

# Curriculum vitæ

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## Employment record

- 11/2010 – Postdoc researcher, pre-doctoral university assistant, Department of Meteorology and Geophysics, University of Vienna, Austria
- 11/2015 – Employee, MET Development & Consulting, MeteoServe Wetterdienst / Austro Control GmbH
- 08–09/2010 Research trainee, Subdivision of Fluid Mechanics, Department of Mathematics, University of Oslo, Norway
- 01–06/2010 Project staff, Institute for Theoretical Physics, Vienna University of Technology (TU Vienna), Austria

## Education

- 2010 – 2015 Doctoral studies in Meteorology at the University of Vienna. Thesis title: *Mountain-wave-induced rotors and low-level turbulence: new insights from remote-sensing observations and numerical simulations*. Supervisor: Prof. Vanda Grubišić
- 2004 – 2009 Studies in Physics at the Vienna University of Technology. Diploma thesis title: *Vibrations and diffusion in colloidal cluster crystals*. Supervisor: Prof. Gerhard Kahl
- 1995 – 2003 High school. Final exams in Physics, French, and Latin.

## Visits and stays

- 08/2014, 08/2013, 07–08/2012 Visitor, Earth Observing Laboratory (EOL), National Center for Atmospheric Research (NCAR), Boulder, Colorado
- 06/2009 Visitor, Centre for Computational Chemistry, University of Cambridge, UK
- 02–07/2008 Exchange student, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland

## Workshops & schools

- 09/2015      *Weather Research and Forecasting (WRF) Model Tutorial and Workshop*, National Centre for Atmospheric Science, Chester, UK
- 10/2012      *Bridging the gap between atmospheric scales*, Wageningen University, NL
- 04/2011      *Parametrization of subgrid-scale physical processes*, European Centre for Medium-Range Weather Forecast (ECMWF), Reading, UK

## Teaching experience

- 2012 –        Supervision of Bachelor and Master students (M. Wind, R. Mühlgassner, M. Hornbogner, C. Weiß, L. Kugler), University of Vienna
- 2011 – 2016    Exercise classes in *Thermodynamics of the Atmosphere* und *Dynamics of the Atmosphere III*, University of Vienna
- 2007 – 2008    Tutor in *Quantum Theory* and *Mathematical Methods in Theoretical Physics*, TU Vienna

## Awards

- 03/2016      *Promotio sub auspiciis Praesidentis rei publicae* (highest distinction for studies in Austria, awarded to five doctoral students at the University of Vienna in 2016)
- 11/2015      Award for *Best Poster* by the Austrian Meteorological Society, 6th Austrian Meteorology Day, Vienna, Austria
- 09/2015      *Second Best Student Poster Presentation*, at the 33rd International Conference on Alpine Meteorology (ICAM), Innsbruck, Austria
- 08/2014      *Best Student Poster Presentation Award* by the American Meteorological Society, 16th Conference on Mountain Meteorology, San Diego, California
- 04/2014      *Outstanding Student Poster Award* by the European Geosciences Union, EGU General Assembly, Vienna, Austria
- 08/2012      *Best Student Poster Presentation* by the American Meteorological Society, 15th Conference on Mountain Meteorology, Steamboat, Colorado

## Selected conference contributions and invited talks

- Strauss L., S. Serafin, M. Dorninger, and co-authors, 2018: Can we predict icing of structures and wind turbines reliably using high-resolution ensemble forecasts? European Meteorological Society (EMS) Annual Meeting 2018, Budapest, Hungary.
- Strauss L., S. Serafin, M. Dorninger, and co-authors, 2018: Verification of probabilistic forecasts of icing in Germany (winter 2016/17). Winterwind Conference 2018, Åre, Sweden.
- Strauss L., 2017: Turbulence in breaking mountain waves and low-level rotors. Invited talk at the German Aerospace Center (DLR), Oberpfaffenhofen, Germany.
- Strauss L., S. Serafin, V. Grubišić, 2015: Using Google Earth for visualization of meteorological data in complex terrain. Poster at the 33rd International Conference on Alpine Meteorology (ICAM), Innsbruck, Austria.

## Publications

- Serafin, S., L. Strauss, and V. Grubišić, 2017: Climatology of westerly wind events in the lee of the Sierra Nevada. *J. Appl. Meteor. Climatol.*, **56**, 1003–1023, doi:10.1175/JAMC-D-16-0244.1.
- Strauss, L., S. Serafin, and V. Grubišić, 2016: Atmospheric rotors and severe turbulence in a long deep valley. *J. Atmos. Sci.*, **73**, 1481–1506, doi:10.1175/JAS-D-15-0192.1.
- Strauss, L., S. Serafin, S. Haimov, and V. Grubišić, 2015: Turbulence in breaking mountain waves and atmospheric rotors estimated from airborne in situ and Doppler radar measurements. *Q.J.R. Meteorol. Soc.*, **141**, 3207–3225, doi:10.1002/qj.2604.
- Grubišić, V., S. Serafin, L. Strauss, S. Haimov, J. R. French, and L. Oolman, 2015: Wave-induced boundary-layer separation in the lee of the Medicine Bow Mountains. Part II: Numerical modeling. *J. Atmos. Sci.*, **72**, 4865–4884, doi:10.1175/JAS-D-14-0381.1.
- French, J. R., S. Haimov, L. Oolman, V. Grubišić, S. Serafin, and L. Strauss, 2015: Wave-induced boundary-layer separation in the lee of the Medicine Bow Mountains. Part I: Observations. *J. Atmos. Sci.*, **72**, 4845–4863, doi:10.1175/JAS-D-14-0376.1.
- Coslovich, D., L. Strauss, and G. Kahl, 2011: Hopping and microscopic dynamics of ultrasoft particles in cluster crystals. *Soft Matter*, **7**, 2127–2137, doi:10.1039/C0SM00545B.

## Manuscripts in review

- Serafin, S., L. Strauss, and M. Dorninger, 2018: Ensemble reduction using cluster analysis. In preparation for *Q.J.R. Meteorol. Soc.*

## Scientific analysis & programming skills

- Programming Python ●●●, Object-oriented programming ●●●, Unix shell scripting ●●○, Fortran ●●○, C/C++ ●○○, NCAR Command Language ●○○
- Numerical simulation Weather Research and Forecasting (WRF) Model ●●●, Cloud Model 1 (CM1) ●○○, ANSYS CFX (CFD software) ●○○
- Data analysis Wind turbine (SCADA) data, remote-sensing data (Doppler radars, lidars, wind profilers), in situ measurements (aircraft, flux towers); analysis of boundary-layer turbulence, spectral & wavelet analysis; forecast verification; statistical post-processing
- Applications L<sup>A</sup>T<sub>E</sub>X, Microsoft Office, Libre Office, Virtual Box, Adobe Acrobat Professional, Photoshop Elements, Lightroom, Google Earth
- Web TYPO3 CMS (<http://imgw.univie.ac.at/en/research/tm>)
- Operating systems Linux, Windows, Mac OS X

## **Languages**

- German Native
- English Fluent (C1)
- French Fluent (B1)
- Mandarin Chinese Basic knowledge (A1)

## **Hobbies and leisure activities**

- Music, ballroom and latin dancing
- Running, hiking, skiing
- Foreign languages, travelling