

Claudia Acquistapace

Curriculum Vitae

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"Osa, che a rinunciare ce la fanno tutti" - cit.

In a nutshell

I am a creative scientist interested in the microphysical processes of warm clouds, like boundary layer clouds. I enjoy taking part in measurement campaigns to produce high-resolution ground-based remote sensing observations of cloud processes and how precipitation is initiated, especially using cloud radars. I am interested in developing synergies between models and observations for improving the representation of the observed processes and the overall model performance to reduce the impacts of climate change. Seeing satisfaction, curiosity, and success in my students' eyes is my top gratification. I need teamwork to give my best, and I love communicating science to society. In my career, I developed a strong scientific network, with whom I enjoy cooperating and develop projects.

Professional Experience

- 2023, present **Junior research group leader of the project funded by DWD within the IDEA-S4S network, "EXploiting sPAtiotemporal cloud patterns to advance severe Storms process understanding and detection (EXPATS)", <https://expats-ideas4s.com/>.**
Objectives:
- Distinguish patterns of cloud spatiotemporal evolution from multiplatform datasets
 - Evaluate the ICON-GLORI model output over the Alpine region.
 - Investigate spatiotemporal patterns of hail events in multiyear datasets
- 2020, 2023 **Independent researcher funded by individual grant from Deutsche Forschungsgemeinschaft (DFG), "Precipitation life cycle in trade wind cumuli", <https://bit.ly/3ihE7KL>.**
Objectives:
- Characterization of warm precipitation processes based on observations analyzing the main dynamic and thermodynamic factors and assessment of the driving parameters for precipitation development in trade wind cumuli.
 - Evaluation of precipitation processes in LES with observations: assessment of the main factors influencing precipitation formation in LES with emphasis on autoconversion parametrization.
 - Assessment of the vertical structure of the evaporation rate of precipitation and its dependency on atmospheric parameters and DSD.
- 2019– present **Science communication manager of CA18235 - PROfiling the atmospheric Boundary layer at European scale (PROBE) COST action.**
Main tasks:
- Administration of the budget for communication activities,
 - Creation and maintenance of the PROBE COST Action [website](#) and editing of the newsletter,
 - Promotion and coordination of the PROBE COST Action activities (short term scientific mission, conference grants, job offers, subgroups, conference sessions etc.)

- 2017–2020 **Post-Doctoral researcher (HD(CP)² project)**, University of Cologne, Germany, Ending Feb 2020.
Specific skills:
- Statistical analysis of big amounts of data.
 - Analysis of ground-based observations from wind lidar, ceilometer, radiosondes, microwave radiometer.
 - Evaluation and comparison of ICON-LEM model outputs (meteograms) with ground-based observations for boundary layer clouds and boundary layer structure.
- 2019– present **PI of project "Wetoo: what they don't tell you", a video documentary on women in science, funded by the Gender equality commission of the University of Cologne.**
- 2019, May **Approved proposal for small field campaign by Department of Energy (DOE) and the Atmospheric Radiation Measurement (ARM), *Precipitation in trade cumuli within EUREC4A***, 20 January 2020 - 20 February 2020.
- 2013–2017 **Phd candidate**, University of Cologne, Germany.
Main voci of research:
- Cloud radar raw data analysis (I/Q) and optimization of settings for drizzle detection purpose.
 - Forward simulations of 1d bin microphysical model
 - Creation of extended dataset of multi sensor observations of liquid continental clouds.
 - Development of new criterion to detect drizzle in the cloud from ground-based.

Education

- 2022–2023 **Post BA-professional master degree in Communication of Science and Innovation**, *University of Trento, Trento, Italy.*
- 2013–2017 **Doctoral degree in Meteorology**, *Investigation of drizzle onset in liquid clouds using ground-based active and passive remote sensing instruments*, (research project implemented in the framework of EU Marie Curie Initial Training Network (FP7 - PEOPLE - 2011 - ITN) University of Cologne, Cologne, Germany.
Supervisor: Prof. Dr. Ulrich Löhnert
- 2009–2012 **Master Degree in Physics - specialization in Atmospheric Physics and Meteorology**, *University of Bologna, Bologna, Italy, (110 e lode/110).*
- 2003–2009 **Bachelor degree in Physics**, *University of Pisa, Pisa, Italy, (110/110).*
- 1998–2003 **High school Diploma**, *Liceo Scientifico F. Buonarroti, Pisa, Italy (100/100).*

Teaching/supervising experience

- Nov 2023 **Reviewer and associated editor activity**, *Associated editor AMD IS, Reviewer for Bulletin of Atmospheric Science and Technology, Geophysical research letters, Journal of advances in modeling earth systems, Journal of applied meteorology and climatology, Journal of geophysical research, Journal of the atmospheric sciences, Atmospheric measurement techniques..*
- 2021- 2023 **Master thesis supervisor**, *Labri, Giacomo (2021) Mesoscale Air-Sea interaction during the EUREC4A campaign: case studies analysis, University of Bologna, Michelle Porth, Lennea Hayo, in progress, University of Cologne .*
- June 2019 **Training on PAMTRA**, *1 day training workshop on the Passive and Active Microwave radiative TRANSfer model (PAMTRA), University of Leipzig, Germany.*

2016-2017 and 2018-2019 **Teaching assistant**, *Cloud physics course, master degree in Meteorology*, course held by Prof. Susanne Crewell, University of Cologne, Germany.

