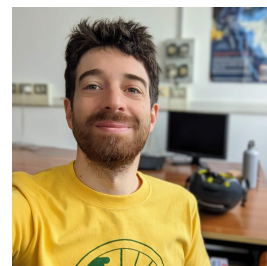


Giacomo Roversi, PhD Student

National Doctoral Program in Polar Sciences
Ca' Foscari University (Venice, IT) | CNR-ISAC (Rome, IT)



Contact details

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GitHub: [giacom0roversi](https://github.com/giacom0roversi)

Language skills

Italian (native),
English (proficient),
German (fair),
Japanese (beginner)

Programming skills

Python, Jupyter, R, MATLAB,
Bash, Git, LaTeX/beamer

SUMMARY

Giacomo Roversi is currently a PhD Student of the National Doctoral Program in Polar Sciences (DIN-SP) at the Ca' Foscari University in Venice (IT), under the supervision of Prof. Barbara Stenni (Ca' Foscari Univ.) and Dr. Luca Baldini (CNR-ISAC, Rome, IT). His research project is focused on precipitation and cloud microphysics observations in Antarctica, and it is funded by the National Project for Antarctic Research (PNRA). Since June 2022 he is based in Rome at the Institute of Atmospheric Sciences and Climate (ISAC) of the National Research Council (CNR) of Italy.

He graduated from the University of Ferrara in 2016 with a bachelor's thesis on space-borne radar estimates of snowfall rates in Antarctica. During his master studies he further specialized in meteorological Earth observations, remote sensing and data analysis.

Since the end of 2016 he also studies the opportunistic sensing of precipitation. He graduated from the University of Bologna in 2022 with a master's thesis on the exploitation of Commercial Microwave Links (CML) to estimate rainfall rates.

During his activity, Dr Roversi has developed fruitful relationships with the major Italian (Arpae, CNR) and international (KIT, WUR, KNMI, TAU, CTU) organizations active in the field. He contributed to the formation of an autonomous CML research group in Bologna (Italy) in 2022, and he has joined the OpenSense COST Action (CA20136, opensenseaction.eu).

Between June 2022 and January 2023 he also worked inside the INDRA Joint Research Project between Italy and Vietnam (*Research and development of a precipitation estimation methodology using INtegrated RAinfall measurements platform for agriculture*, www.indra-project.info), for the University of Bologna.

RESEARCH INTERESTS

Precipitation characteristics and microphysics; Meteorology and climate of Polar regions; Remote sensing of precipitation from weather radars, satellites and opportunistic sensors; Climate change and Antarctic Ice Sheet mass balance.

MOBILITY

- Feb-May 2026 **Visiting researcher under the supervision of Prof. Okamoto and Sato**, *Validation of EarthCARE ESA and JAXA L2 products and estimation of the air motion component from ground Doppler measurements*, Research Institute for Applied Mechanics (RIAM), Kyushu University, Fukuoka, Japan.
- Oct-Dec 2025 **Visiting researcher under the supervision of Prof. Okamoto and Sato**, *Improvements to the K2W spectral conversion algorithm and multi-year characterization of Antarctic precipitation regimes*, Research Institute for Applied Mechanics (RIAM), Kyushu University, Fukuoka, Japan.
- Nov-Dec 2024 **XL Spedizione Italiana in Antartide**, *OSS12 Stratospheric Lidar Scientific Team*, Piano Nazionale di Ricerche in Antartide (PNRA), Concordia Station, 75°05'59"S 123°19'56"E, Antarctica.

CURRENT POSITION

- 2023 - now **PhD Student**, *Clouds and precipitation characterization in Antarctica through in-situ measurements and remote sensing from ground and satellite platforms*. National Doctoral Program in Polar Sciences (DIN-SP), 39th cycle, Department of Environmental Sciences, Informatics and Statistics, Ca' Foscari University, Venice, Italy.

PREVIOUS POSITIONS

- 2022 - 2023 **Research grant**, *Characterization of solid and liquid precipitation in Antarctica through multi-sensor techniques, specifically referring to measures from satellites and from radars and disdrometers located by the Italian Antarctic research base "Mario Zucchelli"*, Institute of Atmospheric Sciences and Climate, National Research Council of Italy (CNR-ISAC).
- 2017 - 2018 **Researcher and developer** (project collaboration) at Meteorological and Environmental Earth Observation – MEEO S.r.l. (www.meeo.it), Development of a near-real-time operational service for rainfall monitoring based on CML (RAINBO project LIFE15CCA/IT/00035).

