Curriculum vitae

PERSONAL INFORMATION

Sergio Cogliati, PhD

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Remote Sensing of Environmental Dynamics Lab.

Department of Earth and Environmental Sciences (DISAT)

University of Milano-Bicocca, Italy

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Date of birth 1 October 1981 | Nationality Italian

RESEARCH

Remote Sensing, Imaging spectroscopy, Earth Observation, Earth Science

- Design and implementation of novel Earth Observation satellite missions;
- Hyperspectral Remote Sensing methods and applications;
- Development of retrieval algorithms and inverse methods for parameters retrieval from Remote Sensing observations;
- Coupled Atmosphere/Surface Radiation Transfer Models (RTM) for the interpretation of Remote Sensing observations;
- Development of automatic high spectral resolution field spectrometers for continuous and long term monitoring of land, aquatic and atmosphere geophysical parameters;
- Analysis of the Remote Sensing sun-induced fluorescence signal in relation with Ecosystems structure and functioning;
- **SCOPUS**: H-index 33, Citations 3309, (web-link)
- **GOOGLE SCHOOLAR**: H-index 36, Citations 4449, (web-link)

UNIVERSITY APPOINTMENTS

Dec 2023 — **Associate Professor**

Department of Earth and Environmental Sciences (DISAT),
University of Milano-Bicocca, Italy
https://www.unimib.it/sergio-cogliati

Dec 2020 – Dec 2023 — **Academic Researcher (RTD-B)**

Department of Earth and Environmental Sciences (DISAT),
University of Milano-Bicocca, Italy

Jul 2017 – Dec 2020 — **Academic Researcher (RTD-A)**

Department of Earth and Environmental Sciences (DISAT),
University of Milano-Bicocca, Italy

Apr 2016 – May 2017 — **Post-Doctoral Research Scientist**

Development of vegetation sun-induced fluorescence retrieval algorithm for the ESA's FLEX mission

Remote Sensing of Environmental Dynamics Lab. (http://ltda-disat.it/)
Department of Earth and Environmental Sciences (DISAT),
University of Milano-Bicocca, Italy

Mar 2014 – Feb 2016 **Post-Doctoral Research Scientist**

Development of hyperspectral systems for estimating land surface optical parameters and vegetation sun-induced fluorescence

Remote Sensing of Environmental Dynamics Lab. (http://ltda-disat.it/)
Department of Earth and Environmental Sciences (DISAT),
University of Milano-Bicocca, Italy

Feb 2012 – Jan 2014 **Post-Doctoral Research Scientist**

Hyperspectral remote (proximal) sensing: data collection and algorithm development

Remote Sensing of Environmental Dynamics Lab. (http://ltda-disat.it/)
Department of Earth and Environmental Sciences (DISAT),
University of Milano-Bicocca, Italy

Feb 2011 – Jan 2012 **Post-Doctoral Research Scientist**

Innovative methods for proximal remote sensing

Remote Sensing of Environmental Dynamics Lab. (http://ltda-disat.it/)
Department of Earth and Environmental Sciences (DISAT),
University of Milano-Bicocca, Italy

UNIVERSITY EDUCATION

2008–2011 **PhD Degree in Environmental Science**

Dissertation title “Development of automatic spectrometric systems for proximal sensing of photosynthetic activity of vegetation”. http://hdl.handle.net/10281/19798

University of Milano-Bicocca, Italy

2004–2007 **MSc Degree in Sciences and Technologies for Environment and Landscape** *cum Laude*

Thesis "Innovative remote-sensing techniques for monitoring vegetation photosynthetic activity"

University of Milano-Bicocca, Italy

2001–2004 **BS Degree in Environmental Sciences and Technologies**

Thesis "Passive optical measurements of vegetation sun-induced fluorescence through the analysis of Fraunhofer Lines"

