

PERSONAL INFORMATION

Marta Galvagno

WORK EXPERIENCE

January 2013 - Present

Researcher

Environmental Protection Agency of Aosta Valley (ARPA Valle d'Aosta) Climate Change Unit - Aosta, Italy)

- Monitoring of climate change impacts on terrestrial ecosystems
- Carbon and water flux measurements in grasslands and forests using the eddy covariance technique
- Biosphere-atmosphere interactions in mountain regions
- Inter-annual dynamic of the carbon budget of alpine ecosystems: measurements and modeling
- Management of projects related to the impacts of climate change, including field experiments, modeling and stakeholder engagement
- Scientific staff of Fluxnet site IT-Trf (larch forest) and Fluxnet and ICOS site IT-Tor (alpine grassland)
- Vegetation phenology: field observations, integration of remote and proximal sensing
- Routine maintenance and calibration of instrumentation and sampling equipment
- Support to the Regional Government to prepare long-term climate mitigation plans, and to quantify the current LULUCF role to the regional carbon budget of the Aosta Valley (Italy)

April 2021 - March 2022

Short-term collaboration

Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC) - ICOS Ecosystem Thematic Centre (ICOS ETC)

- Support for the definition of practical and technical information to the ICOS (Integrated Carbon Observation System) stations on the management and submission of metadata related to GHG fluxes and ICOS variables
- Support for the definition of the Biological, Ancillary, Disturbance and Metadata (BADM) protocol related to GHG flux processing procedures

November 2012

Researcher

University of Innsbruck, Department of Ecology (Austria)

- Short Scientific Mission for the Cost Action ES0804, "Advancing the integrated monitoring of trace gas exchange between the biosphere and the atmosphere"

February 2011 – January 2012

Project collaboration

Environmental Protection Agency of Aosta Valley (ARPA Valle d'Aosta) Climate Change Unit - Aosta, Italy)

- MANFRED Project " Management strategies to adapt alpine space forests to climate change risks" (Alpine Space 2007-2013)
- Carbon and water flux measurements in grasslands and forests using the eddy covariance technique.
- Monitoring of Scots Pine (*Pinus sylvestris*) decline in mountain areas by remote sensing
- PhenoALp Project - Phénologie Alpine (Interreg-Alcotra Italia-Francia 2007-2013)
- Phenology of grassland and forest alpine ecosystems
- Interactions between the carbon budget, phenology and climate

- 2008 – 2011 **PhD in Environmental Science - Thesis Title: Carbon dioxide exchange in subalpine grasslands: integration of eddy covariance measurements, proximal sensing and models**
University of Milano Bicocca, Milano, Italy
 - Carbon and water flux measurements using the eddy covariance technique
 - Using digital images for monitoring plant phenology and modeling ecosystem Gross Primary Production
 Supervisor: Prof. Roberto Colombo
- 2008 **Training course on "Trends in plant ecophysiology and ecosystem ecology research"**
University of Palermo, Palermo, Italy
 - Professors: Dennis Baldocchi (University of Berkeley), Park. S. Nobel (University of California)
- 2007 **Research fellowship**
University of Milano Bicocca, Milano, Italy
 - Ecophysiology of alpine tree species in long-term monitoring sites
 - Proximal sensing techniques for measuring biophysical and biochemical (NDVI, MTCI, sun induced chlorophyll fluorescence) vegetation parameters on diverse canopies
- 2004 – 2006 **Master Degree in Biology**
University of Pavia, Pavia, Italy
 Ecophysiology and phenology of alpine tree species (*Larix decidua* Mill.) in response to environmental factors
 Thesis title: "Analisi ecofisiologiche nella caratterizzazione del ciclo fenologico in *Larix decidua* Mill. attraverso misure di fluorescenza attiva ed estrazione di pigmenti fotosintetici"
 Supervisor: Prof. Francesco Sartori
 Final vote: 110/110 cum laudae
- 2001 – 2004 **Bachelor's Degree in Biology**
University of Pavia, Pavia, Italy
 Detection of genetic diversity using RAPD-PCR in lichens populations growing over ophiolitic soils
 Thesis title: "Studio di biodiversità in licheni di ambienti ofolitici: applicazione del metodo biosistemático in *Cladonia pocillum* (Ach.) O.J. Rich."
 Supervisor: Prof. Mariagrazia Valcuvia-Passadore, Prof. Maura Brusoni
 Final vote: 110/110 cum laudae
- 1996 – 2001 **High School Graduation**
Liceo Scientifico Statale Galileo Galilei, Alessandria
 Scientific high-school, Final vote: 88/100