EDUCATION

- Mar 17, 2022 **Master's degree in Physics of the Earth System** (Atmospheric Physics, Radiative Transfer and Remote Sensing, EQF level 7), *Commercial Microwave Links as opportunistic sensors for precipitation in northern Italy: building and validating an operational monitoring network*. University of Bologna. Supervisors: Porcù Federico, Alberoni Pier Paolo. Final Grade: 110/110.
- July 21, 2016 **Degree in Physics** (EQF level 6), *Snowfall estimates in Antarctica from satellite radar measurements: sensitivity to the shape and temperature of the hydrometeors* (in Italian). University of Ferrara. Supervisors: Mantovani Fabio, Porcù Federico, Milani Lisa. Final Grade: 109/110.

TEACHING

- Oct-Nov 2022 **Lecturer and tutor**, *Data analysis in R for the Laboratory of Atmospheric Physics*, Master degree in Physics of the Earth System, Department of Physics and Astronomy "Augusto Righi", University of Bologna, Italy.
- 2012 - 2022 **Ski instructor** (seasonal work), *Private and group lessons for children and adults, held in Italian, English and German*, Ski & Snowboard School Badia Pedraces (www.scuolascibadia.it), South Tyrol, Italy.

PUBLICATIONS

- Feb 2026 **Roversi G.**, Bracci A., Sato K., Okamoto H. and Baldini L.: *Four Years of Vertically Pointing Radar Observations at Mario Zucchelli Station, Antarctica, and Implications for Satellite Ground Validation*[submitted], URSI GASS, IEEE Xplore, 2026.
- Apr 2026 Covi, E., **Roversi, G.**, and Nebuloni, R.: *OpenRainER: an open-source dataset for studying the opportunistic sensing of rainfall in Emilia-Romagna, Italy*, Earth Syst. Sci. Data Discuss. [preprint], doi: [10.5194/essd-2026-160](https://doi.org/10.5194/essd-2026-160), in review, 2026
- Aug 1, 2025 R. Nebuloni, ..., **Roversi, G.**, et al., *A Review of Technical Aspects and Challenges in Opportunistic Rainfall Estimation Using Satellite and Terrestrial Microwave Links: How wireless infrastructure can be used for rainfall monitoring*, IEEE Geoscience and Remote Sensing Magazine, vol. 13, no. 4, pp. 266-296, Dec. 2025, doi: [10.1109/MGRS.2025.3573645](https://doi.org/10.1109/MGRS.2025.3573645).
- Oct 29, 2024 Scognamiglio G., Rucci A., Vaccaro A., Adirosi E., Sapienza F., Giannetti F., Bacci G., Angeloni S., Baldini L., **Roversi G.**, Ortolani A., Antonini A., Melani S.: *Deep Learning for Opportunistic Rain Estimation via Satellite Microwave Links*. Sensors (Basel). 2024 Oct 29;24(21):6944. doi: [10.3390/s24216944](https://doi.org/10.3390/s24216944).
- Feb 25, 2024 **Roversi G.**, Pancaldi M., Cossich W., Corradini D., Nguyen T.T.N., Nguyen T.V., Porcu' F.: *The Extreme Rainfall Events of the 2020 Typhoon Season in Vietnam as Seen by Seven Different Precipitation Products*. Remote Sens. 2024, 16, 805. doi: [10.3390/rs16050805](https://doi.org/10.3390/rs16050805).
- Oct 30, 2020 **Roversi G.**, Alberoni P.P., Fornasiero A., Porcu' F.: *Commercial microwave links as a tool for operational rainfall monitoring in Northern Italy*. Atmospheric Measurements Techniques 2020, 13, 5779–5797, doi: [10.5194/amt-13-5779-2020](https://doi.org/10.5194/amt-13-5779-2020).

PUBLISHED DATASETS

- 2023 - now Covi E., **Roversi G.**: *OpenRainER Dataset*, doi: [10.5281/zenodo.10593848](https://doi.org/10.5281/zenodo.10593848)
- 2022 - now **Author and maintainer** of the resources of the APP and FIRCLOUDS PNRA Projects on the [National Antarctic Data Centre \(NADC\)](https://nadc.org/) platform (8 records).