University of Milano-Bicocca, Italy

RESEARCH PROJECTS AND MEASUREMENT CAMPAIGNS

PROJECT Principal Investigator

- **2023-2025 ASI FLEX Inland water and Terrestrial Airborne measurements and scientific exploitation (FLEX-ITA)**. Developing scientific expertise and national infrastructure for airborne SIF remote sensing, for integrating satellite observations with field measurements. The high-resolution SIF maps will be used for the development of advanced scientific applications in terrestrial and aquatic environments. Project PI, budget 556 kEuro (296 kEuro ASI, 260 KEuro in-kind) (web-link)

- **2023-2025 Development of a MUlti-SEnsor remote sensing approach from drone to earLY detect plant diseases: A tool for sustainable agriculture and food security (MUSELY)**. Bando PRIN 2022 PNRR (ERC PE10-14 Earth observations from space/remote sensing). Project PI, budget 293 kEuro

LOCAL UNIT Principal Investigator

- **2023-2024 ESA FLEX L1B TO L2 ALGORITHM DEVELOPMENT STUDY - CCN5**. Contract Change Notice 5 (CCN5) - Extension of the project (6 months) to provide algorithms (ATBDs) and software for the L1B to L2C data processing module(s) (L2RM) for the ESA FLEX mission. PI of the Unimib unit, budget 23k euro https://flex-l2.magellium.com/
- **2022-2023 ESA FLEX L1B TO L2 ALGORITHM DEVELOPMENT STUDY - CCN4**. Contract Change Notice 4 (CCN4) - Extension of the project (6 months) to provide algorithms (ATBDs) and software for the L1B to L2C data processing module(s) (L2RM) for the ESA FLEX mission to be integrated into the FLEX L2 E2E simulator. PI of the Unimib unit, budget 27k euro https://flex-l2.magellium.com/
- **2022-2023 ESA DEFLOX - CCN4**. The activity focused on hardware development in the context of the FLEX mission and finalizing the FLEX validation concept. The contractor manufactured 4 ground D-FloX systems, campaign activities focussing on instrument deployment in larger heights are foreseen. budget 35k euro
- **2020-2022 ESA FLEX L1B TO L2 ALGORITHM DEVELOPMENT STUDY - CCN3**. Contract Change Notice 3 (CCN3) - Extension of the project (2 year) to provide algorithms (ATBDs) and software for the L1B to L2D data processing module(s) (L2RM) for the ESA FLEX mission to be integrated into the FLEX L2 E2E simulator. PI of the Unimib unit, budget 100k euro https://flex-l2.magellium.com/
- **2019 ESA FLEX L1B TO L2 ALGORITHM DEVELOPMENT STUDY - CCN1**. Contract Change Notice 1 (CCN1) - Extension of the project (1 year) to provide algorithms (ATBDs) and software for the L1B to L2D data processing module(s) (L2RM) for the ESA FLEX mission to be integrated into the FLEX L2 E2E simulator. PI of the Unimib unit, budget 97.9k euro https://flex-l2.magellium.com/
- **2017-2019 ESA FLEX L1B TO L2 ALGORITHM DEVELOPMENT STUDY**. The project aims at providing scientifically consolidated algorithms (through ATBDs) and software for the L1B to L2D data processing module(s) (L2RM) for the ESA FLEX mission to be integrated into the FLEX L2 E2E simulator. PI of the Unimib unit, budget 46k euro https://flex-l2.magellium.com/
- **2014-2015 FLEX Bridge (FB) Study, European Space Agency (ESA)**. Optimizing the *SpecFit* algorithm to retrieve the sun-induced fluorescence spectrum from radiative transfer simulations of the ESA/FLEX 8^{th} Earth Explorer mission. http://www.flex-photosyn.ca/FB_HOME.htm
- **2014-2015 HyPlant Processing Experiment (HYPER), European Space Agency (ESA)**. Implementing sun-induced fluorescence retrieval algorithm based on *Spectral Fitting* in the processing-chain for the airborne *Hyperspectral Plant Imaging Spectrometer* (HyPlant). Budget 32k euro
- **2012-2014 FLEX/S3 Tandem Mission Performance Analysis and Requirements Consolidation Study (PARCS), European Space Agency (ESA).** Retrieval of sun-induced fluorescence by *Spectral Fitting* methods for the ESA's FLEX/S3 Tandem mission. http://ipl.uv.es/flex-parcs/index.php/home/proposal/8-project