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	B2	B2	B1	B2	B2
English	C1	C2	C1	C1	C1

Communication skills - Excellent communication skills acquired through the presentation of scientific research in international workshops, conferences and congresses

Computer skills

- Unix/Linux Systems, Windows systems
- R software,
- Office and Libre Office Suite
- Basic knowledge of GIS environment

2023

- Weijie Zhang, Martin Jung, Mirco Migliavacca, Rafael Poyatos, Diego G Miralles, Tarek S El-Madany, Marta Galvagno, Arnaud Carrara, Nicola Arriga, Andreas Ibrom, et al. The effect of relative humidity on eddy covariance latent heat flux measurements and its implication for partitioning into transpiration and evaporation. *Agricultural and Forest Meteorology*, 330:109305, 2023
- Edoardo Bellini, Marco Moriondo, Camilla Dibari, Marco Bindi, Nicolina Staglianò, Edoardo Cremonese, Gianluca Filippa, Marta Galvagno, and Giovanni Argenti. Vistock: A simplified model for simulating grassland systems. *European Journal of Agronomy*, 142:126647, 2023
- L Brilli, R Martin, G Argenti, M Bassignana, M Bindi, R Bonet, P Choler, E Cremonese, M Della Vedova, C Dibari, et al. Uncertainties in the adaptation of alpine pastures to climate change based on remote sensing products and modelling. *Journal of Environmental Management*, 336:117575, 2023

2022

- Ludovica Oddi, Mirco Migliavacca, Edoardo Cremonese, Gianluca Filippa, Giorgio Vacchiano, Consolata Siniscalco, Umberto Morra di Cella, and Marta Galvagno. Contrasting responses of forest growth and carbon sequestration to heat and drought in the alps. *Environmental Research Letters*, 2022
- Gianluca Filippa, Edoardo Cremonese, Marta Galvagno, Arthur Bayle, Philippe Choler, Mauro Bassignana, Anaïs Piccot, Laura Poggio, Ludovica Oddi, Simon Gascoin, et al. On the distribution and productivity of mountain grasslands in the gran paradiso national park, nw italy: A remote sensing approach. *International Journal of Applied Earth Observation and Geoinformation*, 108:102718, 2022
- Giulia Bruno, Francesco Avanzi, Simone Gabellani, Luca Ferraris, Edoardo Cremonese, Marta Galvagno, and Christian Massari. Disentangling the role of subsurface storage in the propagation of drought through the hydrological cycle. *Advances in Water Resources*, 169:104305, 2022

2021

- Mirco Migliavacca, Talie Musavi, Miguel D Mahecha, Jacob A Nelson, Jürgen Knauer, Dennis D Baldocchi, Oscar Perez-Priego, Rune Christiansen, Jonas Peters, Karen Anderson, et al. The three major axes of terrestrial ecosystem function. *Nature*, 598(7881):468–472, 2021
- Rafael Poyatos, Víctor Granda, Víctor Flo, Mark A Adams, Balázs Adorján, David Aguadé, Marcos PM Aidar, Scott Allen, M Susana Alvarado-Barrientos, Kristina J Anderson-Teixeira, et al. Global transpiration data from sap flow measurements: the sapfluxnet database. *Earth System Science Data*, 13(6):2607–2649, 2021
- Ludovica Oddi, Edoardo Cremonese, Lorenzo Ascari, Gianluca Filippa, Marta Galvagno, Davide Serafino, and Umberto Morra di Cella. Using uav imagery to detect and map woody species encroachment in a subalpine grassland: Advantages and limits. *Remote Sensing*, 13(7):1239, 2021

