

Education

- 1989 Diploma in Physics, University of Wuppertal
- 1994 PhD in Physics, University of Wuppertal
Thesis title: Das CRISTA-Meßsystem: Struktur und Anwendungen
- 2001 Habilitation in Physics, University of Wuppertal
Thesis title: Remote Sensing and Modelling of the Earth's Middle
Atmosphere: Results of the CRISTA Experiment
- 1997 - 1998 Visiting Scientist, National Center for Atmospheric Research
(NCAR), Boulder, Colorado (12 months)

Professional Positions

- 2002-2010 Director of Institute of Chemistry and Dynamics of the Geosphere
(ICG-1), Forschungszentrum Jülich GmbH
- Since 2010 Director of Institute of Energy and Climate Research (IEK-7),
Forschungszentrum Jülich GmbH
- Since April 2003 Professor (C4) for Atmospheric Physics,
Faculty for Mathematics and Natural Science, University of Wuppertal

Committees and Boards

- Since 2016 Review Board for Atmosphere, Ocean, and Climate, German Science
Foundation (DFG), Elected Member
- 2012 - 2016 Review Board for Atmosphere and Ocean, German Science Foundation
(DFG), Elected Member
- Since 2014 Scientific Steering Committee, High Altitude and Long Range
Research Aircraft (HALO), Member
- 2014-2017 Steering Committee of Helmholtz Research Area "Earth and
Environment", Permanent Guest
- Since 2017 Management Board of Helmholtz Research Area "Earth and
Environment"; Permanent Guest
- 2006-2013 Board of Trustees of Leibniz-Institute for Atmospheric Physics,
Kühlungsborn, Germany, Member
- Since 2014 Board of Directors, Institute for Atmosphere and Environmental
Research at University of Wuppertal, Member
- Since 2015 Copernicus Medal Award Committee, Member

Scientific Advisory/Review Boards

2016, 2018	ESA Scientific Peer Review Panels for Earth Explorer Missions
2015	Chair, Scientific Evaluation Board, DLR Institute for Physics of the Atmosphere (IPA), Oberpfaffenhofen
2015	Review Board of Evaluation of the Leibniz Institute for Tropospheric Research (TROPOS), Member
2006-2014	Chair, Scientific Advisory Board of Leibniz-Institute for Atmospheric Physics, Kühlungsborn
2006	Scientific Advisory Board for Program ATMO at Karlsruhe Institute for Technology (KIT), Member

Scientific Leadership

Since 2018	Mission Advisory Group of ESA´s Earth Explorer candidate FORUM (EE-10), Member
Since 2017	Scientific Coordinator, HALO mission WISE
Since 2017	Scientific Co-Coordinator, HALO mission SouthTRAC-Dyn
Since 2015	Group Leader, Helmholtz – Chinese Academy of Science (CAS) Joint Research Group “Climatological impact of increasing anthropogenic emissions over Asia”
2006-2009	Mission Assessment Group of ESA´s Earth Explorer candidate PREMIER (EE-7), Member
2009-2013	Mission Advisory Group of ESA´s Earth Explorer candidate PREMIER (EE-7), Member
2010-2011	Coordinator, PREMIER science impact study

Helmholtz-Association

2004-2008	Spokesman, Topic „Stratosphere and Tropopause Region in a Changing Climate“, Helmholtz-program „Atmosphere and Climate“.
2009-2013	Spokesman, Topic „Composition and Dynamics of the Upper Troposphere and Stratosphere“, Helmholtz-program „Atmosphere and Climate“.
Since 2014	Spokesman, Topic „Composition and Dynamics of the Upper Troposphere and Middle Atmosphere“, Helmholtz program “Atmosphere and Climate”.
Since 2014	Deputy-Spokesman, Helmholtz-program „Atmosphere and Climate“
2004-2009	Spokesman Virtual Helmholtz-institute „Centre Tropical Tropopause“
2007-2012	Spokesman, Topic “Chemistry and Dynamics of the Atmosphere“, Helmholtz-network EOS (Earth Observation System)

2010	Steering Committee, Portfolio-Process of Helmholtz Research Area „Earth and Environment“, Member
Since 2013	Spokesman of Forschungszentrum Jülich for Earth System Knowledge Platform (ESKP)

Community Service:

Since 2008	Guest-Editor, EGU-Journal “Atmospheric Measurement Techniques”
1996, 2000	Editor, Advances in Space Research
2010,	DACH conference, Bonn, Organization panel
2013	ESA Living Planet Symposium, Edinburgh, Organization panel
2014, 2018	COSPAR conference, Deputy-Organizer (Moscow, Pasadena)
2016	ESA ATMOS Conference, Iraklion, Organization panel
2010, 2014, 2018	Reviewer „WMO Scientific Assessment of Ozone Depletion“
	Reviewer for international journals and funding agencies (EU, USA, UK, Sweden, Belgium, Netherlands, India ...)
	Reviewer for national funding agencies (DFG, Humboldt, BMBF, Helmholtz ...)

Memberships

German Physical Society (DPG)

American Geophysical Union (AGU)

Development Association, Rhenish Institute for Environmental Research (RIU) at University of Cologne

Awards

1994, 1997	ASTRO-SPAS Award of German Space Agency (DARA)
1994	ATLAS-3 Award of National Aeronautics and Space Administration (NASA)

Current Research Interest

- Role of the atmosphere in the climate system
- Transport of atmospheric trace gases
- Satellite and aircraft instrumentation
- Infrared limb-sounding of the atmosphere

Important Publications

Riese, M., et al.: Gimballed Limb Observer for Radiance Imaging of the Atmosphere (GLORIA) scientific objectives, *Atmospheric Measurement. Techniques*, 7, 1915-1928, doi:10.5194/amt-7-1915-2014, 2014.

Riese, M., Ploeger, F., Rap, A., Vogel, B., Konopka, P., Dameris, M., Forster, P., Impact of uncertainties in atmospheric mixing on simulated UTLS composition and related radiative effects, *Journal of Geophysical Research-Atmospheres*, 117, 10.1029/2012JD017751, 2012.

Ern, M., Preusse, P., Gille, J.C., Hepplewhite, C.L., Mlynczak, M.G., Russell III, J.C., and Riese, M., Implications for atmospheric dynamics derived from global observations of gravity wave momentum flux in stratosphere and mesosphere, *Journal of Geophysical Research-Atmospheres*, 116, 10.1029/2011JD015821, 2011

Riese, M., Spang, R., Preusse, P., Ern, M., Jarisch, M., Offermann, D., Grossmann, K. U., Cryogenic Infrared Spectrometers and Telescopes for the Atmosphere (CRISTA) data processing and atmospheric temperature and trace gas retrieval, *Journal of Geophysical Research*, 104(D13), 16,349-16,367, 1999.

Summers, M.E., Conway, R. R., Siskind, D.E., Stevens, M.H., Offermann, D., Riese, M., Preusse, P., Strobel, D.F., Russell III, J.M., Implication of satellite OH observations for middle atmospheric H₂O and ozone, *Science*, 277(5334), 1967-1970, 1997.

ResearcherID: A-3927-2013

(~ 130 peer reviewed publications)