LOCAL UNIT MEMBER

- **2023 ESA CalVal PARK**. The Cal/Val Park concept aims to fulfil the data and knowledge gaps in the current ground-based infrastructure, to address the Cal/Val needs of multi-spectral and hyperspectral optical sensor, with a medium to high and very-high spatial resolution.
- **2021 ESA SWATHSENSE Campaign**. Acquisition of multi-angular hyperspectral (VNIR-SWIR) and thermal data from ground and airborne platforms over rural areas.

- **2019-2022 ASI PRISCAV (PRISMA CAlibration/Validation)**. Calibration/Validation activity for the PRISMA imaging spectroscopy spaceborne mission.
- **2019 FLEXSense Campaign, European Space Agency (ESA)**. The remote sensing campaign comprised various experiments including a water stress experiment in agricultural crops.
- **2018 FLEXSense Campaign, European Space Agency (ESA)**. This large European remote sensing campaign is in support of the development of ESA's FLEX mission. The campaign comprised various ground-validation measurements simultaneous to airborne hyperspectral surveys (HyPlant, AVIRIS, TASI, LiDAR) and satellite overpasses in different core sites in Europe and US (IT, DE, ES, FR, CH).
- **2018-2019 AtmoFLEX, European Space Agency (ESA)**. The project aims at consolidating the atmospheric correction concept devloped for the FLEX mission through the collection, analysis and modeling of an comprehensive dataset of high-resolution field spectroscopy (downwelling radiance), sunphotometer and satellite observations
- **2014-2016 SOYFLEX, European Space Agency (ESA).** The project further supported the testing of the HyPlant airborne sensor to retrieve solar-induced chlorophyll fluorescence and canopy VSWIR reflectance over different targets and sites. The red and far-red fluorescence maps were computed by three retrieval methods (1) The 'singular vector deconvolution' (SVD) uses solar Fraunhofer lines; (2) The iFLD method; (3) The'Spectral Fitting Method' (SFM). The analyses were extended to a dedicated experiment with two different soybean varieties. In addition, the effect of a shadow and quick light exposure on photosynthesis, fluorescence and canopy temperature was investigated ('virtual cloud experiment') to generate specific scientific results to support FLEX mission.
- **2013 FLuorescence EXplorer Campaign in USA (Flex-US), ESA/NASA** Airborne campaign to record an unprecedented FLEX-like data-set containing maps of sun-induced fluorescence, surface temperature, and canopy structure with the airborne *HyPlant* and G-LiHT (Goddard's LiDAR, Hyperspectral and Thermal Imager) sensors. https://earth.esa.int/documents/10174/134665/FLEX-US_Final_Report
- **2013 Sentinel-2 Experiment FLEX (Sen2ExpFL), European Space Agency (ESA).** Airborne campaign with APEX and *HyPlant* spectrometers to collect surface reflectance (Sentinel-2 configurations) and sun-induced fluorescence imagery over deciduous broad-leaf forest.
- **2012 HYFLEX, European Space Agency (ESA).** The project supported the testing of the novel Hyperspectral Plant Imaging Spectrometer (HyPlant). Maps of solar-induced chlorophyll fluorescence over different agricultural field sites, needle and broadleaf forest were retrieved within the project. Results demonstrated the capability of HyPlant airborne data to test and evaluate different approaches to model and retrieve top-of-canopy (TOC) fluorescence and the possibility to study the physiological response between fluorescence and photosynthesis.
- **2011 HABlakes, EUFAR** Spectral characterization of harmful algae blooms in the Mantova lake (Italy). http://cedadocs.badc.rl.ac.uk/1222/16/HABlakes.pdf
- **2011 Summer School on Optical Sampling and Manipulation Experiment (SSOS), COST-Action EuroSpec**.
- **2010 Intercomparison Experiment of Field Spectrometers, *Deutsches Zentrum für Luft- und Raumfahrt* (DLR)**. Intercomparison of radiance and spectral performances of different field spectrometers promoted by German Space Agency and Remote Sensing Laboratories (RSL) Zurich.
- **2010 Early detection of crop water and nutritional stress by remotely sensed indicators (EDOCROS), EUFAR**.
- **2009 Sentinel-3 Experiment (Sen3Exp), European Space Agency (ESA).** Sen3Exp field campaign promoted by European Space Agency to consolidated and to develop Sentinel-3 mission. http://www.esa.int/esaCP/SEMOW432BZF_index_0.html

