Curriculum Vitae Volker Wulfmeyer

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Academic Record and Professional Experience

2001 - today	Full University Professor and Executive Director of the Institute of Physics and Meteorology, University of Hohenheim, Stuttgart, Germany (C4)
2000	Qualification to give lectures at a German university (Venia Legendi)
1999	Qualification to apply for a German professorship (Habilitation)
1999 - 2000	Head of the Lidar Research Group at the National Center for Atmospheric Research (NCAR) in Boulder, CO, USA
1996 - 1999	Research Fellowship at NCAR and the National Oceanic and Atmospheric Administration (NOAA) in Boulder, CO, USA
1995 - 1996	Postdoc at the Meteorological Institute of the University of Hamburg, Germany
1991 - 1995	Post-graduate studies at the Max-Planck-Institute for Meteorology and the University of Hamburg, PhD thesis with the grade "summa cum laude"
1991	Graduation (Diploma) in Physics at the Georg-August-University, diploma thesis written at the Max Planck Institute for Fluid Dynamics, Göttingen, Germany

Awards, Prizes, and Selected Grants

May 2022	EU Patent No. EP3909659 "Use of an apparatus and method for obtaining fresh water"
April 2020	Appointment as member of the Global Energy and Water Exchanges (GEWEX) Global Land/Atmosphere System Study (GLASS) Panel of WCRP
Summer 2020, 2018	Nomination of Prof. Wulfmeyer for the Landesforschungspreis Baden-Württemberg by the University of Hohenheim
May 2017	Appointment as Principal Investigator and Research Grant of the US Atmospheric Radiation Measurement (ARM) Program, the National Aeronautics and Space Administration (NASA), NOAA, USA, and BMBF, Germany, for the Land-Atmosphere Feedback Experiment (LAFE)
August 2016	Grant of the Carl Zeiss Foundation for the Land Atmosphere Feedback Observatory of the University of Hohenheim
January 2016	First Cycle Award of the United Arab Emirates Research Program for Rain Enhancement Science (UAEREP)
Summer 2013	Visiting Fellows Award of the Cooperative Institute for Research in Environmental Sciences (CIRES), Boulder, CO, USA
2011	Member of the Heidelberg Academy of Sciences and Humanities as the first representative of the University of Hohenheim
2003 - 2006	NCAR Affiliate Scientist
2003	US Patent 6,633,596, Frequency stable pulsed laser
1996 - 2000	Feodor-Lynen Scholarship of the Alexander von Humboldt Foundation (AvH)
1996	Award of the German Meteorological Society for the "Best Meteorological Application of a Lidar System", International Laser Radar Conference, Berlin
1994	German Gebrauchsmuster G9410659.2, variable attenuator for lidar signals

Supervision and teaching

- Head and organizer of the first transdisciplinary M.Sc. Study Program on "Earth and Climate System Science" in Germany at the University of Hohenheim, founded in winter semester 2010/2011
- Many B.Sc. classes in basic physics, various B.Sc. and M.Sc. modules in meteorology, climatology, and remote sensing at the University of Hohenheim
- Supervision of 1 habilitation, 25 PhD, 29 M.Sc., 23 B.Sc., and 8 diploma theses

Academic Services and Synergistic Activities

- Steering Committee of the **High-Performance Computing Center** (HLRS, www.hlrs.de), Stuttgart, Germany, since 06/2022
- Foundation of the **Working Group "Climate Crisis"** at the Heidelberg Academy of Sciences (see https://hadw-bw.de/sites/default/files/documents/Athene_2-2022.pdf), since 04/2022
- Global Energy and Water Exchanges (GEWEX) **Global Land/Atmosphere System Study (GLASS) Panel** of the World Climate Research Program (WCRP), since 04/2020 (see www.gewex.org/panels/global-landatmosphere-system-study-panel)
- *Representative* of the University of Hohenheim in the **Deutsches Klimakonsortium** (DKK, see www.deutsches-klima-konsortium.de), since 01/2017
- *Local Coupling (LoCo) Working Group* of the **Global Land/Atmosphere System Study (GLASS)** of the **World Climate Research Program (WCRP)** since 10/2016
- *Chair* of the Awardees of the **UAE Research Program for Rain Enhancement Science (UAEREP)**, 2018-2019
- *Scientific Task Group (STG)* on *Impact and Improvement of Planetary Boundary Layer Retrieval from Space* of **NASA**, USA, 2016-2018
- *Steering Committee* of the **Research Training Group "Water-People-Agriculture"** at the University of Hohenheim, since 2013
- *Scientific Advisory Board* of the **Terrestrial Environmental Observatories (TERENO)** of the **Helmholtz Association** in Germany, 2008-2018
- *Science Steering Committee* of the **Tokyo Metropolitan Area Convection Study for Extreme Weather Resilient Cities** of the **World Weather Research Program (WWRP)**, 2013-2016
- *Executive Board* of the **Competence Center "Water – Earth System Science (WESS)"** of the Universities Tübingen, Stuttgart, and Hohenheim as well as the Helmholtz Center for Environmental Research, Leipzig, Germany, 2010-2015
- *Editor* of the QPF Special Issues 1 and 2, Meteorol. Z. 2008, 2011; COPS Special Issues of the Q. J. R. Meteorol. Soc. 2011 and Meteorol. Z. 2013
- *Editor-in-Chief* of the **Meteorologische Zeitschrift**, 2007-2013
- *Chairman* and *organizer* of various sessions at conferences such as the Third International Conference on QPE/QPF and Hydrology of WWRP, Nanjing, China, 2010; COPS Session at the EGU General Assembly 2012, LA Feedback Session at EGU 2016, 2018
- **WWRP** *Working Group on Mesoscale Weather Forecasting Research*, 2007-2015
- *Chair of the International Science Steering Committee* of the **Convective and Orographically-induced Precipitation Study (COPS)**, a **Research and Development Project** of **WWRP**, 2004-2010
- *Scientific Advisory Committee* of the **German Meteorological Service (DWD)**, 2003-2011
- **EUMETSAT** *Application Expert Group* for Atmospheric Sounding and Wind Profiling, 2006
- *Steering Committee* of the **German Research Foundation (DFG) Priority Program 1167** „Quantitative Precipitation Forecasting", 06/01-03/09
- *Mission Advisory Group* of the **Water Vapour Lidar Experiment in Space (WALES)** Earth Explorer Mission of the **European Space Agency (ESA)**, 2001-2004
- *Committee on Laser Atmospheric Studies* of the **American Meteorological Society**, 1999-2001
- Reviewer of key journals in atmospheric sciences as well as MPG, DFG, BMBF, ARM, NSF, NERC UK
- Member of the European Geophysical Union, the German Meteorological Society, the American Meteorological Society, and the German Physical Society

