

PERSONAL INFORMATION

Marco Rosoldi

Consiglio Nazionale delle Ricerche. Istituto di Metodologie per l'Analisi Ambientale

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Sex Male | Nationality Italy

POSITION

Research Scientist

WORK EXPERIENCE

2017-present

Research scientist

Consiglio Nazionale delle Ricerche (CNR)

- Contract researcher on Atmospheric Sciences and ground-based remote sensing at the CNR-IMAA Atmospheric Observatory (CIAO).

Business or sector Government / Research

2012-2017

Contract researcher

Consiglio Nazionale delle Ricerche (CNR)

- Contract researcher on Atmospheric Sciences and ground-based remote sensing at the CNR-IMAA Atmospheric Observatory (CIAO).

Business or sector Government / Research

EDUCATION AND TRAINING

2012-2015

PhD in Methods and Technologies for Environmental Monitoring

University of Basilicata, Potenza, Italy

Academic Discipline: Physics of the Earth and of the Circumterrestrial Medium

Title of PhD thesis: Study of droplet activation in thin clouds using ground-based Raman lidar and ancillary remote sensors

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

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

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Tutor of undergraduate students
- Invited speaker at international conferences
- Media appearances (print, TV, online)
- Scientific dissemination to general public

Organisational skills/research projects/measurement campaigns

- Responsible for the radio-sounding station at CIAO, part of the global observing network GRUAN (GCOS Reference Upper-Air Network, www.gruan.org), for measuring the profiles of standard meteorological variables through the troposphere and lower stratosphere (2015-present).
- Responsible for the station of cloud remote sensing observation at CIAO, part of CLOUDNET network (devcloudnet.fmi.fi), providing vertical profiles of cloud properties at high temporal and spatial resolution, in order to continuously evaluate and improve the representation of clouds in mesoscale weather models (2016-present).
- Participation in C3S_512 “Quality Assurance for the Climate Data Store”, FRAMEWORK AGREEMENT ECMWF/COPERNICUS/2018/C3S_512_BSC/SC1, Copernicus Climate Change Service (C3S), 01/10/2018 – present
- Participation in H2020 project GAIA-CLIM (Gap Analysis for Integrated Atmospheric ECV CLimate Monitoring, www.gaia-clim.eu), aiming to assess and improve the ability to use non satellite global observations of atmospheric Essential Climate Variables (ECVs) to validate and characterize the equivalent satellite observations (01/03/2015 - 29/02/2018).
- Participation in H2020 project ACTRIS-2 (Aerosol, Clouds, and Trace gases Research Infrastructure, www.actris.eu), including among its specific objectives the consolidation and optimization of the European observing capabilities for investigating aerosols, clouds, and their interactions, with high vertical and temporal resolution throughout the troposphere by means of an advanced network of coordinated lidar and cloud-radar stations in such a way that the data they provide can be efficiently integrated with other observations and effectively shared with a wide user community (2015-present).
- Site responsible for the measurement campaign INTERACT II (INTERcomparison of Aerosol and Cloud Tracking), carried out at CIAO from July 2016 to January 2017 in the framework of the ACTRIS-2 project, aiming to evaluate the potential of commercial automatic lidars and ceilometers for aerosol profiling, by using as a reference advanced multi-wavelength lidars of the ACTRIS-EARLINET network (European Aerosol Research Lidar NETwork, www.earlinet.org).
- PI of the Cloud radar for the international measurement campaign PRE-TECT (<http://pre-TECT.space.noa.gr>), carried out at the ACTRIS station of Finokalia (Greece) in April 2017, aiming to improve the characterization of desert dust and its interactions with ice clouds by the remote sensing techniques and retrieval algorithms developed in the framework of ACTRIS. More specifically, the campaign aims to validate ground-based and airborne remote sensing retrievals against surface and airborne in-situ measurements.

Job-related skills

- Observational data analysis
- Dataset creation
- Advanced statistical analysis
- Expert of in-situ remote sensing technologies
- Atmospheric measurement uncertainty analysis
- Validation of field measurement techniques