SCIENTIFIC COMMITTEES OF INTERNATIONAL CONFERENCES

Jul 2024 **The International Geoscience and Remote Sensing Symposium (IGARSS)** 7 - 12 July, 2024 • Athens, Greece. (https://www.2024.ieeeigarss.org/)

Nov 2023 **IEEE INTERNATIONAL WORKSHOP ON Metrology for Agriculture and Forestry** SPECIAL SESSION n°13 Optical sensors in Plant Pathology; Pisa, Italy, November 6-8, 2023 (https://metroagrifor.org/special-session-13)

Jul 2022 **The International Geoscience and Remote Sensing Symposium (IGARSS)** 17 - 22 July, 2022 • Kuala Lumpur Convention Centre (KLCC), Kuala Lumpur, Malaysia. (https://www.igarss2022.org/)

May 2022 **ESA Living Planet Symposium 2022** 23–27 May 2022 at the World Conference Center in Bonn, Germany. (https://lps22.eu/)

EDITORIAL BOARD OF SCIENTIFIC JOURNALS

Mar 2023 - now Guest editor of the special issue "Recent advances in the interpretation of solar-induced chlorophyll fluorescence for remote sensing applications", Remote Sensing of Environment Journal, RSE (web-link)

Jan 2019 - now Editorial Board Member of the Sensor Journal MDPI (since January 2019);

Jan 2019 - 2020 Guest Editor of the Special Issue "Advances on Quantitative Remote Sensing of Sun-Induced Chlorophyll Fluorescence", Remote Sensing Journal, MDPI (web-link);

REVIEWER OF SCIENTIFIC JOURNALS

- Remote Sensing of Environment (RSE)
- IEEE Transactions on Geoscience and Remote Sensing (TGRS)
- IEEE Geoscience and Remote Sensing Letters (GRSL)
- Journal of Geophysical Research: Atmospheres (JGR-A)
- Geophysical Research Letters (GRL)
- Remote Sensing (RS)
- Sensor
- Optic Express (OE)

REVIEW PANELS OF NATIONAL AND INTERNATIONAL PROJECTS

Jul 2022 BELSPO's research programme for earth observation STEREO IV (Support to the exploitation and research of earth observation data) – scientific evaluator
web-link

Nov 2018 Member of the NASA evaluation panel on "Terrestrial Ecology: Arctic-Boreal Vulnerability Experiment Ð Phase 2 (SIF)", Washington DC, USA

Nov 2018 Reviewer for the programme Earth Observation STEREO III (Support to the exploitation and research of earth observation data), Belgian Science Policy Office (BELSPO) http://eo.belspo.be/About/Stereo3.aspx

May 2018 COST Action Rapporteur – Reviewer for Action OPTIMISE Final review

Jul 2017 Project proposal reviewer for "User Support Programme Space Research" - Netherlands Space Office (NSO)