PRESENTATIONS

- Jun 2026 **Roversi G.**, Bracci A., Baldini L., Okamoto H., Sato K.: *Validation of ESA and JAXA EarthCARE Level-2 CPR and Synergistic Precipitation Products over Coastal Antarctica using K2W-based Ground Radar and Disdrometer Observations* (oral presentation), EarthCARE Science and Validation Workshop 2026, Oxford, United Kingdom.
- Jun 2026 **Roversi G.**, Bracci A., Baldini L., Okamoto H., Sato K.: *Near-Surface Sublimation Below the CPR Blind Zone: Implications for EarthCARE Snowfall Surface Estimation in Coastal Antarctica* (poster presentation), EarthCARE Science and Validation Workshop 2026, Oxford, United Kingdom.
- Dec 2025 **Roversi G.**, Bracci A., Baldini L., Okamoto H., Sato K.: *Ground Validation of CPR Radar Reflectivity, Doppler and Microphysics Products at the Mario Zucchelli Antarctic Site using the K2W Methodology with 24 GHz Doppler Radar, Disdrometer, and Ceilometer measurements* (oral presentation), EarthCARE Science and Validation Workshop 2025, Tokyo, Japan.
- Sep 2025 **Roversi G.**, Bracci A., Adirosi E., Baldini L., Okamoto H., Sato K.: *Stime di neve e validazione dei prodotti radar della missione EarthCARE con misure di un profilatore radar a 24 GHz e di due disdrometri della base antartica "Mario Zucchelli"* (oral present. in Italian), RadMet2025.IT, Milan, Italy.
- Mar 2025 **Roversi G.**, Bracci A., Baldini L., Okamoto H., Sato K.: *Preliminary Ground Validation of CPR Radar Reflectivity and Doppler Velocity products at the Mario Zucchelli Antarctic Site using the K2W Methodology with 24 GHz Doppler Radar and Disdrometer* (poster presentation), 2nd ESA-JAXA EarthCARE In-Orbit Validation Workshop, Frascati (Rome), Italy.
- Sep 2024 **Roversi G.**, Bracci A., Adirosi E., Angeloni S., Montopoli M., Baldini L., Porcù F.: *Classification of precipitating ice particles by combining MRR and disdrometer measurements during five years of Antarctic coastal precipitation - A work in progress: first preliminary results and a case study* (poster presentation). ERAD 2024, Rome, Italy.
- Jul 2024 **Roversi G.**, Corradini D., Pancaldi M., Cossich W., Nguyen T.T.N., Nguyen T.V., Porcù F.: *High-resolution intercomparison of multi-platform precipitation products over Vietnam* (poster presentation), ATMOS 2024 ESA Conference, Bologna, Italy.
- Feb 2024 Covi E., **Roversi G.**, Alberoni P.P., Nanni S. and Porcù F.: *Open-source precipitation dataset from CML and conventional measurement networks* (poster presentation), 5° Congresso Nazionale AISAM, Lecce, Italy.
- Nov 2022 **Roversi G.**, Pancaldi M., Cossich W., Nguyen T.T.N., Nguyen T.V., Porcù F.: *Intercomparison of operational precipitation products in Vietnam* (oral presentation, online), AOMSUC-12 Session 4, Japan Meteorological Agency, Tokyo, Japan.

- Jun 2022 **Roversi G.**, Pancaldi M., Cossich W., Porcù F.: *Intercomparison of multi-platform precipitation data in Vietnam* (oral presentation, online), INDRA Workshop - Precipitation estimation from multi-platform datasets, Bologna, Italy - Hanoi, Vietnam.
- Jul 2021 **Roversi G.**, Alberoni P.P., Fornasiero A., Conigliaro A., Covi E., Porcù F.: *Precipitation estimates from CML in Italy* (oral present. in Italian, online), RadMet2021.IT, Firenze, Italy.
- Sep 2018 **Roversi G.**, Alberoni P.P., Fornasiero A., Pasetti S., Folegani M., Porcù F.: *Comparison between different QPEs based on: microwave links, adjusted radars and gauges* (poster presentation in Italian), 1° Congresso Nazionale AISAM, Bologna, Italy.
- Jul 2018 Alberoni P.P., Fornasiero A., **Roversi G.**, Pasetti S., Folegani M., Porcù F.: *Comparison between different QPEs based on: microwave links, adjusted radars and gauges* (poster presentation), ERAD 2018, Session 13, Ede - Wageningen, The Netherlands.

STUDENTS SUPERVISION

- 2023 **Advisor** of one Master Student during Thesis (Correlator), Department of Physics and Astronomy "Augusto Righi", University of Bologna, Italy

EDITORIAL ACTIVITY

- 2022 Reviewer for *Water Resources Research* (AGU Wiley), 1 publication
- 2021 Reviewer for *Journal of Hydrology: Regional Studies* (Elsevier), 1 publication
- 2020 Public reviewer for *Atmospheric Measurement Techniques* (Copernicus): Fencel, M., Dohnal, M., Valtr, P., Grabner, M., and Bareš, V.: Atmospheric observations with E-band microwave links – challenges and opportunities, *Atmos. Meas. Tech.*, 13, 6559–6578, [10.5194/amt-13-6559-2020](https://doi.org/10.5194/amt-13-6559-2020), 2020.

OTHER TITLES AND QUALIFICATIONS

- 2023 Accompagnatore di Alpinismo Giovanile (Club Alpino Italiano)
- 2022 Meteorologo/Meteorologist (OMM-WMO)
- 2017 Tecnico in Meteo-Climatologia operativa (Regione Emilia-Romagna)
- 2013 Accompagnatore Sezionale di Alpinismo Giovanile (Club Alpino Italiano)
- 2012 Assistente Maestro di Sci (Collegio Professionale Maestri di Sci Alto Adige)

OTHER INTERESTS

Cycling, skiing, mountaineering, photography, cars, technology, space exploration.