

Lukas Kugler

Curriculum Vitae

Department of Meteorology and Geophysics, University of Vienna
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EDUCATION

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|-------------------|--|-----------------|
| 03/2020 - present | PhD Meteorology Candidate for PhD Department of Meteorology and Geophysics University of Vienna PhD topic: Data assimilation of cloud-affected satellite observations for convective-scale numerical weather prediction Supervisor: Prof. Martin Weissmann | Vienna, Austria |
| 10/2017 - 01/2020 | MSc Meteorology Department of Meteorology and Geophysics University of Vienna Defensio at January 20, 2020 MSc thesis topic: The Added Value of Machine Learning in Forecasting Wind Turbine Icing Supervisor: Ass.-Prof. Manfred Dorninger | Vienna, Austria |
| 10/2013 - 09/2017 | BSc Meteorology Department of Meteorology and Geophysics University of Vienna Thesis topic: Parameterizing the asphalt surface temperature (in German) Supervisor: Dr. Dieter Mayer | Vienna, Austria |
| 03/2013 - 12/2013 | Bachelor studies Economics Vienna University of Economics and Business Passed entry exams of Business administration, Economics, Mathematics, Business Law | Vienna, Austria |
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RELEVANT EXPERIENCE

- 03/2020 - present **University Assistant** Vienna, Austria
Department of Meteorology and Geophysics, University of Vienna
- Teaching thermodynamics, radiative transport, ...
- 09/2020 **Participant of the ESoWC challenge** Reading, UK
Team with Sebastian Lehner
Hosted by ECMWF, € 5000 grant by Copernicus-ECMWF
Hydrological forecasts using Machine Learning methods
The results were presented at
- the final project meeting at ECMWF HQ, (09/2019),
 - the workshop on building reproducible workflows for Earth sciences (10/2019)
 - the “1st Artificial Intelligence for Copernicus workshop“ (11/2019)
 - the Austrian meteorologists’ day (11/2019)
- 10/2017 - 08/2019 **Assistant Model Developer** Vienna, Austria
UBIMET GmbH (private weather service)
- Taking care of continuously running forecast models from a software and meteorological perspective
 - Experiments for improving the overall combination of used parametrizations and source-code development for the LSM parametrization
 - Developing data-driven blending methods of forecast models
 - Rewriting legacy code in python to improve the speed of execution
 - Providing code to handle large data volumes for the most used file formats in python for plotting, verification, analytics etc.

PUBLICATIONS

Kugler L. (2019): The Added Value of Machine Learning in Forecasting Wind Turbine Icing, MSc Thesis, University of Vienna, doi:10.25365/thesis.60595

CONFERENCE PRESENTATIONS

11/2019 1st Artificial Intelligence for Copernicus workshop
Talk: Machine learning techniques for high-impact-weather (flood forecasts)

TEACHING

Summer ‘21, ‘22 Teaching assistant for Physical Concepts, University of Vienna

IT SKILLS

- **Languages:** German (native), English (fluent, C1)
- **Programming languages:** Python, Fortran, Shell, Matlab