2020

- Gilberto Pastorello, Carlo Trotta, Eleonora Canfora, Housen Chu, Danielle Christianson, You-Wei Cheah, Cristina Poindexter, Jiquan Chen, Abdelrahman Elbashandy, Marty Humphrey, et al. The fluxnet2015 dataset and the oneflux processing pipeline for eddy covariance data. *Scientific data*, 7(1):1–27, 2020
- Yunpeng Luo, Tarek El-Madany, Xuanlong Ma, Richard Nair, Martin Jung, Ulrich Weber, Gianluca Filippa, Solveig F Bucher, Gerardo Moreno, Edoardo Cremonese, et al. Nutrients and water availability constrain the seasonality of vegetation activity in a mediterranean ecosystem. *Global Change Biology*, 2020

2019

- Gianluca Filippa, Edoardo Cremonese, Marta Galvagno, Michel Isabellon, Arthur Bayle, Philippe Choler, Bradley Z Carlson, Simone Gabellani, Umberto Morra di Cella, and Mirco Migliavacca. Climatic drivers of greening trends in the alps. *Remote Sensing*, 11(21):2527, 2019
- Biagio Di Mauro, Roberto Garzonio, Micol Rossini, Gianluca Filippa, Paolo Pogliotti, Marta Galvagno, Umberto Morra di Cella, Mirco Migliavacca, Giovanni Baccolo, Massimiliano Clemenza, Barbara Delmonte, Valter Maggi, Marie Dumont, Francois Tuzet, Matthieu Lafaysse, Samuel Morin, Edoardo Cremonese, and Roberto Colombo. Saharan dust events in the european alps: role in snowmelt and geochemical characterization. *The Cryosphere*, 13(4):1147–1165, 2019
- Adriano Conte, Silvano Fares, Luca Salvati, Flavia Savi, Giorgio Matteucci, Francesco Mazzenga, Donatella Spano, Costantino Sirca, SerenaSerena Marras, Marta Galvagno, et al. Ecophysiological responses to rainfall variability in grassland and forests along a latitudinal gradient in italy. *Frontiers in Forests and Global Change*, 2:16, 2019
- Ludovica Oddi, L Celi, E Cremonese, Gianluca Filippa, M Galvagno, Giovanna Palestini, and C Siniscalco. Decomposition processes interacting with microtopography maintain ecosystem heterogeneity in a subalpine grassland. *Plant and Soil*, 434(1):379–395, 2019

2018

- Gianluca Filippa, Edoardo Cremonese, Mirco Migliavacca, Marta Galvagno, Oliver Sonnentag, Elyn Humphreys, Koen Hufkens, Youngryel Ryu, Joseph Verfaillie, Umberto Morra di Cella, et al. Ndvi derived from near-infrared-enabled digital cameras: Applicability across different plant functional types. *Agricultural and Forest Meteorology*, 249:275–285, 2018
- Yunpeng Luo, Tarek El-Madany, Gianluca Filippa, Xuanlong Ma, Bernhard Ahrens, Arnaud Carrara, Rosario Gonzalez-Cascon, Edoardo Cremonese, Marta Galvagno, Tiana Hammer, et al. Using near-infrared-enabled digital repeat photography to track structural and physiological phenology in mediterranean tree–grass ecosystems. *Remote Sensing*, 10(8):1293, 2018

