Giacomo Roversi, MSc

Institute of Atmospheric Sciences and Climate (CNR-ISAC) Research grant fellow

Personal information

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Summary

Giacomo Roversi is currently a research grant fellow at the Institute of Atmospheric Sciences and Climate (ISAC) of the National Research Council (CNR) of Italy, under the supervision of Dr. Luca Baldini, inside the National Project for Antarctic Research (PNRA), and is also collaborating with the Department of Physics and Astronomy "Augusto Righi", University of Bologna, under the supervision of Prof. Federico Porcù.

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

Since the end of 2016 he researches about 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 in Italy, also writing a scientific publication.

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, of which he is currently a member. In August 2022 he joined the WG1, WG2 and WG3 of the OpenSense COST Action (CA20136, opensenseaction.eu), participating in a comprehensive review of the current state of opportunistic sensing.

Since June 2022 he is also working inside the INDRA Joint Research Project between Italy and Vietnam (Research and development of a precipitation estimation methodology using INtergrateD RAinfall measurements platform for agriculture, www.indra-project.info), for the University of Bologna.

Research interests

Precipitation characteristics and microphysics; Remote sensing of precipitation from weather radars, satellites and opportunistic sensors; Climate change and water/mass balance in Antarctica.



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Professional experience

- 2022 now **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).
- Oct-Nov 2022 **Teaching 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 (UNIBO).
 - 2017 2018 **Researcher and developer** (project collaboration) at Meteorological and Environmental Earth Observation MEEO S.r.l. (www.meeo.it): Developement of a near-real-time operational service for rainfall monitoring based on CML (RAINBO project LIFE15CCA/IT/00035).
 - 2012 2022 **Ski instructor** (seasonal work) at Ski & Snowboard School Badia Pedraces (www.scuolascibadia.it): Private and group lessons to children and adults, held in Italian, English and German.

Education

- Mar 17, 2022 **Master 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.
- 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

Publications

Oct 30, 2020 **G. Roversi**, P. P. Alberoni, A. Fornasiero, and F. Porcù, 2020. *Commercial microwave links as a tool for operational rainfall monitoring in Northern Italy*. Atmospheric Measurements Techniques, 13, 5779–5797, 10.5194/amt-13-5779-2020.

Presentations

- Nov 16, 2022 **G. Roversi**, M. Pancaldi, W. Cossich, T. T. N. Nguyen, T. V. Nguyen and F. Porcù: Intercomparison of operational precipitation products in Vietnam (oral presentation, online), AOMSUC-12 Session 4, Japan Meteorological Agency, Tokyo, Japan.
- June 22, 2022 **G. Roversi**, M. Pancaldi, W. Cossich and F. Porcù: *Intercomparison of multi-platform precipitation data in Vietnam* (oral presentation, online), INDRA Workshop Precipitation estimation from multi-platform datasets, Bologna, Italy Hanoi, Vietnam.
 - July 7, 2021 **G. Roversi**, P. P. Alberoni, A. Fornasiero, A. Conigliaro, E. Covi, F. Porcù: *Precipitation estimates from CML in Italy* (oral present. in Italian, online), RadMet2021.IT, Firenze, Italy.

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- Sept 12, 2018 **G. Roversi**, P. P. Alberoni, A. Fornasiero, S. Pasetti, M. Folegani, F. Porcù: *Comparison between different QPEs based on: microwave links, adjusted radars and gauges* (poster presentation in Italian), 1° Congresso Nazionale AISAM, Bologna, Italy.
 - July 1, 2018 P. P. Alberoni, A. Fornasiero, G. Roversi, S. Pasetti, M. Folegani, F. Porcù: Comparison between different QPEs based on: microwave links, adjusted radars and gauges (poster presentation), ERAD2018, Session 13, Ede-Wageningen, The Netherlands.

Participations

- Nov 16, 2022 The 12th Asia Oceania Meteorological Satellite Users' Conference (Tokyo, Japan, online)
- Nov 03, 2021 1st CELLENMON Meeting (TelAviv, Israel, online)
- Apr 23, 2020 Technical meeting of the international CML community (online)
- June 25, 2019 1st Symposium on the hydro-meteorological use of CML (Garmisch-Partenkirchen, Germany)
- June 17, 2019 1st SISC/AISAM Conference on Weather and Climate Forecasting (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): Fencl, 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, 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 Porfessionale Maestri di Sci Prov. di Bolzano)

Languages

Italian (native speaker), English (proficient), German (good)

Programming languages

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

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