10 Selected Publications (Scopus, 17.03.2023, 217 Publications, 7366 citations, h-index 48)

Thundathil, R., T. Schwitalla, A. Behrendt, and **V. Wulfmeyer**, 2021: Impact of assimilating lidar water vapour and temperature profiles with a hybrid ensemble transform Kalman filter: Three-dimensional variational analysis on the convection-permitting scale. Q. J. Roy. Meteor. Soc. 147, 4163–4185, DOI:10.1002/qj.4173 (Impact Factor 7.2).

Warrach-Sagi, K., J. Ingwersen, T. Schwitalla, C. Troost, J. Aurbacher, L. Jach, T. Berger, T. Streck, and **V. Wulfmeyer**, 2022: Noah-MP with the generic crop growth model Gecros in the WRF model: Effects of dynamic crop growth on land-atmosphere interaction. J. Geophys. Res. Atmospheres, 127, e2022JD036518, DOI:10.1029/2022JD036518 (Impact Factor 5.2).

Schwitalla, T., K. Warrach-Sagi, **V. Wulfmeyer**, and M. Resch, 2020: Near-global-scale high-resolution seasonal simulations with WRF-Noah-MP v.3.8.1, Geosci. Model Dev. 13, 1959–1974, DOI:10.5194/gmd-13-1959-2020 (Impact Factor 6.9).

Davin, E.L., D. Rechid, M. Breil, R.M. Cardoso, E. Coppola, P. Hoffman, L.L. Jach, E. Katragkou, N. de Noblet-Ducoudré, K. Radke, M. Raffa, P.M.M. Soares, G. Sofiadis, S. Strada, G. Strandberg, M. H. Tölle, K. Warrach-Sagi, and **V. Wulfmeyer**, 2020: Biogeophysical impacts of forestation in Europe: First results from the LUCAS Regional Climate Model intercomparison. Earth Syst. Dyn. 11, 183–200, DOI:10.5194/esd-11-183-2020 (Impact Factor 5.5).

Branch, O., and **V. Wulfmeyer**, 2019: Can desert plantations enhance rainfall? P. Natl. Acad. Sci. 116 (38), 18841-18847, DOI:10.1073/pnas.1904754116 **(Impact Factor 12.8).**

Wulfmeyer, V., J.M.V. Pineda, S. Otte, M. Karlbauer, M.V. Butz, T.R. Lee, and V. Rajtschan, 2023: Estimation of the surface fluxes for heat and momentum in unstable conditions with machine learning and similarity approaches for the LAFE data set. Boundary-Layer Meteorol. 186, 337-371, DOI:10.1007/s10546-022-00761-2 (Impact Factor 3.5).

Wulfmeyer, V., and A. Behrendt, 2021: Raman Lidar for Water-Vapor and Temperature Profiling. In: Foken T (ed.), Chapter 25, Handbook of Atmospheric Measurements. Springer Nature, Switzerland, 719-739. DOI:10.1007/978-3-030-51171-4_25.

Wulfmeyer, V., D.D. Turner, B. Baker, R. Banta, A. Behrendt, T. Bonin, W.A. Brewer, M. Buban, A. Choukulkar, E. Dumas, R.M. Hardesty, T. Heus, J. Ingwersen, D. Lange, T. R. Lee, S. Metzendorf, S.K. Muppa, T. Meyers, R. Newsom, M. Osman, S. Raasch, J. Santanello, C. Senff, F. Späth, T. Wagner, T. Weckwerth, 2018: A new research approach for observing and characterizing land-atmosphere feedback. Bull. Amer. Meteorol. Soc. 99, 1639-1667, DOI:10.1175/BAMS-D-17-0009.1 (Impact Factor 8.8).

Wulfmeyer, V., S.K. Muppa, A. Behrendt, E. Hammann, F. Späth, Z. Sorbjan, D.D. Turner, and R.M. Hardesty, 2016: Determination of convective boundary layer entrainment fluxes, dissipation rates, and the molecular destruction of variances: Theoretical description and a strategy for its confirmation with a novel lidar system synergy. J. Atmos. Sci. 73, 667-692, DOI:10.1175/JAS-D-14-0392.1 (Impact Factor 3.2).

Wulfmeyer, V., R.M. Hardesty, D.D. Turner, A. Behrendt, M.P. Cadeddu, P. Di Girolamo, P. Schlüssel, J. Van Baelen, and F. Zus, 2015: A review of the remote sensing of lower-tropospheric thermodynamic profiles and its indispensable role for the understanding and the simulation of water and energy cycles. Rev. Geophys. 53, 819–895, DOI:10.1002/2014RG000476 **(Impact Factor 22).**