University of Cologne

Institute for Geophysics and Meteorology
Pohligstr. 3, D-50969 Cologne
Tel: +49 (0)221 470 5286
Email: crewell@meteo.uni-koeln.de
Website: www.geomet.uni-koeln.de/crewell

Prof. Dr. Susanne Crewell

*1964

Areas of interest

Observation of atmospheric water cycle variables

Microwave remote sensing: Instrumentation and Methods

Sensor synergy of ground, air- and satellite-borne observations

Representation of clouds and precipitation in atmospheric models

Degrees

2002	Habilitation in Meteorology, University of Bonn, Germany
1993	PhD in Physics, University of Bremen, Germany
1990	Diploma in Meteorology, University of Kiel, Germany

Experience

2006 – present	Professor of Meteorology, University of Cologne, Germany
2004 – 2006	Professor of Experimental Meteorology, University of Munich, Germany
1996 – 2004	Assistant Professor, University of Bonn, Germany
1994 – 1996	Research Associate, State University of New York, Stony Brook, USA
1993 – 1994	Postdoc, University of Bremen, Germany

Selected community services

2014 – present	Member of the Senate Committee on Collaborative Research Centres, German National Science Foundation DFG
2014 – present	Joint ESA-EUMETSAT Microwave Imager & Ice Cloud Imager Science Advisory Group
2013 – present	Member of Academy of Sciences, Humanities and the Arts North Rhine Westphalia
2012 – present	Member of Senate Commission, Helmholtz Association
2012 – present	Member of the Scientific Advisory Board, German Weather Service DWD
2007 – 2014	Elected Member of Review Board for Atmospheric Science and Oceanography, National Science Foundation DFG
2011 – 2014	Member of Senate Commission on Water Research, German Research Foundation, DFG
2006 – 2012	Member of Scientific Advisory Board, Leibniz Institute for Tropospheric Research Leipzig TROPOS
2008 – 2010	Board Member of Atmospheric Climate Research Facility, US Department of Energy Radiation Measurement (ARM)

Selected publications

for complete list see ResearcherID O-1640-2013

Corbetta, G., T. Heus, R. Neggers, E. Orlandi, **S. Crewell**, 2015: Overlap statistics of shallow boundary layer clouds: comparing ground-based observations with large-eddy simulations, *Geophys. Res. Lett.* doi:10.1002/2015GL065140.

Eikenberg, S., C. Köhler, A. Seifert, **S. Crewell**, 2015: How microphysical choices affect simulated infrared brightness temperatures, *Atmospheric Research*, 156, 67–79, doi:10.1016/j.atmosres.2014.12.010.

Ebell, K., E. Orlandi, A. Hünerbein, U. Löhnert, **S. Crewell**, 2013: Combining ground and satellite based measurements in the atm. state retrieval: Assessment of the information content, *J. Geophys. Res*., doi:10.1002/jgrd.50548.

Reitter, S., K. Fröhlich, A. Seifert, **S. Crewell**, M. Mech, 2011: Evaluation of ice and snow content in the global numerical weather prediction model GME with CloudSat, *Geosci. Model Dev*., doi:10.5194/gmd-4-579-2011.

Crewell, S., K. Ebell, U. Löhnert, and D.D. Turner, 2009: Can liquid water profiles be retrieved from passive microwave zenith observations? *Geophys. Res. Lett*., doi: 10.1029/2008GL036934.

Rose, T. **S. Crewell**, U. Lohnert, and C. Simmer, 2005: A network suitable microwave radiometer for operational monitoring of the cloudy atmosphere, Atmospheric Research, 75(3), doi: 10.1016/j.atmosres.2004.12.005

Selected projects

2016 - 2019 TR172 – Collaborative Research Center “Arctic Amplification: Climate Relevant Atmospheric and Surface Processes, and Feedback Mechanisms $(AC)^3$”, Deputy Speaker, Cluster Speaker E, German Science Foundation DFG

2014 – 2017 ET-CC – Emerging Group: Energy Transition and Climate Change, German Excellence Initiative

2012 – 2016 ITaRS – Marie Curie “Initial Training Network for Atmospheric Remote Sensing”, European Union, Coordinator

2012 – 2019 $HD(CP)^2$ – “High Definition of Clouds and Precipitation for Climate Prediction”, German Science Ministry BMBF

2012 – 2013 “Use of Spectral Information at Microwave Region for Numerical Weather Prediction”, European Space Agency ESA

2011 – 2018 Hans-Ertel Zentrum HErZ – “Retrospective Analysis of regional climate”, German Weather Service DWD

2007 – 2018 TR32 – Collaborative Research Center “Patterns in the Soil-Atmosphere-Vegetation System: Monitoring, Modelling and Data Assimilation”, PI D2 and IRTG, German Science Foundation DFG

2010 – 2013 HAMP – “Using the HALO Microwave Package for cloud and precipitation research”, German Science Foundation DFG

2010 – 2012 AWARDS – “Advanced microWAve Radiometers in Deep space Stations”, European Space Agency ESA-ESTEC