research Council of Italy (CNR), Institute for Agricultural and Forestry System in the Mediterranean (ISAFOM). Via della Madonna Alta, 128, 06128, Perugia (PG), Italy

- Head of the Research Unit of ISAFOM-CNR in Perugia (Prot. N. 195392 del 20250603 (2025-CNR0A00-0195392), June 3, 2025; <https://isafom.cnr.it/perugia/>) (2025 – ongoing)
- Head of the Research Unit of ISAFOM-CNR in Viterbo (VT) at University of Tuscia (Approval N. 158/2023 – 478, May 23, 2023) (2023 – ongoing)
- Forest Modelling Laboratory Head (Prot. N. 0000652/2020; www.forest-modelling-lab.com) (2020 – ongoing)
- Principal Investigator Bonis' Watershed site of Bonis (Cosenza, Calabria) (Prot. N. 0391591/2023) (2023 – ongoing)
- Principal Investigator 3D-CMCC-FEM (*Three Dimensional – Coupled Model Carbon Cycle – Forest Ecosystem Model*; www.github.com/Forest-Modelling-Lab/3D-CMCC-FEM) (2011 – ongoing)

Business or sector Research, Development and Management

27 December 2018 – 31 December 2020 Researcher (III level, permanent position)

National Research Council of Italy (CNR), Institute for Agricultural and Forestry System in the Mediterranean (ISAFOM). Via della Madonna Alta, 128, 06128, Perugia (PG), Italy. Prot. N. 00086795/2022

- Forest Modelling Laboratory Head (Prot. N. 0000652/2020; www.forest-modelling-lab.com) (2020 – ongoing)
- Principal Investigator 3D-CMCC-FEM (*Three Dimensional – Coupled Model Carbon Cycle – Forest Ecosystem Model*; www.github.com/Forest-Modelling-Lab/3D-CMCC-FEM) (2011 – ongoing)

Business or sector Research and Development

1 February 2019 – 31 December 2019

“Research Scientist” (Affiliated)

Foundation euro-Mediterranean Centre on Climate Change (CMCC) – Via Augusto Imperatore 16, 73100, Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100, Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- Research Unit Leader for IAFES Division: “RU: Vegetation modelling and climate change impacts” (Prot. N. 153/CMCC/2019)

Business or sector Research and Development

1 June 2017 – 26 December 2018

“Research scientist” (II level, part-time 50%, permanent position)

Foundation euro-Mediterranean Centre on Climate Change (CMCC) – Via Augusto Imperatore 16, 73100 Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100, Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- Research Unit Leader for IAFES Division: “RU: Vegetation modelling and climate change impacts” (Prot. N. 741/17/CMCC).
- Principal Investigator 3D-CMCC-FEM
- CMIP6 CLM 4.5-CESM output analysis, Earth System Models (ESMs) development of the phenological tool for the analysis within the ESMValTool (H2020 “CRESCENDO” Project)

Business or sector Research and Development

16 May 2016 – 15 October 2018

Researcher (III level, fixed-term, part-time 50%)

National Research Council of Italy (CNR), Institute for Agricultural and Forestry System in the Mediterranean (ISAFOM). Via Cavour 4-6, 87036, Rende (CS), Italy (Bando n. 01 – 2015 ISAFOM CS – Prot. 0003228-19/06/15 GU n.51-7/7/15)

- Vegetation modelling and future projections Principal Investigator in the Bonis (Calabria) study area (Project PON “AmbiTecFilLegno” (PON03PE_00024_1)
- Principal Investigator 3D-CMCC-FEM
- Sustainable forest management scenarios under RCP 4.8 e 8.5 climate scenarios

Business or sector Research and Development

1 January 2016 – 15 May 2017

“Junior scientist” (III level, fixed-term, part-time 50%)

Foundation euro-Mediterranean Centre on Climate Change (CMCC) – Via Augusto Imperatore 16, 73100, Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100, Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- Research Unit Leader for IAFES Division: “RU: Vegetation modelling and climate change impacts”
- CMIP6 CLM 4.5-CESM output analysis, Earth System Models (ESMs) development of the phenological tool for the analysis within the ESMValTool (H2020 “CRESCENDO” Project)
- Principal Investigator 3D-CMCC-FEM

Business or sector Research and Development

1 January 2015 – 31 December 2015

“Junior scientist” (II level, fixed-term)

euro-Mediterranean Centre on Climate Change (CMCC) s.c.a.r.l. – Via Augusto Imperatore 16, 73100, Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100, Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- “Ecosistemi terrestri e cambiamenti climatici” activities: “Sviluppo e validazione di moduli del modello 3D-CMCC-FEM” (Prot. 2565/14/CMCC)(“GEMINA” Project, WP A.2.8)
- Research Unit Leader for IAFES Division: “RU: Vegetation modelling and climate change impacts”
- Principal Investigator 3D-CMCC-FEM

Business or sector Research and Development

1 January 2014 – 31 December 2014

“Junior scientist” (III level, fixed-term)

euro-Mediterranean Centre on Climate Change (CMCC) s.c.a.r.l. – Via Augusto Imperatore 16, 73100, Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100, Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- “Ecosistemi terrestri e cambiamenti climatici” activities: “Sviluppo e validazione di moduli del modello 3D-CMCC-FEM” (Prot. 2565/14/CMCC)(Progetto “GEMINA”, WP A.2.8)
- Research Unit Leader for IAFES Division: “RU: Vegetation modelling and climate change impacts”
- Principal Investigator 3D-CMCC-FEM

Business or sector Research and Development

1 May 2013 – 31 August 2013

Post-Doctorate researcher (co.co.co)

euro-Mediterranean Centre on Climate Change (CMCC) s.c.a.r.l. – Via Augusto Imperatore 16, 73100, Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100, Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- “Realizzazione Scenari di cambiamento di distribuzione della vegetazione nel Mediterraneo” (“FUME” Project, WP 2.2)
- Use of “Species Distribution Models, SDM” (e.g. BIOMOD) for future forests distribution analyses.
- Research Unit Leader for IAFES Division: “RU: Vegetation modelling and climate change impacts”

Business or sector Research and Development

1 September 2012 – 31 December 2013

Post-Doctorate researcher (co.co.co)

euro-Mediterranean Centre on Climate Change (CMCC) s.c.a.r.l. – Via Augusto Imperatore 16, 73100, Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100, Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- “applicazione del modello 3D-CMCC Forest Model” (“FUME” Project, WP 4 task 2 pilot study 1)

- Research Unit Leader for IAFES Division: "RU: Vegetation modelling and climate change impacts"

Business or sector Research and Development

1 September 2012 – 31 December 2013 Post-Doctorate researcher (co.co.co)

euro-Mediterranean Centre on Climate Change (CMCC) s.c.a.r.l. – Via Augusto Imperatore 16, 73100, Lecce (LE), Italy (www.cmcc.it) – Division IAFES (Impacts on Agriculture, Forests and Ecosystem Services). Viale Trieste 127, 01100 Viterbo (VT), Italy (www.cmcc.it/it/divisions/iafes)

