

Curriculum vitae

PERSONAL INFORMATION Sergio Cogliati, PhD

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:** <https://www.scopus.com/authid/detail.uri?authorId=23990334600>
- **GOOGLE SCHOLAR:** <https://scholar.google.it/citations?user=4bQXYvMAAAAJ&hl=it>

UNIVERSITY APPOINTMENTS

Dec 2020 – now Academic Researcher (RTD-B)

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

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

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

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

LOCAL UNIT PI

- **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-12.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 52k euro <https://flex-12.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-12.mage11ium.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 8th 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://ip1.uv.es/flex-parcs/index.php/home/proposal/8-project>

LOCAL UNIT MEMBER

- **2021 SWATHSENSE Campaign, European Space Agency (ESA).** Acquisition of multi-angular hyperspectral (VNIR-SWIR) and thermal data from ground and airborne platforms over rural areas.
- **2019-2022 PRISCAV (PRISMA CALibration/Validation), Italian Space Agency (ASI).** 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 developed 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
- **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).** Airborne campaigns on agricultural and forest areas (Finland, Germany and Czech Republic) for testing the novel *Hyperspectral Plant Imaging Spectrometer* (HyPlant) in retrieving vegetation sun-induced fluorescence.
- **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.** <http://cost-es0903.fem-environment.eu/training-schools/summer-school-on-optical-sampling/>

- **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/SEM0W432BZF_index_0.html

EDITORIAL BOARD OF SCIENTIFIC JOURNALS

- 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 (https://www.mdpi.com/journal/remotesensing/special_issues/Chloro_Fluorescence));

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

- Nov 2018 Member of the NASA evaluation panel on "Terrestrial Ecology: Arctic-Boreal Vulnerability Experiment D 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 Accademia 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 SPEAKER

- 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 Invited speaker at **“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 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 Teledetección, 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 Tecnología de la Información Geográfica, Universidad de Alcalá (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>

Driving license B

SCIENTIFIC PUBLICATIONS

Peer-reviewed (selection)