Jun 2017 COST Action Rapporteur – reviewer for Action OPTIMISE Mid-Term review

Jun 2016 Belgian Research Programme for Earth Observation, STEREO III – membro del Review Panel (Belgian Science Policy Office) http://eo.belspo.be/About/Stereo3.aspx

Nov 2016 National Science Centre (Narodowe Centrum Nauki) Poland, panel ST10

Apr 2015 Apr 2015: EUFAR Projects, (European Facility For Airborne Research)

VISITING SCIENTIST

Oct 2017 **NASA Goddard Space Flight Center (GSFC)**, Biospheric Sciences Branch CODE 618, visiting scientist sponsored by Goddard Earth Sciences Technology and Research (GESTAR) program of the Universities Space Research Association (USRA) (Host: Dr. Jeffrey G. Masek and Dr. Elizabeth M Middleton)
Duration: 16 days

Apr 2016 **NASA Goddard Space Flight Center (GSFC)**, Biospheric Sciences Branch CODE 618, (Host: Dr. Elizabeth M Middleton)
Duration: 1.5 months

Sep 2010 **German Aerospace Center DLR**, Oberpfaffenhofen (DE), Short Term Scientific Mission, COST Action EuroSpec ESO903 "Intercomparison Experiment of field spectrometers" hosted by the Applied Spectroscopy workgroup – durata 2 settimane
Duration: 2 weeks

GRANTS AND PERSONAL AWARDS

2016 **"PREMIO GIOVANI TALENTI"** national award for junior Researcher by the University of Milano-Bicocca and Academia Nazionale dei Lincei

2010 **Grant Short Term Scientific Mission, COST Action EuroSpec ESO903** "Intercomparison Experiment of field spectrometers" hosted by the Applied Spectroscopy workgroup, DLR

2008 **"PREMIO EUGENIO ZILIOLI"** national award for the best Master thesis on Remote Sensing by IREA-CNR/AIT (Italian Remote Sensing Association)

INVITED TALKS

Oct 2023 **ESA S2NG Mission Advisory Group Meeting No.2** on "Relevant results from recent ESA campaign activities and opportunities for S2NG", ESA-ESTEC, The Netherlands, 24-25 October 2023;

Mar 2023 **ESA FLEX Mission Advisory Group Meeting No.33** on "Fluorescence Retrieval"; Parc Cientific de la Universitat de Valencia", Valencia, Spain, 30-31 March 2023;

Sep 2022 **Centre d'Etudes Spatiales de la Biosphère - CESBIO** "Activities and Field campaigns in relation to DART"; Toulouse, France, 15 September 2022;

Oct 2017 **NASA/GSFC invited speaker to present Biospheric Sciences Seminar at NASA's Goddard Space Flight Center (GSFC)** on "Fluorescence spectrum retrieval from high-resolution radiance observations for the FLEX mission"

Sep 2017 **"Airborne fluorescence workshop"** Sponsored by the European Space Agency, Fluorescence Explorer (FLEX) Advisory Group, and University of Nebraska – Lincoln 26 - 29 September 2017, University of Nebraska

Apr 2016 **NASA Goddard Space Flight Center (GSFC), Biospheric Sciences Branch, Brown Bag Seminar**: Sergio Cogliati and Caroline Nichol "Canopy Fluorescence Measurements and LiDAR in European Campaigns" https://neptune.gsfc.nasa.gov/bsb/calendar/view.php?id=269&y=2016&m=04&d=27 (Host: Dr. Jeffrey G. Masek and Dr. Elizabeth M Middleton)

Dec 2011 **AGU Fall Meeting** "Unattended instruments for ground-based hyperspectral measurements: development and application for plant photosynthesis monitoring", 5-9 December 2011, San Francisco, CA, USA http://adsabs.harvard.edu/abs/2011AGUFM.B14A..04C