- "Sviluppo ed implementazione del modello 3D-CMCC Forest Model ed implementazione del modello vegetazionale nel framework CLM" (Prot. Nr. 1873/12/CMCC)("GEMINA" Project)
- Research Unit Leader for IAFES Division: "RU: Vegetation modelling and climate change impacts"

Business or sector Research and Development

1 July 2011 – 31 August 2011

Post-Doctorate researcher (research fellow)

University of Tuscia, DISAFRI Dept., Via S. Camillo de Lellis, snc, 01100, Viterbo (VT), Italy

- "Implementazione del modello 3D-CMCC con dati in situ e satellitari" (Prot. Nr. 113)(joint "MINISTERO dell'AMBIENTE expert advice Kyoto 2010-2011)
- Principal Investigator 3D-CMCC-Satellite (stellite version) with ALOS-AVNIR2 high resolution images

Business or sector Research and Development

1 April 2011 - 31 May 2011

Post-Doctorate researcher (research fellow)

University of Tuscia, DISAFRI Dept., Via S. Camillo de Lellis, snc, 01100, Viterbo (VT), Italy

- "Implementazione del modello 3D-CMCC con dati in situ e satellitari" (Prot. Nr. 320/322)("KLAUS" Project (joint European Space Agency – Sistema GmbH – University of Tuscia)
- Principal Investigator 3D-CMCC-Satellite (stellite version) with ALOS-AVNIR2 high resolution images (www.sistema.at/wp/products-and-services/mea-multisensor-evolution-analysis/).

Business or sector Research and Development

8 January 2007 – 30 November 2007

Post-Graduate

Sapienza University of Rome, Botanica Dept., Piazzale Aldo Moro 5, 00185, Rome, Italy

- Climatic Database creation responsible
- GIS and Universal Kriging analyses

Business or sector Research and Development

FOREIGN RESEARCH EXPERIENCE (Extended visits)

January – February 2013

Invited visiting scientist, NCAR - Land Model Working Group (LMWG)

National Centre for Atmospheric Research (NCAR), 1850 Table Mesa Dr, Boulder, CO 80305. Colorado (USA),

EDUCATION and TRAINING

November 2007 – March 2011

Philosophy Doctor (Ph.D) in Forest Ecology

University of Tuscia, DISAFRI Dept., Via S. Camillo de Lellis, snc, 01100, Viterbo, Italy.

Thesis title: "*Development o fan ecological-forestry model for forests at high structure complexity*" (in Italian), (Nr.

Registered number 1 Nr. Ord. 598).

Tutor: Prof. Riccardo Valentini

November 1999 – December 2006

Master degree/Laurea in Natural Science

Sapienza University of Rome, Botanica Dept., Piazzale Aldo Moro 5, 00185, Roma (Italy)

Thesis title: "*Contribution to the knowledge of the vascular flora of Lazio: distribution of the genus Acer L. and taxonomic considerations*" (in Italian)(Prot. N. 6306/186)(matricola nr. 686226).

Tutor: Dr. Andrea Pavesi

September 1993 – July 1998

High School Scientific Diploma

Liceo Scientifico Statale Manfredi Azzarita, Via Tommaso Salvini 20/24, 00197, Rome (Italy)

11–12 May 2016

Workplace Safety and Hygiene Course

Viterbo. Workplace Safety and Hygiene Course (art. 37 del D.Lgs. 81/08). (8 hours course).

30 March – 4 April 2009

V intensive advanced training course for PhD students in the forestry-environmental sector

CSALP, Pieve Tesino (Trento), Italy, organized by the PhD in Forest Ecology of the University of Tuscia

4–8 May 2009

C-Programming course

CINECA Consorzio Inter-universitario di Calcolo Avanzato (Bologna). “Introduction to C-language”

Tutor course: Prof. C. Gheller

4–8 February 2008

Statistical course

University of Siena (Siena), Italy, “Statistical Analyses for Botanists and Ecologists”

Tutor course: Prof. J. Leaps

14–18 May 2007

GIS course

IpT s.r.l. (Roma). Base and Advanced course ArcGis 9.x (Model builder, Spatial Analyst, 3D Analyst)

Tutor course: Dott. S. De Corso

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Spanish	A2	A2	A2	A2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user. Common European Framework of Reference for Languages

Communication skills

- Excellent verbal and written communication skills both in an office environment and with external stakeholders. Experienced at giving presentations at meetings and workshops with large audiences

Organizational and managerial skills

- Experience and expertise in several fields, gained during the participation at several national and international research and consultancy projects and during the supervision of degree and PhD students. Good ability in coordinating working groups, and by leading the Forest Modelling Lab., and organizing work activities, by respecting goals and deadlines

Computer skills

- Operative systems: Unix (Ubuntu, Xubuntu, Kubuntu, Lubuntu, Mint), Microsoft
- Programming languages: C, Bash Shell, Fortran, R
- GIS software: ArcView 3.X, ArcGis, QuantumGis, IDRISI
- Remote Sensing software: Envi 4.7
- NetCDF software: NcView 2.x, Panoply
- Versioning software: Git, GitHub, SVN
- Integrated Development Environment (IDE) software: Eclipse, Code:Blocks, Microsoft Visual C++, R-Studio, MatLab
- Forest, Vegetation and Land models: LPJ, LPJ-Why-Me, 3-PG, 3-PG *Satellite*, 3-PG day, Formind, Treedyn3, TripleX, Formix, C-Fix, Sortie-ND, 3D-CMCC-*Satellite*, 3D-CMCC-FEM, 3D-CMCC-CNR-BGC, CLM v.x.x, CTEM Model, BIOME-BGC 4.x
- Weather data generators: Daymet, MT-CLIM
- Others: Microsoft Office, Open Office, Libre Office, OCR FineReader, SPSS Plus, Statistica, GraphPad, SigmaPlot, G3–DataAnalyzer, TeamViewer, Dropbox, Google Drive, Meld, Total Commander, Paintshop Pro, Adobe Photoshop, Google Earth

& Map

Driving licence

B

Qualification(s)

Qualified (selection procedure: COM/1/2015/GFIV – Research, Specific Domain: Agriculture and Forestry)(JRC-0011821) profile 4: Agriculture, Environment and Earth Science at the European Commission *Joint Research Centre* (JRC), Ispra (Italy)(29 June 2017)

Academic qualification

- National qualification for **Associated Professor** in Botany (05/A1)(National Scientific Qualification) call for applications D.D. 2175/2018 (from 06/07/2020 to 06/07/2030)
- National qualification for **Associated Professor** in Arboriculture and forest systems (07/B2)(National Scientific Qualification) call for applications D.D. 553/2021 (from 10/02/2023 to 10/02/2033)
- National qualification for **Full Professor** in Arboriculture and forest systems (07/B2)(National Scientific Qualification) call for applications D.D. 553/2021 (from 06/12/2023 to 06/12/2034)