- Hanno Scharr, Patrick Rademske, Luis Alonso, Sergio Cogliati, and Uwe Rascher (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, p. 112718. ISSN: 0034-4257. DOI: <https://doi.org/10.1016/j.rse.2021.112718>
- Ran Wang, John A. Gamon, Ryan Moore, Arthur I. Zygielbaum, Timothy J. Arkebauer, Rick Perk, Bryan Leavitt, Sergio Cogliati, Brian Wardlow, and Yi Qi (2021). "Errors associated with atmospheric correction methods for airborne imaging spectroscopy: Implications for vegetation indices and plant traits". In: *Remote Sensing of Environment* 265, p. 112663. ISSN: 0034-4257. DOI: <https://doi.org/10.1016/j.rse.2021.112663>
- Luis Guanter, Itziar Irakulis-Loitxate, Javier Gorroño, Elena Sánchez-García, Daniel H. Cusworth, Daniel J. Varon, Sergio Cogliati, and Roberto Colombo (2021). "Mapping methane point emissions with the PRISMA spaceborne imaging spectrometer". In: *Remote Sensing of Environment* 265, p. 112671. ISSN: 0034-4257. DOI: <https://doi.org/10.1016/j.rse.2021.112671>
- L. Ferrero, V. Bernardoni, L. Santagostini, S. Cogliati, F. Soldan, S. Valentini, D. Massabò, G. Močnik, A. Gregorič, M. Rigler, P. Prati, A. Bigogno, N. Losi, G. Valli, R. Vecchi, and E. Bolzacchini (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, p. 148277. ISSN: 0048-9697. DOI: <https://doi.org/10.1016/j.scitotenv.2021.148277>
- Bastian Siegmann, Maria Pilar Cendrero-Mateo, Sergio Cogliati, Alexander Damm, John Gamon, David Herrera, Christoph Jedmowski, Laura Verena Junker-Frohn, Thorsten Kraska, Onno Muller, Patrick Rademske, Christiaan van der Tol, Juan Quiros-Vargas, Peiqi Yang, and Uwe Rascher (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, p. 112609. ISSN: 0034-4257. DOI: <https://doi.org/10.1016/j.rse.2021.112609>. URL: <https://www.sciencedirect.com/science/article/pii/S0034425721003291>
- S. Cogliati, F. Sarti, L. Chiarantini, M. Cosi, R. Lorusso, E. Lopinto, F. Miglietta, L. Genesisio, L. Guanter, A. Damm, S. Pérez-López, D. Scheffler, G. Tagliabue, C. Panigada, U. Rascher, T.P.F. Dowling, C. Giardino, and R. Colombo (2021). "The PRISMA imaging spectroscopy mission: overview and first performance analysis". In: *Remote Sensing of Environment* 262, p. 112499. ISSN: 0034-4257. DOI: <https://doi.org/10.1016/j.rse.2021.112499>
- L. Ferrero, A. Gregorič, G. Močnik, M. Rigler, S. Cogliati, F. Barnaba, L. Di Liberto, G. P. Gobbi, N. Losi, and E. Bolzacchini (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
- Ilaria Cesana, Mariano Bresciani, Sergio Cogliati, Claudia Giardino, Remika Gupana, Dario Manca, Stefano Santabarbara, Monica Pinardi, Martina Austoni, Andrea Lami, and Roberto Colombo (2021). "Preliminary Investigation on Phytoplankton Dynamics and Primary Production Models in an Oligotrophic Lake from Remote Sensing Measurements". In: *Sensors* 21.15. ISSN: 1424-8220. DOI: 10.3390/s21155072
- Sergio Cogliati, Marco Celesti, Ilaria Cesana, Franco Miglietta, Lorenzo Genesisio, Tommaso Julitta, Dirk Schuettemeyer, Matthias Drusch, Uwe Rascher, Pedro Jurado, et al. (2019). "A Spectral Fitting Algorithm to Retrieve the Fluorescence Spectrum from Canopy Radiance". In: *Remote Sensing* 11.16, p. 1840
- Gina H Mohammed, Roberto Colombo, Elizabeth M Middleton, Uwe Rascher, Christiaan van der Tol, Ladislav Nedbal, Yves Goulas, Oscar Pérez-Priego, Alexander Damm, Michele Meroni, et al. (2019). "Remote sensing of solar-induced chlorophyll fluorescence (SIF) in vegetation: 50 years of progress". In: *Remote sensing of environment* 231, p. 111177
- Subhajt Bandopadhyay, Anshu Rastogi, Uwe Rascher, Patrick Rademske, Anke Schickling, Sergio Cogliati, Tommaso Julitta, Alasdair Mac Arthur, Andreas Hueni, Enrico Tomelleri, et al. (2019). "Hyplant-derived Sun-induced fluorescence—A new Opportunity to disentangle complex vegetation signals from diverse vegetation types". In: *Remote Sensing* 11.14, p. 1691

- Giulia Tagliabue, Cinzia Panigada, Benjamin Dechant, Frédéric Baret, Sergio Cogliati, Roberto Colombo, Mirco Migliavacca, Patrick Rademske, Anke Schickling, Dirk Schüttemeyer, et al. (2019). "Exploring the spatial relationship between airborne-derived red and far-red sun-induced fluorescence and process-based GPP estimates in a forest ecosystem". In: *Remote Sensing of Environment* 231, p. 111272
- Helge Aasen, Shari Van Wittenberghe, Neus Sabater Medina, Alexander Damm, Yves Goulas, Sebastian Wieneke, Andreas Hueni, Zbyněk Malenovský, Luis Alonso, Javier Pacheco-Labrador, et al. (2019). "Sun-induced chlorophyll fluorescence II: review of passive measurement setups, protocols, and their application at the leaf to canopy level". In: *Remote Sensing* 11.8, p. 927
- M Pilar Cendrero-Mateo, Sebastian Wieneke, Alexander Damm, Luis Alonso, Francisco Pinto, Jose Moreno, Luis Guanter, Marco Celesti, Micol Rossini, Neus Sabater, et al. (2019). "Sun-induced chlorophyll fluorescence III: Benchmarking retrieval methods and sensor characteristics for proximal sensing". In: *Remote Sensing* 11.8, p. 962
- R Colombo, R Garzonio, B Di Mauro, M Dumont, F Tuzet, S Cogliati, G Pozzi, A Maltese, and E Cremonese (2019). "Introducing thermal inertia for monitoring snowmelt processes with remote sensing". In: *Geophysical Research Letters* 46.8, pp. 4308–4319
- Cinzia Panigada, Giulia Tagliabue, Eli Zaady, Offer Rozenstein, Roberto Garzonio, Biagio Di Mauro, Mattia De Amicis, Roberto Colombo, Sergio Cogliati, Franco Miglietta, et al. (2019). "A new approach for biocrust and vegetation monitoring in drylands using multi-temporal Sentinel-2 images". In: *Progress in Physical Geography: Earth and Environment*, p. 0309133319841903
- Feng Zhao, Rong Li, Wout Verhoef, Sergio Cogliati, Xinjie Liu, Yanbo Huang, Yiqing Guo, and Jianxi Huang (2018). "Reconstruction of the full spectrum of solar-induced chlorophyll fluorescence: Intercomparison study for a novel method". In: *Remote sensing of environment* 219, pp. 233–246
- Marco Celesti, Christiaan van der Tol, Sergio Cogliati, Cinzia Panigada, Peiqi Yang, Francisco Pinto, Uwe Rascher, Franco Miglietta, Roberto Colombo, and Micol Rossini (2018). "Exploring the physiological information of Sun-induced chlorophyll fluorescence through radiative transfer model inversion". In: *Remote sensing of environment* 215, pp. 97–108
- Roberto Garzonio, Biagio Di Mauro, Sergio Cogliati, Micol Rossini, Cinzia Panigada, Barbara Delmonte, Valter Maggi, and Roberto Colombo (2018). "A novel hyperspectral system for high resolution imaging of ice cores: Application to light-absorbing impurities and ice structure". In: *Cold Regions Science and Technology* 155, pp. 47–57
- Luca Ferrero, Grisa Mocnik, Sergio Cogliati, Asta Gregoric, Roberto Colombo, and Ezio Bolzacchini (2018). "Heating rate of light absorbing aerosols: time-resolved measurements, the role of clouds, and source identification". In: *Environmental science & technology* 52.6, pp. 3546–3555
- Roberto Colombo, Marco Celesti, Remo Bianchi, Petya KE Campbell, Sergio Cogliati, Bruce D Cook, Lawrence A Corp, Alexander Damm, Jean-Christophe Domec, Luis Guanter, et al. (2018). "Variability of sun-induced chlorophyll fluorescence according to stand age-related processes in a managed loblolly pine forest". In: *Global change biology* 24.7, pp. 2980–2996
- Neus Sabater, Jorge Vicent, Luis Alonso, Sergio Cogliati, Jochem Verrelst, and José Moreno (2017). "Impact of atmospheric inversion effects on solar-induced chlorophyll fluorescence: Exploitation of the apparent reflectance as a quality indicator". In: *Remote Sensing* 9.6, p. 622
- Roberto Garzonio, Biagio Di Mauro, Roberto Colombo, and Sergio Cogliati (2017). "Surface reflectance and sun-induced fluorescence spectroscopy measurements using a small hyperspectral UAS". In: *Remote Sensing* 9.5, p. 472
- Christiaan van der Tol, Micol Rossini, Sergio Cogliati, Wouter Verhoef, Roberto Colombo, Uwe Rascher, and Gina Mohammed (2016). "A model and measurement comparison of diurnal cycles of sun-induced chlorophyll fluorescence of crops". In: *Remote sensing of environment* 186, pp. 663–677
- M Rossini, A Burkart, S Cogliati, N Davies, M Hom, A Mac Arthur, E Middleton, U Rascher, et al. (2016). "Comparison of sun-induced chlorophyll fluorescence estimates obtained from four portable field spectroradiometers". In: *Remote Sens* 8, p. 122

- Micol Rossini, Michele Meroni, Marco Celesti, Sergio Cogliati, Tommaso Julitta, Cinzia Panigada, Uwe Rascher, Christiaan van der Tol, and Roberto Colombo (2016). "Analysis of red and far-red sun-induced chlorophyll fluorescence and their ratio in different canopies based on observed and modeled data". In: *Remote sensing* 8.5, p. 412
- S Cogliati, W Verhoef, S Kraft, N Sabater, L Alonso, J Vicent, J Moreno, M Drusch, and R Colombo (2015). "Retrieval of sun-induced fluorescence using advanced spectral fitting methods". In: *Remote Sensing of Environment* 169, pp. 344–357
- S Cogliati, M Rossini, T Julitta, M Meroni, A Schickling, A Burkart, F Pinto, U Rascher, and R Colombo (2015). "Continuous and long-term measurements of reflectance and sun-induced chlorophyll fluorescence by using novel automated field spectroscopy systems". In: *Remote sensing of environment* 164, pp. 270–281
- Uwe Rascher, L Alonso, Andreas Burkart, C Cilia, S Cogliati, R Colombo, Alexander Damm, Matthias Drusch, Luis Guanter, J Hanus, et al. (2015). "Sun-induced fluorescence—a new probe of photosynthesis: First maps from the imaging spectrometer HyPlant". In: *Global change biology* 21.12, pp. 4673–4684
- M Rossini, L Nedbal, L Guanter, A Ač, L Alonso, A Burkart, S Cogliati, R Colombo, A Damm, M Drusch, et al. (2015). "Red and far red Sun-induced chlorophyll fluorescence as a measure of plant photosynthesis". In: *Geophysical research letters* 42.6, pp. 1632–1639
- Micol Rossini, Cinzia Panigada, Chiara Cilia, Michele Meroni, Lorenzo Busetto, Sergio Cogliati, Stefano Amaducci, and Roberto Colombo (2015). "Discriminating Irrigated and Rainfed Maize with Diurnal Fluorescence and Canopy Temperature Airborne Maps". In: *ISPRS International Journal of Geo-Information* 4.2, pp. 626–646
- Francisco Pinto, Alexander Damm, Anke Schickling, Cinzia Panigada, Sergio Cogliati, Mark Müller-Linow, Agim Balvora, and Uwe Rascher (2016). "Sun-induced chlorophyll fluorescence from high-resolution imaging spectroscopy data to quantify spatio-temporal patterns of photosynthetic function in crop canopies". In: *Plant, cell & environment* 39.7, pp. 1500–1512
- Andreas Burkart, Anke Schickling, Maria Pilar Cendrero Mateo, Thomas Jan Wrobel, Micol Rossini, Sergio Cogliati, Tommaso Julitta, and Uwe Rascher (2015). "A Method for Uncertainty Assessment of Passive Sun-Induced Chlorophyll Fluorescence Retrieval Using an Infrared Reference Light". In: *Sensors Journal, IEEE* 15.8, pp. 4603–4611
- Andreas Burkart, Sergio Cogliati, Anke Schickling, and Uwe Rascher (2014). "A novel UAV-based ultra-light weight spectrometer for field spectroscopy". In: *Sensors Journal, IEEE* 14.1, pp. 62–67
- Tommaso Julitta, Edoardo Cremonese, Mirco Migliavacca, Roberto Colombo, Marta Galvagno, Consolata Siniscalco, Micol Rossini, Francesco Fava, Sergio Cogliati, Umberto Morra di Cella, et al. (2014). "Using digital camera images to analyse snowmelt and phenology of a subalpine grassland". In: *Agricultural and Forest Meteorology* 198, pp. 116–125
- Cinzia Panigada, Micol Rossini, Michele Meroni, C Cilia, Lorenzo Busetto, STEFANO Amaducci, M Boschetti, Sergio Cogliati, V Picchi, F Pinto, et al. (2014). "Fluorescence, PRI and canopy temperature for water stress detection in cereal crops". In: *International Journal of Applied Earth Observation and Geoinformation* 30, pp. 167–178
- Micol Rossini, Mirco Migliavacca, Marta Galvagno, Michele Meroni, Sergio Cogliati, Edoardo Cremonese, Francesco Fava, Anatoly Gitelson, Tommaso Julitta, Umberto Morra di Cella, et al. (2014). "Remote estimation of grassland gross primary production during extreme meteorological seasons". In: *International Journal of Applied Earth Observation and Geoinformation* 29, pp. 1–10
- Micol Rossini, Francesco Fava, Sergio Cogliati, Michele Meroni, A Marchesi, Cinzia Panigada, Claudia Giardino, Lorenzo Busetto, Mirco Migliavacca, Stefano Amaducci, et al. (2013). "Assessing canopy PRI from airborne imagery to map water stress in maize". In: *ISPRS Journal of Photogrammetry and Remote Sensing* 86, pp. 168–177
- M Bresciani, M Rossini, G Morabito, E Matta, M Pinardi, S Cogliati, T Julitta, R Colombo, F Braga, and C Giardino (2013). "Analysis of within-and between-day chlorophyll-a dynamics in Mantua Superior Lake, with a continuous spectroradiometric measurement". In: *Marine and Freshwater Research* 64.4, pp. 303–316

Sergio Cogliati, Roberto Colombo, Micol Rossini, Michele Meroni, Tommaso Julitta, and Cinzia Panigada (2012). "Retrieval of vegetation fluorescence from ground-based and airborne high resolution measurements". In: *Geoscience and Remote Sensing Symposium (IGARSS), 2012 IEEE International*. IEEE, pp. 7129–7132