NATIONAL AND INTERNATIONAL PHD DEFENSE

May 2018 President of the evaluation committee of the PhD defense of Neus Sabater Medina “Development of atmospheric correction algorithms for very high spectral and spatial resolution images: application to seosat and the flex/sentinel–3 missions”, Programa de Doctorado en Teledección, Departamento de Física de la Tierra y Termodinámica Facultad de Física, Universitat de València, Spain

Sep 2015 External Reviewer for the PhD thesis of Javier Pacheco-Labrador “Automated proximal sensing for estimation of the bidirectional reflectance distribution function in a Mediterranean tree-grass ecosystem”, Program de Doctorado en Tecnologia de la Informacion Geografica, Universidad de Alcalà (Madrid, Spain)

ADDITIONAL INFORMATION

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Inglese	B2	B2	B2	B1	C1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

Technical skills

- Field spectroscopy measurements with a range of spectrometers (i.e., ASD FieldSpec, Ocean Optics etc.);
- Collection, analysis and interpretation of multi-angular observations with field goniometers to study Bidirectional Reflectance Distribution Function (BRDF);
- Processing of fine-spectral resolution data collected by airborne and satellite sensors to retrieve surface geophysical parameters (and sun-induced fluorescence);
- Atmospheric radiative transfer models (MODTRAN5);
- Canopy radiative transfer models (ProSAIL, SCOPE etc. . .);
- Development of field spectroscopy systems (hardware/software) to collect continuous and long term fine-resolution spectral measurements (and sun-induced fluorescence) in the VNIR spectral range (350-1100 nm);

Computer skills

- OS: MS Windows, Linux (Debian, Ubuntu, CentOS), FreeBSD
- Office suites: MS Office, LaTeX
- Programming languages: IDL, C, C++, Java, Fortran, Matlab
- Integrated development environment (IDE): NI/CVI, LabView, NetBeans, Eclipse
- Developing engineering software application to drive scientific instruments
- Image processing software: ENVI
- Parallel computing on High-Performance Computers (HPC) (GALILEO - Cineca) http://www.hpc.cineca.it/content/galileo

SCIENTIFIC PUBLICATIONS

Articles (Peer-Review)

A.1. Moncholi-Estornell, A., Cendrero-Mateo, M.P., Antala, M., Cogliati, S., Moreno, J., and Van Wittenberghe, S. (2023). "Enhancing Solar-Induced Fluorescence Interpretation: Quantifying Fractional Sunlit Vegetation Cover Using Linear Spectral Unmixing". In: *Remote Sensing* 15.17. DOI: 10.3390/rs15174274

A.2. Rossini, M., Garzonio, R., Panigada, C., Tagliabue, G., Bramati, G., Vezzoli, G., Cogliati, S., Colombo, R., and Di Mauro, B. (2023). "Mapping Surface Features of an Alpine Glacier through Multispectral and Thermal Drone Surveys". In: *Remote Sensing* 15.13. DOI: 10.3390/rs15133429

A.3. Colombo, R., Pennati, G., Pozzi, G., Garzonio, R., Di Mauro, B., Giardino, C., Cogliati, S., Rossini, M., Maltese, A., Pogliotti, P., and Cremonese, E. (2023). "Mapping snow density through thermal inertia observations". In: *Remote Sensing of Environment* 284. DOI: 10.1016/j.rse.2022.113323

A.4. Wang, R., Gamon, J.A., Hmimina, G., Cogliati, S., Zygielbaum, A.I., Arkebauer, T.J., and Suyker, A. (2022). "Harmonizing solar induced fluorescence across spatial scales, instruments, and extraction methods using proximal and airborne remote sensing: A multi-scale study in a soybean field". In: *Remote Sensing of Environment* 281. DOI: 10.1016/j.rse.2022.113268