ADDITIONAL INFORMATION

Projects

- PRIN2022 “CLICFor”, Principal Investigator for CNR e CNR-ISAFOM (N. 2023-CNR0A00-0333857)(2023 – ongoing)
- Horizon Europe “OptForEU”, Principal Investigator CNR, Work Package 2 and TG2.3. Leader member of the Scientific Advisory Board (2023 – ongoing)(Prot. N. 2023-CNR0A00-0068572 + Prot. N. 343174/2025) <https://cordis.europa.eu/project/id/101060554>
- PNRR “National Biodiversity Future Centre” SPOKE 4 Principal Investigator for CNR-ISAFOM (2022 – ongoing)(Prot. N. 2023-CNR0A00-0066976) <https://www.nbfc.it/en>
- Horizon Europe “ForestNavigator”, Principal Investigator for CNR (2022 – ongoing) <https://cordis.europa.eu/project/id/101056875>
- PRIN2020 “MULTIFOR”, Principal Investigator for CNR-ISAFOM (2022 – 2025) <https://www.multifor.eu/>
- PRIN2020 “WATERSTEAM”, Principal Investigator for CNR-ISAFOM (2022 – 2025) <https://www.waterstem.org/>
- “Progetti@CNR”, Principal Investigator for CNR-ISAFOM (2022 – 2025)
- “Cambiamento climatico: mitigazione del rischio per uno sviluppo sostenibile” (quota FOE 2019; DTA.AD003.474). Principal Investigator DTA.AD003.474.029 / Attività ISAFOM Napoli (2019 – 2022)
- Horizon Europe “OptFOREST”, Expert Panel member (2024 – ongoing) <https://www.optforests.eu/>
- Cost-Action CA19139 “PROCLIAS” (Process-based models for climate impact attribution across sectors)(CNR-ISAFOM). Management committee (2020 – 2024) <https://www.cost.eu/actions/ca19139/>
- H2020 “eLTER PLUS” (European Long-Term Ecosystem and socio-ecological Research Infrastructure)(CNR-ISAFOM). Forest Modelling and Biogeochemical cycles Principal Investigator. (2020 – ongoing) <https://elter-ri.eu/elter-plus>
- PON “OT4CLIMA” (Earth Observation and Climate Change), external participant.
- H2020 “Desira” (Digitisation: Economic and Social Impacts in Rural Areas)(CNR-ISAFOM). “Game changer” (2019 – 2023) <https://cordis.europa.eu/project/id/818194>
- H2020 “LANDSUPPORT” (Development of Integrated Web-Based Land Decision Support System Aiming Towards the Implementation of Policies for Agriculture and Environment)(CNR-ISAFOM). Principal Investigator in Forest Modelling and Impact scenarios. (2018 – 2022) <https://cordis.europa.eu/project/id/774234>
- Climate-KIC “MADAMES” (Mitigation and ADaptation Analysis for Mediterranean Ecosystem Services)(CMCC-IAFES). Forest Modelling Principal Investigator (2018) <https://italy.climate-kic.org/projects/madames-studio-gestione-sostenibile-foreste/>
- H2020 “XF–Actors” (Xylella Fastidiosa Active Containment Through a multidisciplinary-Oriented Research Strategy)(CMCC-IAFES). Forest Modelling Principal Investigator. (2018) <https://cordis.europa.eu/project/id/727987>
- “ISIMIP” (Inter-Sectoral Impact Model Intercomparison Project)(CMCC-IAFES & CNR-ISAFOM). Principal Investigator in Forest Modelling 3D-CMCC-FEM & 3D-CMCC-CNR BGC. Scientific board member for Forestry Sector. (2016 – ongoing) <https://www.isimip.org/>
- “REFORM” (REsilience of FOrest Mixtures)(CMCC-IAFES & Tuscia University)(2018 – 2020)
- EFi-funded “FORMASAM” (FOrest MAnagement Scenarios for Adaptation and Mitigation – DBA.AD002.177)(CNR-ISAFOM). Principal Investigator (<https://www.cnr.it/it/progetti-di-ricerca/progetto/28931/forest-management-scenarios-for-adaptation-and-mitigation-dba-ad002-177>) (2018 – 2020)
- H2020 “CRESCENDO” (Coordinated Research in Earth Systems and Climate: Experiments, kNowledge, Dissemination and Outreach)(CMCC-IAFES). Forest Modelling Principal Investigator, Co-Responsible for CMIP6 output analyses, CLM4.5 model implementation and 3D-CMCC-CNR BGC (2016 – 2020) <https://cordis.europa.eu/project/id/641816>
- Cost-Action FP1304 “PROFOUND” (Towards robust PROjections of European FOrests UNder climate change)(CMCC-IAFES & CNR-ISAFOM), Management committee, Task group 6 Leader (2015 – 2018) <https://www.cost.eu/actions/FP1304/>
- ERA4CS “MEDSCOPE” (MEDiterranean Services Chain based On climate PrEdictions)(CMCC-IAFES). Forest Modelling Principal Investigator (2018) <https://www.medscope-project.eu/>
- PON “ALFORLAB” (Laboratorio pubblico-privato per l’applicazione di tecnologie innovative ad elevata sostenibilità ambientale nella filiera foresta-legno-energia)(CNR-ISAFOM). Forest Modelling Principal Investigator (2016 – 2018)(Prot. N. 0001842/2019) <https://www.cnr.it/it/news/8071/foreste-da-alforlab-strumenti-per-una-gestione-ottimale-e-la-prevenzione-degli-incendi>
- Life “Olive4Climate” (CMCC-IAFES & University of Tuscia). Principal Investigator 3D-CMCC-Olive, external participant (2015 – 2018) <https://olive4climate.eu/en/>
- SEE “ORIENTGATE” (A network for the integration of climate knowledge into policy and planning)(CMCC-IAFES). Forest Modelling

Principal Investigator (2015 – 2018) <https://orientgateproject.org/>

- FP7 “CLIMAFRICA” (“Climate change predictions in Sub-Saharan Africa: impacts and adaptation”)(CMCC-IAFES). Forest Modelling Principal Investigator (2015) <https://cordis.europa.eu/project/id/244240>
- FISR “CarbItaly” (CMCC-IAFES & University of Tuscia). Forest Modelling Principal Investigator (2014)
- FP7 “FUME” (Forest fire under climate, social and economic changes)(CMCC-IAFES). Forest Modelling Principal Investigator (2014) <https://cordis.europa.eu/project/id/870649>
- FISR “GEMINA” (CMCC-IAFES). 3D-CMCC-FEM Principal Investigator, CMCC IAFES-Division Research Unit leader (RU1)(2011 – 2015)
- PRIN 2010-2011 “CARBOTREES” (Strategie nazionali per la mitigazione dei Cambiamenti Climatici in sistemi arborei agrari forestali)(CMCC-IAFES & University of Tuscia), 3D-CMCC-FEM Principal Investigator (2013 – 2016)
- ESA-funded “KLAUS” (KEO Demonstrator with Models for Land Use Management Context)(University of Tuscia). 3D-CMCC-FEM Principal Investigator (Version “Satellite”)(2011)
- FP6 “CIRCE” (Climate change and Impact Research: The Mediterranean Environment)(University of Tuscia). 3D-CMCC-FEM Principal Investigator (2007 – 2011) <https://cordis.europa.eu/project/id/36961>
- “BIOREFUGIA” (Potential biorefugia in response to climate change for the main tree species of Level II permanent plots in Central Italy)(Sapienza, University of Rome). Climatic Database creation responsible (2006)
- “CONECO-FOR” (CONTROLLO ECOSISTEMI FORRESTALI)(Sapienza, University of Rome). Climatic Database creation responsible (2006).

Nominees, memberships and leaderships

- Head of the Research Unit of ISAFOM-CNR in Perugia (Prot. N. 195392 del 20250603 (2025-CNR0A00-0195392), June 3, 2025) (2025 – ongoing)
- Head of the Research Unit of ISAFOM-CNR in Viterbo (VT) at University of Tuscia (Approval N. 158/2023 – 478, May 23, 2023) (2023 – ongoing)
- Head of the CNR-ISAFOM – Forestry Research Institute for Forest Soil and Ecology, 26080 Odunpazarı Eskişehir, Türkiye operational agreement (2025-2026)(Protocol N. 0333417, 09/09/2025)
- Head of the CNR-ISAFOM – College of Forestry, Beijing Forestry University (BJFU) China operational agreement (2025-2026) (Protocol N. 02008809, 10/06/2025)
- Head of the CNR-ISAFOM – College of Natural Resources and Environment, Northwest A&F University (NWAUFU), Yangling, Shaanxi, China operational agreement (2024-2025) (Protocol N. 451309/2024, 21/11/2024)
- Head of the CNR-ISAFOM - UNITUS-DAFNE operational agreement (2022 - 2025) (Prot. CNR ISAFOM N. 0001372/2022 of 31/05/2022)
- Communication Officer Division 8 “Forest Environment” International Union of Forest Research Organizations (IUFRO)(2021 – ongoing)
- Deputy Coordinator Working Party 8.04.04 “Modelling and Risk Assessment” International Union of Forest Research Organizations (IUFRO)(<https://www.iufro.org/science/divisions/division-8/80000/80400/80404/>)(2021 – ongoing)
- Principal Investigator for CNR and Work Package Leader in the H2020 project “OptForEU” (Grant Agreement n. 101060554)(2022 – ongoing)
- Principal Investigator for CNR HE project “ForestNavigator” (Grant Agreement n. 101056875)(2022 – ongoing)
- Principal Investigator for CNR-ISAFOM PRIN2020 project “MULTIFOR” (2022 – ongoing)
- Principal Investigator for CNR-ISAFOM PRIN2020 project “WATERSTEAM” (2022 – ongoing)
- Principal Investigator for CNR-ISAFOM Progetti@CNR project “WAFER” (2022 – ongoing)
- Management committee COST-Action CA19139 “Process-based models for climate impact attribution across sectors (PROCLIAS), (<https://www.cost.eu/cost-action/process-based-models-for-climate-impact-attribution-across-sectors/>)(2020 – ongoing)
- Management committee COST-Action FP1304 “Towards robust PROjections of European Forests UNDER climate change” (PROFOUND), (http://cost-profound.eu/site/organisation/management-committee/alessio_collalti/)(2015 – 2018)
- Task Group 6 Leader “Modelling forest structure” COST Action FP1304 (<http://cost-profound.eu/site/working-groups/wg2/tg6-modelling-forest-structure/>)(2015 – 2018)
- Research Unit Leader (RU1) CMCC-IAFES (VT) “Modeling of the impacts on terrestrial ecosystems and their services” (2011 – 2018)
- Principal Investigator 3D-CMCC-FEM (<https://www.forest-modelling-lab.com/dr-alessio-collalti/>)(2011 – ongoing)
- Forest Modelling Lab. Head ISAFOM-CNR (<https://www.forest-modelling-lab.com/team/>)(2020 – ongoing)
- Research proposal reviewer ID2025, Free University of Bozen-Bolzano (unibz) (2025)
- Vice President and evaluator “Bandi PRIN 2022 PNRR” scientific and Technical evaluation board – ERC Sector LS8 (2024 – ongoing) (Prot. n. 0425232 06/11/2024)
- Scientific board member for Forestry Sector at the Inter Sectoral Impact - Model Intercomparison Project (ISI-MIP, <https://www.isimip.org/impactmodels/>)(2016 – ongoing)
- Principal Investigator in Forest and Vegetation Modelling at CMCC-IAFES (Viterbo), projects: H2020 “CRESCENDO”, ERA4CS “MEDSCOPE” (up to 2018)
- Principal Investigator in Forest and Vegetation Modelling at CNR-ISAFOM (Perugia), project: H2020 “eLTER” (2020 – ongoing),
- Principal Investigator in Forest and Vegetation Modelling at CNR-ISAFOM (Rende and Perugia), project: “LANDSUPPORT” (2018 – ongoing)
- Principal Investigator “FORMASAM” (FORest Management Scenarios for Adaptation and Mitigation – DBA.AD002.177) EFI-network project (Grant Agreement EFI Network Fund n. 01/2018) at CNR-ISAFOM (<https://www.cnr.it/it/progetti-di-ricerca/progetto/28931/forest-management-scenarios-for-adaptation-and-mitigation-dba-ad002-177/>)(2018 – 2020)
- Principal Investigator in Forest and Vegetation Modelling at CNR-ISAFOM (Rende), project: PON03PE_00024_1 “Laboratorio pubblico-privato per le tecnologie innovative ad alta sostenibilità ambientale nella filiera Foresta-Legno-Energia (Ambi.Tec.Fil.Legno)” ALForLab: DR 1.2.10 (SS) - Modeling of organic carbon variations in forest ecosystems as a function of climate change, the type of soil and erosion processes; DR 1.1.10 (SS) - Analysis of the availability and retrieval of data from ground platforms for gas exchanges and agro-climatic data. (2015 – 2018)(Prot. N. 0001842/2019)
- “Associated Scientist” Foundation euro-Mediterranean Centre on Climate Change (Prot. N. 153/CMCC/2019)(January 2019 – December 2019)
- Member of the extended advisory board of the Italian Society of Silviculture and Forest Ecology (SISEF)(<https://sisef.org/society/cd->

[sisef/](#)(2017 – 2025)

