

# Claudia Acquistapace

## Curriculum Vitae

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

### In a nutshell

I am a perseverant and creative scientist interested in the microphysical processes of warm clouds, like boundary layer clouds. In particular, I focus on the ground-based observations of processes, 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. I am deeply convinced about the usefulness of teamwork, and I love communicating science to the society.

### Education

- 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.
- 2009–2012 **Master Degree in Physics - specialization in Atmospheric Physics and Meteorology**, University of Bologna, Bologna, Italy, (110 e lode/110).
- 2003–2009 **Batchelor degree in Physics**, University of Pisa, Pisa, Italy, (110/110).
- 1998–2003 **High school Diploma**, Liceo Scientifico F. Buonarroti, Pisa, Italy (100/100).

### Professional Experience

- 2019– present **Science communication manager of CA18235 - PROfiling the atmospheric Bound-ary layer at European scale (PROBE) COST action.**
- 2017–present **Post-Doctoral researcher (HD(CP)<sup>2</sup> 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, July **Submitted proposal to Deutsche Forschungsgemeinschaft (DFG) for individual grant**, *"Precipitation life cycle in trade wind cumuli"*.
- 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.

- 2018, **Submitted proposal for ESA-Living planet fellowship 2018**, *Monitoring aerosol-cloud interactions in continental clouds using a multi-platform approach*.  
February
- 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.

## Teaching experience

- June 2019 **Training on PAMTRA**, *1 day training workshop on the Passive and Active Microwave radiative TRAnsfer model (PAMTRA)*, University of Leipzig, Germany.
- 2018-2019 **Assistant**, *Cloud physics course, master degree in Meteorology*, course held by Prof. Susanne Crewell, University of Cologne, Germany.
- 2016–2017 **Assistant**, *Cloud physics course, master degree in Meteorology*, course held by Prof. Susanne Crewell, University of Cologne, Germany.

## Leadership experience

- 2018–2019 **Coordinator of cloud section of a HD(CP)<sup>2</sup> project publication**, *Paper submitted to the Journal of the Meteorological Society of Japan*.
- 2019 **Membro del direttivo dell'associazione "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 award price**, *International Symposium on Tropospheric profiling (ISTP)*, Toulouse, France.
- 2019, March **Reinhard-Süring-Stiftung Forschungpreis 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

- Science communication
- participation in Soap Box Science Event, 22 June 2019, Berlin (DE) <http://soapboxscience.org/soapbox-science-2019-berlin/>
  - organizer of "Science at the pub" Event, 30th November 2017, Cologne (DE) (<https://www.youtube.com/watch?v=vfy0yD4ONdA>)

## Publications

- accepted, in print by the Journal of the Meteorological Society of Japan), Stevens et al., 2019: Large-eddy and Storm Resolving Models for Climate Prediction – The Added Value for Clouds and Precipitation (doi:10.2151/jmsj. 2020-021)
- (under review to the Atmospheric Chemistry and Physics), Costa Suros et al., 2019: Detection and attribution of aerosol-cloud interactions in large-domain large-eddy simulations with ICON <https://www.atmos-chem-phys-discuss.net/acp-2019-850/>
- (in preparation), **C.Acquistapace** et al., 2019, JAMES: Boundary layer cloud life cycle in ICON-LEM and ground-based observations.
- **Acquistapace, C.**, U. Löhnert, M. Maahn, and P. Kollias, 2019: A New Criterion to Improve Operational Drizzle Detection with Ground-Based Remote Sensing. J. Atmos. Oceanic Technol., 36, 781 – 801, <https://doi.org/10.1175/JTECH-D-18-0158.1>
- **Acquistapace, C.**, Kneifel, S., Löhnert, U., Kollias, P., Maahn, M., and Bauer-Pfundstein, M.: Optimizing observations of drizzle onset with millimeter-wavelength radars, Atmos. Meas. Tech., 10, 1783 – 1802, <https://doi.org/10.5194/amt-10-1783-2017>, 2017.
- Löhnert, U., J.H. Schween, **C. Acquistapace**, K. Ebell, M. Maahn, M. Barrera-Verdejo, A. Hirsikko, B. Bohn, A. Knaps, E. O'Connor, C. Simmer, A. Wahner, and S. Crewell, 2015: JOYCE: Jülich Observatory for Cloud Evolution. Bull. Amer. Meteor. Soc., 96, 1157 – 1174, <https://doi.org/10.1175/BAMS-D-14-00105.1>

## Selected presentations

- Invited talk - June 2017, **Colloquium - University of Leipzig, Leipzig (Germany):** *Boundary layer cloud life-cycle in ICON-LEM and ground-based observations*
- Talk - May 2019, **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.*
- Invited talk - May 2017, **National Oceanographic Atmospheric Agency (NOAA), Boulder (US):** *Evaluation of boundary layer types using a new boundary layer classification developed at JOYCE.*
- Talk - May 2017, **International Symposium on Tropospheric Profiling (ISTP-2017), Fort Collins (US):** *Developing an advanced categorization scheme for drizzle detection using ground-based observations.*
- Talk - July 2016, **International Conference on Clouds and Precipitation (ICCP), Manchester (UK):** *Developing an advanced categorization scheme for drizzle detection using ground-based observations.*