

# Curriculum Vitae - Dr. Claudia Christine Stephan

## Personal data:

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## Academic career:

05/2019 – present: Group Leader

Max Planck Institute for Meteorology, Hamburg

I was awarded a Minerva Fast Track position by the Max Planck Society and am now leading the group Cloud-Wave Coupling.

05/2018 – 04/2019: Postdoctoral Scientist

Max Planck Institute for Meteorology, Hamburg

I was working on the GWING project (Gravity Wave INteractions in the Global atmosphere), where I ran the upper-atmosphere extension of the atmospheric general circulation model ICON (UA-ICON). By combining observations, UA-ICON simulations and high-resolution global simulations, I investigated the impact of gravity waves on weather and climate, and the relevance of gravity wave features that are neglected in classical parameterizations.

01/2016 – 05/2018: Postdoctoral Scientist

National Centre for Atmospheric Science, Climate Division,  
University of Reading, Reading, UK

I worked on the project ‘Drivers of Regional East Asian Monsoon variability’ as part of a large collaboration between the UK and China. I investigated the drivers of precipitation variability over China on daily to decadal timescales. Furthermore, I tested how well MetUM simulations are able to reproduce observed variability and associated mechanisms.

2011-2015:

PhD Student

University of Colorado, Department of Atmospheric and Oceanic Sciences, Boulder, Colorado. Dissertation: November 2015

Title: Improving the realism of gravity waves generated by convection in numerical models

The main focus of my work with Dr. M. Joan Alexander (NorthWest Research Associates, Boulder) was on convection and small-scale atmospheric gravity waves. I ran and developed the NCAR Weather Research and Forecasting model (WRF) with the goal to improve the representation of sub-grid-scale processes in global models.

2007-2011:

Study of physics and meteorology

Rheinische Friedrich-Wilhelms University, Bonn, Germany

In earned a diploma with distinction in theoretical physics (2011) with a specialization in string theory and mathematical physics. Thesis title: Phenomenological Aspects of Local F-Theory Models, supervised by Prof. Hans Peter Nilles under a scholarship from the Bonn-Cologne Graduate School of Physics and Astronomy.

In addition to my diploma in physics I completed all classwork required for a diploma in meteorology. I first enrolled in meteorology and later added physics as a second major. Instead of writing a second diploma thesis in meteorology. I decided to transfer my credits to the atmospheric science program at the University of Colorado in Boulder, to use them towards a doctoral degree.

## Academic experience:

- 2017: Supervisor of a MSc thesis titled “Precursors and predictability of weather patterns associated with wintertime rainfall in China”
- 2015: Teacher of the laboratory class "Fluid Dynamics of the Atmosphere and Oceans”
- 2012 – 2015: Research Assistant, NorthWest Research Associates, Boulder
- 2011 – 20012: Teaching Assistant, University of Colorado, Boulder. Lectures and review sessions for the class “Severe and Hazardous Weather”. Teacher for undergraduate laboratory classes.
- 2010 – 2011: Teaching Assistant, Physics Institute, Bonn, Advanced theoretical particle physics
- 2007 – 2008: Teaching Assistant, Meteorological Institute, Bonn, Synoptic meteorology
- 2006: Field Project, Black Forest Region, Germany, Convective and Orographically-induced Precipitation Study.

## Selected conferences and academic visits:

- 17th Conference on the Middle Atmosphere, *Newport*, 2013: talk
- SPARC General Assembly, *Queenstown*, 2014: poster
- Atmospheric Composition and Convection Workshop, JPL, *Pasadena*, 2014: attended
- AMS annual meeting, *Phoenix*, 2015: talk
- AMS AOFD, *Minneapolis*, 2015: talk
- SPARC Workshop on Storm Tracks, *Grindelwald*, 2015: talk
- University of North Dakota, *Grand Forks*, 2015: invited colloquium and 7-day research visit
- University of Reading, *Reading, UK*, December 2015: invited colloquium
- New York University, *New York City*, December 2015: invited colloquium
- AGU annual meeting, *San Francisco*, December 2015: talk
- Gravity wave symposium, *Pennsylvania*, May 2016: invited talk
- CLIVAR conference, *Qingdao, China*, September 2016: poster
- Met Office, *Exeter*, December, 2016: invited talk
- IAP, *Beijing*, March, 2017: invited colloquium
- CSSP workshop, Met Office, *Exeter*, March 2017: talk
- NCAS Climate Modeling Summer School, *Cambridge*, September 2017: invited lecture
- AGU annual meeting, *New Orleans*, December 2017: talk
- Max Planck Institute, *Hamburg*, March, 2018 invited seminar
- Institute for Atmospheric Physics, *Kuehlungsborn*, June, 2018: invited seminar
- Departmental Seminar, University of Frankfurt, *Frankfurt*, February, 2019: invited colloquium
- MS-Gwaves conference, IAP *Kuehlungsborn*, March, 2019: talk

EGU, *Vienna*, April, 2019: invited talk and poster  
DLR, *Munich*, May, 2019: invited seminar