- Working group member of the Italian Society of Silviculture and Forest Ecology (SISEF): Forest Fire Management; Forest Communication; Forests, between Mitigation and Adaptation (2017 – 2025)
- Contributes reviewer, XIV Congress of the Italian Society of Silviculture and Forest Ecology (SISEF), Padova (Italy), 9–12 September 2024
- Contributes reviewer, XIII Congress of the Italian Society of Silviculture and Forest Ecology (SISEF), Orvieto (Italy), 30 May –1 June, 2022
- Contributes reviewer, XII Congress of the Italian Society of Silviculture and Forest Ecology (SISEF), Palermo (Italy), 12–15 December, 2019
- National coordinator of the "Forest Modeling" Working Group at the Italian Society of Silviculture and Forest Ecology (SISEF)(<https://sisef.org/gdl/modellistica/>)(2017 – ongoing)
- Scientific advisory board member at the SEA-TUSCIA s.r.l. Spin-Off (<http://seatuscia.com/it/chi-siamo/cits>)(2019 – ongoing)
- Member nominated of the CNR working group on Carbon Cycle (<https://dta.cnr.it/ciclo-del-carbonio/#>)(2019 – ongoing)
- Scientific advisory board member at the Inter Sectoral Impact - Model Intercomparison Project, Forestry Sector (ISI-MIP, <https://www.isimip.org/protocol/>)(2015 – ongoing)
- Chair of the selection committee for the call for applications for assignment ID-20250109-102330 (Prot. 132405, 18 April 2025).
- Member of the selection examining board III level Researcher n. 331.2 ISAFOM RIC (Prot. 0249637, 23 August 2023)
- Member of the selection examining board III level Researcher n. 400.22.ISAC.PNRR (Prot. 0249484, 22 August 2023)
- Member of the selection examining board III level Technologist n. 380.1 ISAFOM TEC (Prot. 0002025, 30 June 2016)
- President member of the selection examining board, n. 1.2021 ISAFOM (Prot. n. 289, 19 February 2021)
- President member of the selection examining board, n. 2.2021 ISAFOM (Prot. n. 238, 10 February 2021)
- Member of the selection examining board, n. 1425/2023-PG (Prot. n. 271905 18 September 2023)
- Member of the Ph.D. examining board: candidate Dott. Piotr Kabala Jerzy, in 'Ambiente, Design e Innovazione' XXXVII Ciclo – DOCTOR EUROPAEUS, Università degli Studi della Campania "Luigi Vanvitelli" (March, 2025)
- Member of the Ph.D. examining board: candidate Dott.ssa Rossella Castronuovo, in 'Scienze e Tecnologie Agrarie, Forestali, e degli Alimenti' XXXVII Ciclo, Scuola di Scienze Agrarie, Forestali, Alimentari ed Ambientali, Università degli Studi della Basilicata, Potenza (PZ), Italy (October, 2024)
- Member of the Ph.D. examining board: candidate Dott. Lombardi Danilo, in 'Environmental and Evolutionary Biology' XXXV Ciclo, Faculty of Mathematical, Physical and Natural Sciences - Department of Environmental Biology, La Sapienza University of Rome, Italy (July, 2023)
- Member of the Ph.D. examining board: candidate Dott.ssa Antonietta Padula, in 'Scienze e Tecnologie Agrarie, Forestali, e degli Alimenti' XXXII Ciclo, Scuola di Scienze Agrarie, Forestali, Alimentari ed Ambientali, Università degli Studi della Basilicata, Potenza (PZ), Italy (May, 2020)
- Member of the Ph.D. examining board: candidate Daniel Nadal Sala, Biology Faculty, University of Barcelona (Spain)(23 October, 2019)
- Nominated "Game-Changer" Programme for Endorsement of Forest Certification schemes (PEFC) Italy, H2020 "Desira" project (<https://cordis.europa.eu/project/rcn/223227/factsheet/en>)(Prot. 16/2019)(2019 – 2023)
- Member of the Italian Society of Silviculture and Forest Ecology (SISEF)(2017 – 2025)
- Member of the "Expert Round-Table of Forest Modelling" (2017 – ongoing)
- Member of the working group on "Sustainable Forest Management" Programme for Endorsement of Forest Certification schemes (PEFC) Italy (Prot. 17/2019)(2019)
- Member of the European Geoscience Union (EGU)
- Member of the American Geophysical Union (AGU)
- Member of the British Ecological Society (BES)
- Member of the International Union of Forest Research Organizations (IUFRO)
- Member of the Italian Society of Silviculture and Forest Ecology (SISEF) (2017 – 2025)
- Member of the Italian Society of Ecology (SItE)
- Member of the Global Forest Biodiversity Initiative (<https://www.gfbinitiative.org/full-member-list/>)(2023 – ongoing)
- Member of Science-i (<https://science-i.org/members/>)(2023 – ongoing)
- Member of the Ecological Forecasting Initiative (EFI; <https://ecoforecast.org/member-profiles/>)(2022 – ongoing)

Editorial roles and revisions

- Section Editor for *Current Climate Change Reports* (ISSN 2198-6061; <https://link.springer.com/journal/40641/editors>)
- Associated Editor at *Journal of Ecology* (ISSN 1365-2745; <https://besjournals.onlinelibrary.wiley.com/hub/journal/13652745/editorial-board/editorial-board>)
- Associated Editor at *Frontiers in Ecology and Evolution* (ISSN 2296701X; <https://www.frontiersin.org/journals/ecology-and-evolution/sections/models-in-ecology-and-evolution#editorial-board>)
- Editorial and Section Board member at *Forests* (ISSN 1999-4907; <https://www.mdpi.com/journal/forests/editors>)
- Member of the Editorial Board subject Editor at *iForest - Biogeosciences and Forestry* (ISSN 1971-7458; <http://www.sisef.it/forest/static/?id=board>) (2017-2025)
- Member of the Editorial Board subject Editor at *Forest@ - Journal of Silviculture and Forest Ecology* (ISSN 1824-0119; <http://foresta.sisef.org/static/?id=board>) (2017-2025)
- Member of the Editorial Board SISEF.ORG (<https://sisef.org/sisef/society/redazione/>) (2017-2025)
- Guest Editor at *Annals of Forest Science* (ISSN 1286-4560) for the Special Issue "Impacts of natural disturbances on forest ecosystems under climate change: large-scale analysis and modeling" (<https://ist.blogs.inrae.fr/afs/2019/10/16/new-special-issue-impacts-of-natural-disturbances-on-forest-ecosystems-under-climate-change-large-scale-analysis-and-modelling/>).
- Guest Editor at *Forests* (ISSN 1999-4907) for the Special Issues: "Allocation of Woody Biomass in Forest Trees Based on Environmental Conditions" (https://www.mdpi.com/journal/forests/special_issues/Growth_Allocation_Woody_Biomass), "Modeling Forest Response to Climate Change" (https://www.mdpi.com/journal/forests/special_issues/Modeling_Forest_Response_to_Climate_Change), "Growth and Yield Models for Forests" (https://www.mdpi.com/journal/forests/special_issues/8618V54280)
- Guest Editor at *Climate* (ISSN 2225-1154) for the Special Issue "Climate Change Impact on Plant Ecology" (https://www.mdpi.com/journal/climate/special_issues/climate_plant_ecology).