Computer skills

- IDL, Origin, Windows, Linux
- MS Office
- Website design

ADDITIONAL INFORMATION

Most relevant publications

- Rosoldi, M.; Coppa, G.; Merlone, A.; Musacchio, C.; Madonna, F.: Intercomparison of Vaisala RS92 and RS41 Radiosonde Temperature Sensors under Controlled Laboratory Conditions. *Atmosphere* 2022, 13, 773. <https://doi.org/10.3390/atmos13050773>, 2022.
- Ilić, L., Jovanović, A., Kuzmanoski, M., Lazić, L., Madonna, F., Rosoldi, M., Mytilinaios, M., Marinou, E., and Ničković, S.: Mineralogy sensitive immersion freezing parameterization in DREAM. *Journal of Geophysical Research: Atmospheres*, 127, e2021JD035093. <https://doi.org/10.1029/2021JD035093>, 2022.
- Madonna, F., Tramutola, E., SY, S., Serva, F., Proto, M., Rosoldi, M., Gagliardi, S., Amato, F., Marra, F., Fassò, A., Gardiner, T., and Thorn, P.W.: The new Radiosounding HARMonization (RHARM) data set of homogenized radiosounding temperature, humidity, and wind profiles with uncertainties. *Journal of Geophysical Research: Atmospheres*, 127, e2021JD035220. <https://doi.org/10.1029/2021JD035220>, 2022.
- Marinou, E.; Voudouri, K.A.; Tsikoudi, I.; Drakaki, E.; Tsekeri, A.; Rosoldi, M.; Ene, D.; Baars, H.; O'Connor, E.; Amiridis, V.; Meleti, C.: Geometrical and Microphysical Properties of Clouds Formed in the Presence of Dust above the Eastern Mediterranean. *Remote Sens.*, 13, 5001. <https://doi.org/10.3390/rs13245001>, 2021.
- Madonna F., Summa, D., Di Girolamo, P., Marra, F., Wang, Y. and Rosoldi, M.: Assessment of Trends and Uncertainties in the Atmospheric Boundary Layer Height Estimated using Radiosounding Observations over Europe, *Atmosphere*, 12, 301, <https://doi.org/10.3390/atmos12030301>, 2021.
- Sy, S., Madonna, F., Rosoldi, M., Tramutola, E., Gagliardi, S., Proto, M., Pappalardo, G.: Sensitivity of trends to estimation methods and quantification of subsampling effects in global radiosounding temperature and humidity time series. *Int. J. Climatol.* Volume 41, Issue S1 p. E1992-E2014, <https://doi.org/10.1002/joc.6827>, 2020.
- Madonna, F., Kivi, R., Dupont, J.-C., Ingleby, B., Fujiwara, M., Romanens, G., Hernandez, M., Calbet, X., Rosoldi, M., Giunta, A., Karppinen, T., Iwabuchi, M., Hoshino, S., von Rohden, C., and Thorne, P. W.: Use of automatic radiosonde launchers to measure temperature and humidity profiles from the GRUAN perspective, *Atmos. Meas. Tech.*, 13, 3621–3649, <https://doi.org/10.5194/amt-13-3621-2020>, 2020.
- F. Finazzi, Fassò A., Madonna F., Negri I., Sun B., Rosoldi M., Statistical harmonization and uncertainty assessment in the comparison of satellite and radiosonde climate variables, *Environmetrics*, 30 (2), e2528, <https://doi.org/10.1002/env.2528>, 2018
- Madonna, F., Rosoldi, M., Lolli, S., Amato, F., Vande Hey, J., Dhillon, R., Zheng, Y., Brettelle, M., and Pappalardo, G.: Intercomparison of aerosol measurements performed with multi-wavelength Raman lidars, automatic lidars and ceilometers in the framework of INTERACT-II campaign, *Atmos. Meas. Tech.*, 11, 2459–2475, <https://doi.org/10.5194/amt-11-2459-2018>, 2018.
- Lolli, S., Madonna, F., Rosoldi, M., Campbell, J. R., Welton, E. J., Lewis, J. R., Gu, Y., and Pappalardo, G.: Impact of varying lidar measurement and data processing techniques in evaluating cirrus cloud and aerosol direct radiative effects, *Atmos. Meas. Tech.*, 11, 1639–1651, <https://doi.org/10.5194/amt-11-1639-2018>, 2018.
- Thorne, P. W., Madonna, F., Schulz, J., Oakley, T., Ingleby, B., Rosoldi, M., Tramutola, E., Arola, A., Buschmann, M., Mikalsen, A. C., Davy, R., Voces, C., Kreher, K., De Maziere, M., and Pappalardo, G.: Making better sense of the mosaic of environmental measurement networks: a system-of-systems approach and quantitative assessment, *Geosci. Instrum. Method. Data Syst.*, 6, 453–472, <https://doi.org/10.5194/gi-6-453-2017>, 2017.
- Nickovic, S., Cvetkovic, B., Madonna, F., Rosoldi, M., Pejanovic, G., Petkovic, S., and Nikolic, J.: Cloud ice caused by atmospheric mineral dust – Part 1: Parameterization of ice nuclei concentration in the NMME-DREAM model, *Atmos. Chem. Phys.*, 16, 11367–11378, <https://doi.org/10.5194/acp-16-11367-2016>, 2016.
- Madonna, F., Rosoldi, M., Güldner, J., Haefele, A., Kivi, R., Cadeddu, M. P., Sisterson, D., and Pappalardo, G.: Quantifying the value of redundant measurements at GCOS Reference Upper-Air Network sites, *Atmos. Meas. Tech.*, 7, 3813–3823, www.atmos-meas-tech.net/7/3813/2014/, doi:10.5194/amt-7-3813-2014, 2014.
- Rosoldi, M., Gumà Claramunt, P., Madonna, F., et al.: Study of thin clouds at CNR-IMAA Atmospheric Observatory (CIAO), *Annals of Geophysics*, 56, Fast Track – 1, <http://dx.doi.org/10.4401/ag-6337>, 2013.

Le informazioni contenute nel presente *Curriculum vitae et studiorum* sono rese sotto la personale responsabilità del sottoscritto ai sensi degli art. 46 e 47 del D.P.R. 28 dicembre 2000 n. 445, consapevole della responsabilità penale prevista dall'art. 76 del medesimo D.P.R., per le ipotesi di falsità in atti e dichiarazioni mendaci.

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 e s.m.i.

Luogo e data: Tito Scalo, li 29/06/2022

Il dichiarante: