Curriculum vitæ

Lukas Strauss, Dr.
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Employment record

11/2015 –	Employee (part-time), MET Development & Innovation, MeteoServe Wetterdienst / Austro Control GmbH
11/2010 –	Pre-doctoral university assistant and project staff, Department of Meteorology and Geophysics, University of Vienna, Austria
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
09/2013	*Observations and experimental methods in an inhomogeneous atmosphere*, Inst. of Meteorology and Climate Research, Garmisch-Partenkirchen
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 students (M. Wind, R. Mühlgassner, A. Bergner, M. Hornbogner), University of Vienna
2011 –	Exercise classes in *Thermodynamics of the Atmosphere* und *Dynamics of the Atmosphere I/II*, 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 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

- 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.

- Strauss L., V. Grubišić, S. Serafin, R. Mühlgassner, 2014: Mountain wave-induced turbulence – "Lower Turbulent Zones" revisited. Poster at the EGU General Assembly, 2014, Vienna.

- Strauss L., S. Serafin, V. Grubišić, 2013: Terrain-induced turbulence: Insights gained from airborne in situ and remotely sensed data. Talk at the Aviation Turbulence Workshop. National Center for Atmospheric Research, Boulder, Colorado.

Publications

- 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 V. Grubišić, 2016: Climatology of westerly wind events in the lee of the Sierra Nevada. In review at *J. Appl. Meteor. Climatol.*.

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   Remotely-sensed data (Doppler radars, lidars, wind profilers), high-rate in situ measurements (aircraft, flux towers); analysis of boundary-layer turbulence, spectral analysis, wavelet analysis
- Applications   LaTeX, 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 (B2)
- Mandarin Chinese   Basic knowledge (A1)