- Guest Editor at Remote Sensing (ISSN 2072-4292) “Estimating Above-ground Biomass and Above-ground Carbon by Remote Sensing Data” (https://www.mdpi.com/journal/remotesensing/special_issues/4F29TY227)
- Reviewer for: *Carbon Balance and Management, Forestry, Frontiers in Plant Science, iForest, Plant and Soil, European Journal of Remote Sensing, Biogeosciences, Forest Ecology and Management, Journal of Applied Ecology, European Journal of Forest Research, Geoscientific Model Development, Ecosphere, Trees, Scientific Reports, Agricultural and Forest Meteorology, Science of the Total Environment (STOTEN), Global Ecology and Biogeography, Forest Ecosystems, Journal of Environmental Management, Communications Earth & Environment, Global Change Biology, Proceedings of the National Academy of Sciences (PNAS), Nature Communications, Nature Geoscience.*

Tutorship

- Visiting scientist and Operating Agreement for Research Activities between College of Forestry, Beijing Forestry University (BJFU), Beijing, China; Scientific contact person: Dr. **A. Collalti**, visiting PhD students Mingjie Chen (2025-2026) (Protocol N. 02008809, 10/06/2025)
- Visiting scientist and Operating Agreement for Research Activities Scientific Contact Person between CNR-ISAFO and College of Natural Resources and Environment, Northwest A&F University (NWAU), Yangling, Shaanxi, China; Scientific contact person: Dr. **A. Collalti**, visiting PhD students Longlong Ma. (2024-2025)(Protocol N. 451309/2024, 21/11/2024)
- Ph.D. co-tutor: “Climate change mitigation by forests: a case study on the role of management on carbon dynamics of a pine forest in South Italy” (2018). University of Tuscia, Viterbo. Ph.D. course in “sciences, technologies and biotechnologies for sustainability” (XXIX Ciclo; s.s.d. AGR/05). Ph.D.: candidate: G. Pellicone. Tutors: Prof. G. Scarascia-Mugnozza, Dr. G. Matteucci, Dr. **A. Collalti**
- Ph.D. co-tutor: “Modelling the effects of climate change on soil heterotrophic respiration in forest ecosystems. Empirical versus Mechanistic approach”. University of Tuscia, Viterbo. Ph.D. course in “sciences, technologies and biotechnologies for sustainability” (XXXII Ciclo; s.s.d. AGR/05). Ph.D.: candidate: C. Biondo. Tutors: Prof. D. Papale, Dr. **A. Collalti**
- Ph.D. co-tutor: “Mixed-species or monocultural forest? Evaluation and perspective under the management and future climate”. University of Tuscia, Viterbo. Ph.D. course in “Sciences, technologies and biotechnologies for sustainability” (XXXVII Ciclo; s.s.d. AGR/05). Ph.D.: candidate: V. Saponaro. Tutors: Prof. T. Chiti, Dr. **A. Collalti**
- Ph.D. co-tutor: “Advancing Forest-Sector Climate Mitigation: A System Modelling Approach to Forest Growth, Wood-Use, and Substitution Effects Under Climate Change” University of Tuscia, Viterbo. Ph.D. course in “Sciences, technologies and biotechnologies for sustainability” (XXXVII Ciclo; s.s.d. AGR/05). Ph.D.: candidate: Prof. R. Valentini, Dr. **A. Collalti**
- M.Sc. co-tutor: “Assessing NEE and Carbon Dynamics among 5 European Forest types: Development and Validation of a new Phenology and Soil Carbon routines within the process oriented 3D-CMCC-Forest-Ecosystem Model”. University of Tuscia, Viterbo. Graduate Degree in Forest and Environmental Sciences (Classe LM-73). Academic year 2013/2014. M.Sc. candidate: S. Marconi (n. matr. SFA-LM 128). Tutors: Dr. T. Chiti, Prof. R. Valentini, Dr. **A. Collalti** (U.S. – Italy Fulbright programme winner)
- Internship co-tutor Regione Lazio project “Torno subito 2017”: “Tools for the analysis of natural and semi-natural systems: developing and testing a robust algorithm for regional to global scale emissions of BVOCs”. Foundation euro-Mediterranean Centre on Climate Change. Apprentice: G. Mengoli. Tutors: Dr. **A. Collalti** (Italy), Prof. I. C. Prentice (UK)
- Tutorship: trainees who have completed the internship period at the CNR-ISAFO within the project PON03PE_00024_1 “AIForLab” (Prot. n. 0001843/2019)

Seminar, lectures, presentations and convener activities, keynotes

- Workshop: “Cross-sectoral OptimESM and ISIMIP workshop 2025”, title presentation “Climate Impacts on Italian Forests”, Morichetti M., Dalmonech D., Vangi E., Reyser C.P.O., **Collalti A.**, Potsdam (Germany), 5-8 Maggio 2025
- Workshop: “Avanzamenti Metodologici E Operativi Per Il Monitoraggio Delle Foreste E Delle Loro Risorse”, title presentation: “Monitoraggio dei flussi, degli stock di carbonio e degli attributi forestali con tecniche avanzate di modellistica di processo”, **Collalti A.** et al., Rome, 2 April 2025
- Workshop: “Conferenza CNR-IRET 2025: risultati e prospettive per la gestione integrata degli ecosistemi del futuro”, **Co-Chair** Round-Table “The Role of Advanced Technologies in Ecosystem and Biodiversity Monitoring”, Rome, 18-19 February 2025 (<https://doi.org/10.61008/CONFIRET2025>)
- XXXIII SItE National Congress “Misurare e prevedere il cambiamento per una gestione sostenibile degli ecosistemi”, **Co-Chair** Parallel Session 07-a-CLIMA “Effetti del Cambiamento Climatico sugli Ecosistemi”, Rome, 23-26 September 2024
- XIV SISEF National Congress “Foreste per il Futuro”, **Chair** Parallel Session 03 “Modellistica forestale e cambiamenti climatici: nuovi scenari e applicazioni a supporto della gestione”, Padova, 9-12 September 2024
- EGU General Assembly **Co-Convener** Session BG3.5 “Enhancing science-based knowledge on forests’ capacities to mitigate climate change”, Cheval S., Giannetti F., Oliver-Villanueva J.-V., **Collalti A.**, Neumann M., Vienna (Austria), 15 April 2024
- Second year project meeting OptForEU-H2020, Bucharest (RO) “WP2 – Modelling the F-C Nexus”, **Collalti A.**, 27-28 February 2024
- LifeWatch ERIC Thematic Service Workshop: Ecological Responses to Climate Change: Implications on Human Well-being, “A Vegetation Simulation Platform in a Global Change Context”, **Collalti A.**, Lecce, 21-22 February, 2024
- National Biodiversity Future Centre (NBFC), Conference on Terrestrial Biodiversity, Bologna, “Ciclo del Carbonio: modelli in essere e in sviluppo”, **Collalti A.**, Dalmonech D., Magnani M., 5 December, 2023
- Hydrospace 2023, Lisbon, Portugal “Towards a Digital Twin for the Water and Energy Cycle over Land”, Brocca L., ..., **Collalti A.**, ..., 27 November-1 December, 2023
- National Biodiversity Future Centre (NBFC), Spoke 4, Rome “Modellizzazione dell’adattamento al cambiamento climatico e scenari di gestione forestale”, **Collalti A.**, 23 May 2023
- LifeWatch – NBFC, online meeting “3D-CMCC – A simulation platform in a global change context”, Dalmonech D., **Collalti A.**, 13 July 2023
- Kick-off meeting, OptForEU-H2020, Bucharest (RO) “WP2 – Modelling the F-C Nexus”, **Collalti A.**, ..., Hemming D., 27-28 February 2023
- Workshop, “Modellistica ecosistemi e biodiversità in ambito LifeWatch Italia”, CNR-Research Area, Pisa (IT) “Un modello forestale per la previsione degli impatti da cambiamento climatico e gestione forestale”, **Collalti A.**, 16-17 February 2023
- ICOS Science Conference 2022 (Utrecht, The Netherlands), **Co-Convener** “C.2 Carbon cycle in the Mediterranean region: from the local to the regional scale”. Cristofanelli P., Fares S., Morgiù Castello J.M., Giani M., **Collalti A.**, 13-15 September 2022
- University of Basilicata, seminar “I modelli come strumento di previsione per gli impatti da cambiamento climatico e gestione forestale”. **Collalti A.** (inviting Prof. Angelo Nolè), 18 January 2022.
- MITE, seminars (2) CReAMO PA project: “I modelli come strumento di previsione del potenziale di mitigazione delle foreste”, “Applicazione di un modello per la previsione degli impatti da cambiamento climatico e gestione forestale”. **Collalti A.** (inviting Dr. M. Iammarino), 21 November 2021.