M Rossini, S Cogliati, M Meroni, Mirco Migliavacca, M Galvagno, L Busetto, E Cremonese, T Julitta, C Siniscalco, U Morra di Cella, et al. (2012). "Remote sensing-based estimation of gross primary production in a subalpine grassland". In: *Biogeosciences* 9.7, pp. 2565–2584

M Meroni, A Barducci, S Cogliati, F Castagnoli, M Rossini, L Busetto, Mirco Migliavacca, E Cremonese, M Galvagno, R Colombo, et al. (2011). "The hyperspectral irradiometer, a new instrument for long-term and unattended field spectroscopy measurements". In: *Review of scientific instruments* 82.4, p. 043106

Roberto Colombo, Lorenzo Busetto, Francesco Fava, Biagio Di Mauro, Mirco Migliavacca, Edoardo Cremonese, Marta Galvagno, Micol Rossini, Michele Meroni, Sergio Cogliati, et al. (2011). "Phenological monitoring of grassland and larch in the Alps from Terra and Aqua MODIS images". In: *Ital. J. Remote Sens* 43.3, pp. 83–96

Manuela Balzarolo, Karen Anderson, Caroline Nichol, Micol Rossini, Loris Vescovo, Nicola Arriga, Georg Wohlfahrt, Jean-Christophe Calvet, Arnaud Carrara, Sofia Cerasoli, et al. (2011). "Ground-based optical measurements at European flux sites: a review of methods, instruments and current controversies". In: *Sensors* 11.8, pp. 7954–7981

Mirco Migliavacca, Marta Galvagno, Edoardo Cremonese, Micol Rossini, Michele Meroni, Oliver Sonnentag, Sergio Cogliati, Giovanni Manca, Fabrizio Diotri, Lorenzo Busetto, et al. (2011). "Using digital repeat photography and eddy covariance data to model grassland phenology and photosynthetic CO₂ uptake". In: *Agricultural and Forest Meteorology* 151.10, pp. 1325–1337

Michele Meroni, Lorenzo Busetto, Luis Guanter, Sergio Cogliati, Giovanni Franco Crosta, Mirco Migliavacca, Cinzia Panigada, Micol Rossini, and Roberto Colombo (2010). "Characterization of fine resolution field spectrometers using solar Fraunhofer lines and atmospheric absorption features". In: *Applied optics* 49.15, pp. 2858–2871

Micol Rossini, Michele Meroni, Mirco Migliavacca, Giovanni Manca, Sergio Cogliati, Lorenzo Busetto, Valentina Picchi, Alessandro Cescatti, Guenther Seufert, and Roberto Colombo (2010). "High resolution field spectroscopy measurements for estimating gross ecosystem production in a rice field". In: *Agricultural and Forest Meteorology* 150.9, pp. 1283–1296

Michele Meroni, Cinzia Panigada, Micol Rossini, Valentina Picchi, Sergio Cogliati, and Roberto Colombo (2009). "Using optical remote sensing techniques to track the development of ozone-induced stress". In: *Environmental Pollution* 157.5, pp. 1413–1420

Michele Meroni, Micol Rossini, Valentina Picchi, Cinzia Panigada, Sergio Cogliati, Cristina Nali, and Roberto Colombo (2008). "Assessing steady-state fluorescence and PRI from hyperspectral proximal sensing as early indicators of plant stress: The case of ozone exposure". In: *Sensors* 8.3, pp. 1740–1754

M Meroni, V Picchi, M Rossini, S Cogliati, C Panigada, C Nali, G Lorenzini, and R Colombo (2008). "Leaf level early assessment of ozone injuries by passive fluorescence and photochemical reflectance index". In: *International Journal of Remote Sensing* 29.17-18, pp. 5409–5422

Conference Papers and Presentations (selection)

Cogliati S, Rossini M, Julitta T, Di Mauro B, Bresciani M, Giardino C, Schickling A, Burkart A, Rascher U, Ferrero L, Middleton E, Huemmrich F, Campbell P, Corp L, and Colombo R (2015). "Automated field spectroscopy systems for collecting continuous measurements of radiance/reflectance in support of hyperspectral satellite missions". In: *2015 HypSPiRI Science and Applications Workshop, 13-15 October, California Institute of Technology, Pasadena*