A.5. Rossini, M., Celesti, M., Bramati, G., Migliavacca, M., Cogliati, S., Rascher, U., and Colombo, R. (2022). "Evaluation of the Spatial Representativeness of In Situ SIF Observations for the Validation of Medium-Resolution Satellite SIF Products". In: *Remote Sensing* 14.20. DOI: 10.3390/rs14205107

A.6. Scodellaro, R., Cesana, I., D'Alfonso, L., Bouzin, M., Collini, M., Chirico, G., Colombo, R., Miglietta, F., Celesti, M., Schuettemeyer, D., Cogliati, S., and Sironi, L. (2022). "A novel hybrid machine learning phasor-based approach to retrieve a full set of solar-induced fluorescence metrics and biophysical parameters". In: *Remote Sensing of Environment* 280. DOI: 10.1016/j.rse.2022.113196

A.7. Buman, B., Hueni, A., Colombo, R., Cogliati, S., Celesti, M., Julitta, T., Burkart, A., Siegmann, B., Rascher, U., Drusch, M., and Damm, A. (2022). "Towards consistent assessments of in situ radiometric measurements for the validation of fluorescence satellite missions". In: *Remote Sensing of Environment* 274. DOI: 10.1016/j.rse.2022.112984

A.8. Damm, A., Cogliati, S., Colombo, R., Fritsche, L., Genangeli, A., Genesio, L., Hanus, J., Peressotti, A., Rademske, P., Rascher, U., Schuettemeyer, D., Siegmann, B., Sturm, J., and Miglietta, F. (2022). "Response times of remote sensing measured sun-induced chlorophyll fluorescence, surface temperature and vegetation indices to evolving soil water limitation in a crop canopy". In: *Remote Sensing of Environment* 273. DOI: 10.1016/j.rse.2022.112957

A.9. Scharr, H., Rademske, P., Alonso, L., Cogliati, S., and Rascher, U. (2021). "Spatio-spectral deconvolution for high resolution spectral imaging with an application to the estimation of sun-induced fluorescence". In: *Remote Sensing of Environment* 267. DOI: 10.1016/j.rse.2021.112718

A.10. Guanter, L., Irakulis-Loitxate, I., Gorroño, J., Sánchez-García, E., Cusworth, D.H., Varon, D.J., Cogliati, S., and Colombo, R. (2021). "Mapping methane point emissions with the PRISMA spaceborne imaging spectrometer". In: *Remote Sensing of Environment* 265. DOI: 10.1016/j.rse.2021.112671

A.11. Wang, R., Gamon, J.A., Moore, R., Zygielbaum, A.I., Arkebauer, T.J., Perk, R., Leavitt, B., Cogliati, S., Wardlow, B., and Qi, Y. (2021). "Errors associated with atmospheric correction methods for airborne imaging spectroscopy: Implications for vegetation indices and plant traits". In: *Remote Sensing of Environment* 265. DOI: 10.1016/j.rse.2021.112663

A.12. Ferrero, L., Bernardoni, V., Santagostini, L., Cogliati, S., Soldan, F., Valentini, S., Massabò, D., Močnik, G., Gregorič, A., Rigler, M., Prati, P., Bigogno, A., Losi, N., Valli, G., Vecchi, R., and Bolzacchini, E. (2021). "Consistent determination of the heating rate of light-absorbing aerosol using wavelength- and time-dependent Aethalometer multiple-scattering correction". In: *Science of the Total Environment* 791. DOI: 10.1016/j.scitotenv.2021.148277

A.13. Siegmann, B., Cendrero-Mateo, M.P., Cogliati, S., Damm, A., Gamon, J., Herrera, D., Jedmowski, C., Junker-Frohn, L.V., Kraska, T., Muller, O., Rademske, P., Tol, C. van der, Quiros-Vargas, J., Yang, P., and Rascher, U. (2021). "Downscaling of far-red solar-induced chlorophyll fluorescence of different crops from canopy to leaf level using a diurnal data set acquired by the airborne imaging spectrometer HyPlant". In: *Remote Sensing of Environment* 264. DOI: 10.1016/j.rse.2021.112609