- CREA, on-line seminar ALFORLAB Life Project CCA/IT/000089 “Foreste mediterranee e cambiamenti climatici: tra mitigazione ed adattamento” “I modelli di simulazione per la previsione del potenziale di mitigazione delle foreste”. **Collalti A.** (inviting Dr. U. Chiavetta), 21 October 2021
- UNITUS, University of Tuscia (Viterbo, Italy). Lecture “Models and forest modelling” **Collalti A.**, at the Forest Ecophysiology course, M.Sc. course Forestry and Environmental Science (inviting Prof. P. De Angelis). 7 January, 2021 (2 hours)
- Workshop: Ordine dei Dottori Agronomi e Forestali di Cosenza “Cambiamento Climatico, Ultima frontiera”, “Climate change, adaptation and mitigation of forests – the modelling perspective”. **Collalti A.** Cosenza (Italy), 22 March, 2019.
- CNR - Area della Ricerca di Bologna (Italy), Conference DISBA 2019 “Nutrient scarcity as a selective pressure for mast seeding”, **Collalti A.**, 13 December 2019
- ISPRA, (Rome, Italy), Workshop “Scenari di cambiamento a lungo termine per il settore LULUCF, dati e modelli di reporting”, “Il modello 3D-CMCC-CNR Forest Ecosystem Model, simulazioni con scenari climatici” **Collalti A.**, (inviting da Dr. M. Vitullo), 29 January, 2018.
- CMCC, Isola Maggiore (Venice, Italy). Seminar: “Tale of an oceanic Antarctic campaign: ice-sheet – ocean-continental margin interactions”, Speaker Colleoni F., Discussant **Collalti A.**. (https://www.cmcc.it/it/lectures_conferences/cmcc-seminar-tale-of-an-oceanic-antarctic-campaign-ice-sheet-ocean-continental-margin-interactions), 27 June, 2017.
- “Obiettivo formativo 1: formazione di esperti e tecnici di ricerca per l’innovazione della filiera integrata foresta-legno-energia” (Cosenza, Italy), organized by University of Calabria and CNR-ISAFOM, coordinated by Prof. Iovino F. for UniCal and by Dr. Matteucci G. for CNR-ISAFOM. Module 12 “Determinazione da remoto di parametri biofisici degli ecosistemi forestali” 2017 (8 hours)
- CREA Centro di Ricerca per la Patologia Vegetale, Rome (Italy). Workshop: “La modellistica come strumento per simulare la vulnerabilità delle piante a fattori ambientali e fitopatologici opportunità e sfide”. **Collalti A.** (http://sito.entecra.it/portale/cra_avviso.php?id=19965&tipo=convegno&lingua=IT) (invited by V. Ilardi) 10 January, 2017
- UNITUS, University of Tuscia (Viterbo, Italy). Lecture “Ecology and forest modelling” **Collalti A.**, to the Forest Ecology course, M.Sc. course Forestry and Environmental Science (inviting Dr. Matteucci G.). 27 May, 2016 (2 hours)
- CNRS-LSCE, Gif sur Yvette (France). “3D-CMCC Forest Ecosystem Model: a process-based model for forest at high structure complexity”. **Collalti A.** (inviting Dr. B. Poulter, Prof. P. Ciais), 17 June, 2013
- NCAR, National Centre for Atmospheric Research, Boulder, Colorado (USA). Seminar: “3D-CMCC Forest Ecosystem Model: a process-based model for forest at high structure complexity”. **Collalti A.** (invited by Dr. Bonan G.), 12 February, 2013
- INRA, COST ACTION FP0603 final meeting, Bordeaux (France). “3D-CMCC Forest Model, a dynamic ecosystem growth model for forests at high structure complexity”, **Collalti A.**, Perugini L., Matteucci G., Valentini R. (inviting Prof. G. Scarascia-Mugnozza) <http://www.isa.ulisboa.pt/proj/fp0603forestmodels/final-meeting.html>, 2 March, 2012

Honours and awards

- “Plant respiration: Controlled by photosynthesis or biomass?”. Collalti A., Tjoelker M.G., Hoch G., Mäkelä A., Guidolotti G., Heskell M., Petit G., Ryan M.G., Battipaglia G., Prentice I.C. *Global Change Biology*, (2020), <https://doi.org/10.1111/gcb.14857>, *CNR-DISBA honourable mention*, 2020.
- “Forest production efficiency increases with growth temperature” **Collalti A.**, Ibrom A., Stockmarr A., Cescatti A., Alkama R., Fernández-Martínez M., Ciais P., Sitch S., Friedlingstein P., Goll D.S., Nabel J.E.M.S., Pongratz J., Arneeth A., Haverd V., Prentice I.C. (2020), *Nature Communications*, <https://doi.org/10.1038/s41467-020-19187-w>, *CNR-DISBA honourable mention*, 2020.
- “Development, implications and application for Sustainable Forest Management and best forest practices of the LANDSUPPORT forestry tool”. Marano G., Matteucci G., **Collalti A.**, Ferlan M., Kozamernik E., Noumonvi K., Vuolo F., Vitullo M., Terribile F. *Poster session winner*. “Umberto Bagnaresi” award. XII SISEF National Congress, Palermo (Italy) November 12–15, 2019.
- “Nutrient scarcity as a selective pressure for mast seeding” Fernández-Martínez M., Pearse I., Sardans J., Sayol F., Koenig W.D., LaMontagne J.M., Bogdziewicz M., **Collalti A.**, Hackett-Pain A., Vacchiano G., Espelta J.M., Peñuelas J., Janssens I.A.. *Nature Plants*, <https://doi.org/10.1038/s41477-019-0549-y>, *CNR-DISBA excellence award*, 2019.