Leadership experience

- May 2023 **Co-Convener of the session "Advancing understanding of the coupling between clouds, convection and circulation "** at the **European Geosciences Union (EGU) General Assembly, Wien 2023**.
- May 2022 **Convener of the session "Profiling the atmospheric boundary layer (ABL): from harmonised measurement networks to multidisciplinary applications"** at the **European Geosciences Union (EGU) General Assembly, Wien 2022**.
- May 2021 **Co-convener of the session "Advancing understanding of the coupling between clouds, convection and circulation"** at the **European Geosciences Union (EGU) General Assembly, Wien 2021**.
- May 2020 **Co-convener of the session "Advancing understanding of the coupling between clouds, convection and circulation"** at the **European Geosciences Union (EGU) General Assembly, Wien 2020**.
- 2018–2019 **Coordinator of cloud section of a HD(CP)² project publication**, *Paper submitted to the Journal of the Meteorological Society of Japan and awarded as outstanding paper from the Journal of the Meteorological Society of Japan*.
- 2019 **Member of the directive committee of the association "Forum Accademico Italiano"(FAI), responsible person for "Young academy" .**
- 2016 **Group leader in production of short movie [Climate Change](#)**.
- 2014–2015 **Experiment leader in various events involving school kids**, (*'Taste Natural Sciences' for school girls, September 26, 2014, University of Cologne, Germany and 'Schnupperuni 2015' for school girls, October 03, 2015, University of Cologne, Germany*).
- 2015 **Active participation in enhancement of Wikipedia article on [Millimeter cloud radars](#) .**

Awards

- 2019, May **Best poster price**, *International Symposium on Tropospheric profiling (ISTP)*, Toulouse, France.
- 2019, March **Research award [Reinhard-Süring-Stiftung 2019](#) for the PhD dissertation 'Investigation of drizzle onset in liquid clouds using ground-based active and passive remote sensing instruments'**, *Garmisch-Partenkirchen, Germany (DE), DACH Conference*.
- 2018 **Award for excellent teaching conferred by the students of the Institute for Geophysics and Meteorology for the winter term of 2017/2018**.

Skills

Languages	Italian (native), English (fluent), Spanish (fluent), German (intermediate), French (basic)
Programming	PYTHON, IDL, SHELL, FORTRAN, MATLAB
Software	LATEX, MS WORD, MS EXCEL, MS POWERPOINT, JOOMLA, YOOTHEME
Editing	ADOBE PREMIERE PRO, ADOBE PHOTOSHOP, ADOBE LIGHTROOM, CANVA

- Science communication
- creator of outreach [video](#) for the Maria S. Merian research vessel during the EUREC4A campaign, June 2021, Cologne (DE)
 - creator of outreach [videos](#) for PROBE COST action, 2020 to present
 - participation in Soap Box Science [event](#) for promoting the visibility of women in science, 22 June 2019, Berlin (DE)
 - organizer of "Science at the pub" [event](#), 30th November 2017, Cologne (DE)

Selected presentations

- 25 May 2023, **Invited Talk**, *University of Trento (Italy): What did we learn with the EUREC4A dataset? A look at clouds and precipitation in the Tropics.* [Link to the presentation](#)
- 12 May 2023, **Invited Talk, GSGS conference**, *University of Cologne (Germany): What makes a weather event become extreme? Chatting about how extreme events form and the challenges we face in modelling and forecasting.* [Link to the presentation](#)
- 26 April 2022, **Invited Talk**, *University of Pisa (Italy): Diverse application of ground-based remote sensing with cloud radars: from investigating impact of cold SST patches on the atmosphere to detecting onset of precipitation in the clouds.*
- May 2019, **Talk, International Symposium on Tropospheric Profiling (ISTP-2019)**, *Toulouse (France): A new criterion to detect drizzle detection from ground-based: a potential new tool for model evaluation.*
- June 2017, **Invited talk, Colloquium - University of Leipzig**, *Leipzig (Germany): Boundary layer cloud life-cycle in ICON-LEM and ground-based observations*
- May 2017, **Talk, National Oceanographic Atmospheric Agency (NOAA)**, *Boulder (US): Evaluation of boundary layer types using a new boundary layer classification developed at JOYCE.*
- May 2017, **Talk, International Symposium on Tropospheric Profiling (ISTP-2017)**, *Fort Collins (US): Developing an advanced categorization scheme for drizzle detection using ground-based observations.*
- July 2016, **Talk, International Conference on Clouds and Precipitation (ICCP)**, *Manchester (UK): Developing an advanced categorization scheme for drizzle detection using ground-based observations.*