A.14. Cogliati, S., Sarti, F., Chiarantini, L., Cosi, M., Lorusso, R., Lopinto, E., Miglietta, F., Genesio, L., Guanter, L., Damm, A., Pérez-López, S., Scheffler, D., Tagliabue, G., Panigada, C., Rascher, U., Dowling, T.P.F., Giardino, C., and Colombo, R. (2021). "The PRISMA imaging spectroscopy mission: overview and first performance analysis". In: *Remote Sensing of Environment* 262. DOI: 10.1016/j.rse.2021.112499

A.15. Cesana, I., Bresciani, M., Cogliati, S., Giardino, C., Gupana, R., Manca, D., Santabarbara, S., Pinardi, M., Austoni, M., Lami, A., and Colombo, R. (2021). "Preliminary investigation on phytoplankton dynamics and primary production models in an oligotrophic lake from remote sensing measurements". In: *Sensors* 21.15. DOI: 10.3390/s21155072

A.16. Bandopadhyay, S., Rastogi, A., Cogliati, S., Rascher, U., Gąbka, M., and Juszczak, R. (2021). "Can vegetation indices serve as proxies for potential sun-induced fluorescence (SIF)? A fuzzy simulation approach on airborne imaging spectroscopy data". In: *Remote Sensing* 13.13. DOI: 10.3390/rs13132545

A.17. Ferrero, L., Gregorič, A., Močnik, G., Rigler, M., Cogliati, S., Barnaba, F., Di Liberto, L., Paolo Gobbi, G., Losi, N., and Bolzacchini, E. (2021). "The impact of cloudiness and cloud type on the atmospheric heating rate of black and brown carbon in the Po Valley". In: *Atmospheric Chemistry and Physics* 21.6, pp. 4869–4897. DOI: 10.5194/acp-21-4869-2021

A.18. Jia, M., Colombo, R., Rossini, M., Celesti, M., Zhu, J., Cogliati, S., Cheng, T., Tian, Y., Zhu, Y., Cao, W., and Yao, X. (2021). "Estimation of leaf nitrogen content and photosynthetic nitrogen use efficiency in wheat using sun-induced chlorophyll fluorescence at the leaf and canopy scales". In: *European Journal of Agronomy* 122. DOI: 10.1016/j.eja.2020.126192

A.19. Tagliabue, G., Panigada, C., Celesti, M., Cogliati, S., Colombo, R., Migliavacca, M., Rascher, U., Rocchini, D., Schüttemeyer, D., and Rossini, M. (2020). "Sun–induced fluorescence heterogeneity as a measure of functional diversity". In: *Remote Sensing of Environment* 247. DOI: 10.1016/j.rse.2020.111934

A.20. Giardino, C., Bresciani, M., Braga, F., Fabbretto, A., Ghirardi, N., Pepe, M., Gianinetto, M., Colombo, R., Cogliati, S., Ghebrehiwot, S., Laanen, M., Peters, S., Schroeder, T., Concha, J.A., and Brando, V.E. (2020). "First evaluation of prisma level 1 data for water applications". In: *Sensors (Switzerland)* 20.16, pp. 1–16. DOI: 10.3390/s20164553

A.21. Pinto, F., Celesti, M., Acebron, K., Alberti, G., Cogliati, S., Colombo, R., Juszczak, R., Matsubara, S., Miglietta, F., Palombo, A., Panigada, C., Pignatti, S., Rossini, M., Sakowska, K., Schickling, A., Schüttemeyer, D., Stróżecki, M., Tudoroiu, M., and Rascher, U. (2020). "Dynamics of sun-induced chlorophyll fluorescence and reflectance to detect stress-induced variations in canopy photosynthesis". In: *Plant Cell and Environment* 43.7, pp. 1637–1654. DOI: 10.1111/pce.13754

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

Signature