2017

- Marta Galvagno, Georg Wohlfahrt, Edoardo Cremonese, Gianluca Filippa, Mirco Migliavacca, Umberto Mora di Cella, and Eva van Gorsel. Contribution of advection to nighttime ecosystem respiration at a mountain grassland in complex terrain. *Agricultural and forest meteorology*, 237:270–281, 2017
- Edoardo Cremonese, Gianluca Filippa, Marta Galvagno, Consolata Siniscalco, Ludovica Oddi, Umberto Morra di Cella, and Mirco Migliavacca. Heat wave hinders green wave: The impact of climate extreme on the phenology of a mountain grassland. *Agricultural and Forest Meteorology*, 247:320–330, 2017
- Chiara Corbari, Giovanni Ravazzani, Marta Galvagno, Edoardo Cremonese, and Marco Mancini. Assessing crop coefficients for natural vegetated areas using satellite data and eddy covariance stations. *Sensors*, 17(11):2664, 2017
- Georg Wohlfahrt and Marta Galvagno. Revisiting the choice of the driving temperature for eddy covariance co2 flux partitioning. *Agricultural and forest meteorology*, 237:135–142, 2017

2016

- Gianluca Filippa, Edoardo Cremonese, Mirco Migliavacca, Marta Galvagno, Matthias Forkel, Lisa Wingate, Enrico Tomelleri, Umberto Morra Di Cella, and Andrew D Richardson. Phenopix: Ar package for image-based vegetation phenology. *Agricultural and Forest Meteorology*, 220:141–150, 2016

2015

- Gianluca Filippa, Edoardo Cremonese, Marta Galvagno, Mirco Migliavacca, Umberto Morra Di Cella, Martina Petey, and Consolata Siniscalco. Five years of phenological monitoring in a mountain grassland: inter-annual patterns and evaluation of the sampling protocol. *International journal of biometeorology*, 59(12):1927–1937, 2015
- Lisa Wingate, Jerome Ogee, Edoardo Cremonese, Gianluca Filippa, Toshie Mizunuma, Mirco Migliavacca, Christophe Moisy, Matthew Wilkinson, Christine Moreaux, Georg Wohlfahrt, et al. Interpreting canopy development and physiology using the europhen camera network at flux sites. *Biogeosciences Discussions*, 2015

- Mirco Migliavacca, Markus Reichstein, Andrew D Richardson, Miguel D Mahecha, Edoardo Cremonese, Nicolas Delapierre, Marta Galvagno, Beverly E Law, Georg Wohlfahrt, T Andrew Black, et al. Influence of physiological phenology on the seasonal pattern of ecosystem respiration in deciduous forests. *Global change biology*, 21(1):363–376, 2015

2014

- Tommaso Julitta, Edoardo Cremonese, Mirco Migliavacca, Roberto Colombo, Marta Galvagno, Consolata Siniscalco, Micol Rossini, Francesco Fava, Sergio Cogliati, Umberto Morra di Cella, et al. Using digital camera images to analyse snowmelt and phenology of a subalpine grassland. *Agricultural and forest meteorology*, 198:116–125, 2014
- Micol Rossini, Mirco Migliavacca, Marta Galvagno, Michele Meroni, Sergio Cogliati, Edoardo Cremonese, Francesco Fava, Anatoly Gitelson, Tommaso Julitta, Umberto Morra di Cella, et al. Remote estimation of grassland gross primary production during extreme meteorological seasons. *International journal of applied earth observation and geoinformation*, 29:1–10, 2014