Abstracts and Articles in proceedings (peer-reviewed)

- Hundal R.A., Annadate S., Cesari R., **Collalti A.**, Maione M., Cristofanelli P., “Emissions of climate-altering species from open vegetation fires in the Mediterranean region - A review on methods and data”, ITINERIS 3rd Project Meeting, Rome (IT), 25–29 September, 2025
- Modanesi S., De Santis D., Dalmonech D., **Collalti A.**, Avanzi F., De Lannoy G., ..., Massari C., “Toward better hydrological drought representation: optimizing vegetation dynamics into the noah-mp land surface model for southern Italy”, *Giornate dell’Idrologia 2025*, Bari (IT), 8–10 September, 2025
- Modanesi S., ..., **Collalti A.**, ..., Massari C., “Leveraging high-resolution Earth observations to assess the degree of evaporation-soil moisture coupling for various Noah-MP runoff parameterizations during drought”, *ESA’s Living Planet Symposium 2025*, Vienna, Austria, June 23–27, 2025
- Puchi P.F., Dalmonech D., Castagneri D., Lehmann M., Saurer M., Klesse S., **Collalti A.**, “Carbon-water interactions in beech forest: Insights from eddy covariance, tree-ring stable isotopes, and modelling”, *EuroDendro2025*, Rīga, Latvia, September 15–19, 2025
- Tomelleri E., Candotti A., Lemenkova P. **Collalti A.**, Dalmonech D., Saponaro V., Castagneri D., Montagnani L., “On the Increasing Occurrence of a Green Christmas: A Perspective from Long-Term Eddy Covariance Observations on Winter Dormancy Interruptions in a Subalpine Forest”, *ARPHA Conference Abstracts 8*: e149281. 28 May, 2025 <https://doi.org/10.3897/aca.8.e149281>
- Mereu S., Brundu G., ..., **Collalti A.**, ..., Spano D., “From Biodiversity to Ecosystem Functions: Modelling Approaches within the NBFC Digital Platform”, *Forum Nazionale della Biodiversità 2025*, Milan, 19–21 May, 2025
- Morichetti M., Dalmonech D., Grieco E., Vangi E., **Collalti A.**, “Assessing forest management practices across Europe under climate scenarios: insights from the 3D-CMCC-FEM model in the OptFor-EU Project”, *EGU General Assembly 2025*, Vienna, Austria, 27 April–2 May 2025
- Natali M., ..., **Collalti A.**, ..., Massari C., “Evaluating gross primary productivity, soil moisture and evapotranspiration derived from multiple Noah-MP dynamic vegetation schemes and satellite observations across land cover types in the Mediterranean region”, *EGU General Assembly 2025*, Vienna, Austria, 27 April–2 May 2025
- Hundal R.A., Annadate S., Cesari R., **Collalti A.**, Maione M., Cristofanelli P., “Emissions of climate-altering species from open vegetation fires in the Mediterranean region - A review on methods and data”, *EGU General Assembly 2025*, Vienna, Austria, 27 April–2 May 2025
- Vangi E., Morichetti D., Dalmonech D., Grieco E., **Collalti A.**, “Predicted Future Changes in the Mean Seasonal Carbon Cycle: Impacts of

- Climate Change", *EGU General Assembly 2025*, Vienna, Austria, 27 April–2 May 2025
- Puchi P.F., Dalmonech D., Castagneri D., Genovese D., Brilli L., **Collalti A.**, "Multi-proxy analysis confirms the tight coupling of carbon assimilation and allocation, with divergent NSCs strategies in two boreal forest species", *EGU General Assembly 2025*, Vienna, Austria, 27 April–2 May 2025
 - Boukhris I., Marano G., Dalmonech D., Santini M., Valentini R., **Collalti A.**, "Challenges and Opportunities in Modeling Forest Growth Under Climate Change", *American Geophysical Union*, Fall Meeting 2024, Washington D.C., US, 9–13 December, 2025
 - Boukhris I., **Collalti A.**, Marano G., Lahssini S., Santini M., Valentini R., "Balancing Forest Sequestration and Substitution for Climate Change Mitigation", *American Geophysical Union*, Fall Meeting 2024, Washington D.C., US, 9–13 December, 2025
 - Maroè P., Notari I., Casu G., **Collalti A.**, "Urban Tree Health Monitoring through Satellite Imagery and Machine Learning: An Integrated Approach to Enhance Urban Forestry Management and Environmental Sustainability", *International Urban Tree Diversity Conference*, Madrid, Spagna, 24-25 Ottobre 2024
 - Petritan A., ..., **Collalti A.**, Cheval S., "Enhancing science-based knowledge on old-growth forests in Europe: Horizon project OptFor-EU and forest research in Romania", *International Conference Old-growth forests: policy and practice*, Škēde, Latvia, 10 October 2024
 - Vangi E., Dalmonech D., D'Amico G., Barbetti R., Corona P., Chirici G., **Collalti A.**, "Monitoring forest attributes, C-fluxes and C-stock in the Italian forests through a process-based model (3D-CMCC-FEM)", *ForestSat2024*, Rotorua, New Zealand, 9-13 September, 2024
 - Vitale M., **Collalti A.**, "Effetti del Cambiamento Climatico sugli Ecosistemi", *XXXIII Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Roma (IT), 23-26 September, 2024
 - Hundal R.A., Annadate S., Cristofanelli P., Maione M., Cesari R., **Collalti A.**, "A Review of Open Fire GHG Emissions in the Mediterranean Region Across Major Inventories", *ICOS 2024*, Versailles (FR), 10-12 September, 2024
 - Modanesi S., De Santis D., Dalmonech D., **Collalti A.**, Avanzi F., De Lannoy G., Massari C., "Challenges in the representation of hydrological droughts by land surface models in the Mediterranean region", *Giornate dell'Idrologia 2024*, Udine (IT), 26-26 June, 2024
 - Puchi P.F., Dalmonech D., Battipaglia G., **Collalti A.**, "Coupling tree-rings analyses and carbon isotope discrimination to forecast early warning of dieback on beech forest along a latitudinal gradient in Italy", *IUFRO 2024*, Stockholm (Sweden), 23-29 June, 2024
 - De Marco A., Anav A., Sorrentino B., **Collalti A.**, Sicard P., Paoletti E., Calatayud V., "Ozone as a threat for Northern hemispheric forests", *IUFRO 2024*, Stoccolma, Svezia, 23-29 June, 2024
 - Dalmonech D., Puchi P.F., Avanzi F., De Santis D., Galvagno M., Kyamagero S., Massari C., Montagnani L., Tomelleri E., **Collalti A.**, "A cross-site model-data integration approach for tracking carbon and water fluxes dynamics under drought conditions in montane forests", *IUFRO 2024*, Stoccolma, Svezia, 23-29 June, 2024
 - Puchi P.F., Dalmonech D., Castagneri D., **Collalti A.**, "Integrating tree-ring anatomical traits and carbon fluxes to unravel carbon allocation using 3D-CMCC-FEM model", *TRACE 2024 – Tree Rings in Archaeology, Climatology and Ecology*, Brasov (Romania), 3-8 June, 2024
 - Vangi E., Dalmonech D., Cioccolo E., Marano G., Bianchini L., Puchi P., Grieco E., Cescatti A., Chirici G., and **Collalti A.**, "Stand age diversity affects forests' resilience and stability, although unevenly", *EGU General Assembly 2024*, Vienna (Austria), 14–19 April 2024, EGU24-8664, <https://doi.org/10.5194/egusphere-egu24-8664>, 2024.
 - Dalmonech D., Vangi E., and **Collalti A.**, "Biotic and abiotic heterogeneity show contrasting GPP and growth trends in Mediterranean forests", *EGU General Assembly 2024*, Vienna (Austria), 14–19 April 2024, EGU24-16915, <https://doi.org/10.5194/egusphere-egu24-16915>, 2024.
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I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged. I authorise the use of my personal data in compliance with Italian Legislative Decree 196/03.

Viterbo, 23 September 2025

Alessio Collalti