Middleton E, Julitta T, Campbell P, Huemmrich K, Schickling A, Rossini M, Cogliati S, Landis D, and Alonso L (2015). "Novel leaf-level measurements of chlorophyll fluorescence for photosynthetic efficiency". In: *Geoscience and Remote Sensing Symposium (IGARSS), 2015 IEEE International*, pp. 3878–3881. DOI: 10.1109/IGARSS.2015.7326671

Sabater N, Alonso L, Cogliati S, Vicent J, Tenjo C, Verrelst J, and Moreno J (2015). "A sun-induced vegetation fluorescence retrieval method from top of atmosphere radiance for the FLEX/Sentinel-3 TanDEM mission". In: *Geoscience and Remote Sensing Symposium (IGARSS), 2015 IEEE International*. IEEE Geoscience and Remote Sensing Society, pp. 2669–2672. DOI: 10.1109/IGARSS.2015.7326362

Comi A, Degni F, Cutellè C F, Cogliati S, Rizzi C, Casati M, Sangiorgi G, Perrone M G, Di Mauro B, Mocnik G, Bolzacchini E, and Ferrero L (2015). "Characterising the U9 Milan background site that links together radiation and pollution measurements". In: *Digital Book of Abstract EAC 2015*. URL: <https://geko.promeeeting.it/digital-handbook.php?day=4>

Garzonio R, Cogliati S, Di Mauro B, Zanin A, Tattarletti B, Zacchello F, Marras P, and Colombo R (2014). "The HYUAV: a novel UAV-based spectroscopy tool for environmental monitoring". In: *International Conference UAVs in Environmental Research July 10-11 University of Exeter Cornwall Campus, Penryn, Cornwall, United Kingdom*

Cogliati S, Rossini M, Julitta T, Panigada C, Schickling A, Pinto F, Alonso L, Vicent J, Sabater N, Colombo R, Rascher U, Verhoef W, and Moreno J (2014). "Retrieval of Sun Induced Fluorescence using Advanced Spectral Fitting Methods from Radiative Transfer Simulations and HyPlant Imagery". In: *5th International Workshop on Remote Sensing of Vegetation Fluorescence, 22–24 April 2014, Paris (France)*

Colombo R, Alonso L, Celesti M, Cogliati S, Damm A, Drusch M, Guanter L, Julitta T, Kokkalis P, Kraft S, Moreno J, Panigada C, Pinto F and Rascher U, Rossini M, Schickling A, Schüttemeyer D, Verhoef W, and Zemek F (2014). "Remote Sensing Of Sun-Induced Chlorophyll Fluorescence At Different Scales". In: *Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), Lausanne, Switzerland, 25-27 June 2014*

Sabater N, Alonso L, Vicent J, Cogliati S, Verrels J, and Moreno J (2014). "A Fluorescence Retrieval Method For The Flex Sentinel-3 Tandem Mission". In: *Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), Lausanne, Switzerland, 25-27 June 2014*

S. Cogliati, R. Garzonio, B. Di Mauro, B. Tartarletti, F. Zacchello, and R. Marras P. and Colombo (2014). "The Hyperspectral UAV (HyUAV) a novel UAV-based spectroscopy tool". In: *ESSEM COST Action ES1309 OPTIMISE, October 8-10, Milano, Italy*

Cogliati S, Colombo R, Rossini M, Meroni M, Julitta T, and Panigada C (2012). "Retrieval of vegetation fluorescence from ground-based and airborne high resolution measurements". In: *International Geoscience and Remote Sensing Symposium (IGARSS)*. Geoscience and Remote Sensing Society (GRS), pp. 7129–7132. DOI: 10.1109/IGARSS.2012.6352019

Rossini M, Cogliati S, Meroni M, Migliavacca M, Busetto L, Cremonese E, Galvagno M, Morra di Cella U, Gioli B, Miglietta F, Seufert G, Cescatti A, and Colombo R (2011). "Field spectroscopy measurements for gross primary productivity estimation across different terrestrial ecosystems". In: *Remote Sensing and Photogrammetry Society Annual Conference 2011: (RSPSoc 2011), Poole, United Kingdom, 13-15 September 2011*, pp. 71–77

S. Cogliati, M. Rossini, M. Meroni, A. Barducci, T. Julitta, and R. Colombo (Dec. 2011). "Unattended instruments for ground-based hyperspectral measurements: development and application for plant photosynthesis monitoring". In: *AGU Fall Meeting Abstracts*

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