2013

- Marta Galvagno, Georg Wohlfahrt, Edoardo Cremonese, Micol Rossini, Roberto Colombo, Gianluca Filippa, Tommaso Julitta, Giovanni Manca, Consolata Siniscalco, Umberto Morra di Cella, et al. Phenology and carbon dioxide source/sink strength of a subalpine grassland in response to an exceptionally short snow season. *Environmental Research Letters*, 8(2):025008, 2013
- Georg Wohlfahrt, Edoardo Cremonese, Albin Hammerle, Lukas Hortnagl, Marta Galvagno, Damiano Gianelle, Barbara Marcolla, and Umberto Morra Cella. Trade-offs between global warming and day length on the start of the carbon uptake period in seasonally cold ecosystems. *Geophysical research letters*, 40(23):6136–6142, 2013
- Matthias Pechl, Oliver Sonnentag, Georg Wohlfahrt, Lawrence B Flanagan, Dennis D Baldocchi, Gerard Kiely, Marta Galvagno, Damiano Gianelle, Barbara Marcolla, Casimiro Pio, et al. Convergence of potential net ecosystem production among contrasting c3 grasslands. *Ecology letters*, 16(4):502–512, 2013
- Marta Galvagno, Micol Rossini, Mirco Migliavacca, Edoardo Cremonese, Roberto Colombo, and Umberto Morra Di Cella. Seasonal course of photosynthetic efficiency in larch decidua mill. in response to temperature and change in pigment composition during senescence. *International journal of biometeorology*, 57(6):871–880, 2013

Before 2013

- Micol Rossini, Sergio Cogliati, Michele Meroni, Mirco Migliavacca, Marta Galvagno, Lorenzo Busetto, Edoardo Cremonese, Tommaso Julitta, Maria Consolata Siniscalco, Umberto Morra di Cella, et al. Remote sensing-based estimation of gross primary production in a subalpine grassland. *Biogeosciences*, 9:2565–2584, 2012
- Mirco Migliavacca, Marta Galvagno, Edoardo Cremonese, Micol Rossini, Michele Meroni, Oliver Sonnentag, Sergio Cogliati, Giovanni Manca, Fabrizio Diotri, Lorenzo Busetto, et al. Using digital repeat photography and eddy covariance data to model grassland phenology and photosynthetic co2 uptake. *Agricultural and Forest Meteorology*, 151(10):1325–1337, 2011
- M Meroni, A Barducci, S Cogliati, F Castagnoli, M Rossini, L Busetto, Mirco Migliavacca, E Cremonese, M Galvagno, R Colombo, et al. The hyperspectral irradiator, a new instrument for long-term and unattended field spectroscopy measurements. *Review of Scientific Instruments*, 82(4):043106, 2011
- Mirco Migliavacca, Marta Galvagno, Edoardo Cremonese, Micol Rossini, Michele Meroni, Oliver Sonnentag, Sergio Cogliati, Giovanni Manca, Fabrizio Diotri, Lorenzo Busetto, et al. Using digital repeat photography and eddy covariance data to model grassland phenology and photosynthetic co2 uptake. *Agricultural and Forest Meteorology*, 151(10):1325–1337, 2011
- L Busetto, R Colombo, Mirco Migliavacca, E Cremonese, M Meroni, M Galvagno, M Rossini, C Siniscalco, U Morra Di Cella, and E Pari. Remote sensing of larch phenological cycle and analysis of relationships with climate in the alpine region. *Global change biology*, 16(9):2504–2517, 2010
- Mirco Migliavacca, E Cremonese, R Colombo, L Busetto, M Galvagno, L Ganis, M Meroni, E Pari, M Rossini, C Siniscalco, et al. European larch phenology in the alps: can we grasp the role of ecological factors by combining field observations and inverse modelling? *International Journal of Biometeorology*, 52(7):587–605, 2008

Book Chapters

- Dario Papale, Mirco Migliavacca, Edoardo Cremonese, Alessandro Cescatti, Giorgio Alberti, Manuela Balzarolo, Luca Belelli Marchesini, Eleonora Canfora, Raffaele Casa, Pierpaolo Duce, et al. Carbon, water and energy fluxes of terrestrial ecosystems in Italy. In *The Greenhouse Gas Balance of Italy*, pages 11–45. Springer, 2015

Personal Information

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April 30, 2026

Marta Galvagno