Andreas PLACH

DATE OF BIRTH November 12th, 1984
NATIONALITY Austrian

WORK EXPERIENCE

Researcher (since 09/2025), Dept. of Meteorology, Stockholm University
Group of Prof. A. Ekman; **Atmospheric transport of aerosols into the Arctic**

Postdoc Researcher (07/2020 to 08/2025), Dept. of Meteorology/Geophysics, Univ. Vienna. (UniVie)
Group of Prof. A. Stohl; **Atmospheric transport modeling** (FLEXPART model) – Atmospheric transport to polar and alpine regions to investigate emission source regions of ice core records; Inverse modeling of GHG emissions (co-supervision of PhD candidate); Transport of wild fire pollutants (*BREATHE* proj.)
07/2020 to 06/2022: 50% position in *isoCEP* project (subcontract with Univ. Bern; M. Leuenberger) **Data analysis** of CH_4 and CO_2 eddy flux measurements to constrain emissions in Switzerland based on tall tower measurements

IT Consultant (01/2020 to 06/2020), self-employed, Graz

Postdoc Researcher (04/2019 to 09/2019), Dept. of Earth Science, Univ. Bergen. Analysed climate-related time series focusing on detection, description, and quantification of abrupt changes. **Funding won by competition** (*Bjerknes Fast Track Initiative 2019* – 250,000 SEK).

PhD research fellow (09/2015 to 03/2019), Dept. of Earth Science, Univ. Bergen.

Short-term researcher (11/2013 to 08/2015), Wegener Center f. Clim./Glob. Change, Univ. Graz. Published master thesis in peer-reviewed journal. Implemented a new statistical optimization algorithm for retrieval of atmospheric profiles from satellite remote sensing (radio occultation).

Short-term researcher (02/2012 to 05/2012), Dept. of Geography/Regional Science, Univ. Graz. Modelled mass/energy balance of Freya glacier in NE-Greenland with the physically-based snow model AMUNDSEN. Error-corrected precipitation data accounting for prevailing wind speeds.

EDUCATION

PhD in Earth Science - Univ. Bergen, Norway, PhD awarded 03/2019

Thesis: **"Simulation of the Eemian Greenland ice sheet";** supervised by K. H. Nisancioglu, A. Born, B. M. Vinther; Designed, executed and analysed **numerical simulation of climate-ice interaction** in warmer-than-present Greenland (Eemian interglacial period; MIS5e; ~ 130 – 115 kiloyears ago). **Analysed global and regional climate simulations** and used three surface mass balance (SMB) models. **Performed high-performance computer (HPC) simulations** of the Greenland ice sheet (Ice Sheet System Model; ISSM); Within the ERC Synergy Grant *ice2ice* project (~100 modelers and observationalists) and the Bjerknes Centre for Climate Research. (~100 modelers and observationalists) and the Bjerknes Centre for Climate Research.
Download link: https://bora.uib.no/bora-xmlui/handle/1956/19443

MSc in Physics (with distinction); Univ. Graz, Austria

Focus **Atmospheric and Climate Physics;** Thesis: "Atmospheric wind profiling based on LEO-LEO infrared-laser occultation"; supervised by G. Kirchengast, V. Proschek

MSc in Environmental System Sciences (with distinction); Univ. Graz, Austria

Focus **Mountain and Climate Geography;** Thesis: "Modeling of the water balance for the catchment of the Enns river (Styria)"; supervised by U. Strasser

BSc in Physics; Univ. Graz, Austria

BSc in Environmental System Sciences; Univ. Graz, Austria

FURTHER EXPERIENCE

Teaching (2021 to 2025), Dept. of Meteorology and Geophysics, Univ. Vienna.

MSc courses (>140 contact hours): Advanced Transport Modeling (2 semesters), Meteorological-Geophysical colloquium (7 semesters), Paper Club (1 semester)

BSc courses (>110 contact hours): Remote Sensing (5 semesters), Physical Concepts (2 semesters), Radiation and Optics in the Atmosphere (2 semesters); total of >110 contact hours

Student supervision: One PhD student (co-supervision), Three undergraduate students (2 main and 1 co-supervision)

Project proposal writing / management

Involved in proposal writing, co-management, and meetings for national and international projects;

co-PI for UniVie contribution to GHG-KIT project (2022 to 2025); PI Andreas Stohl, **co-PI Andreas Plach**; UniVie received 4,500,000 out of 24,000,000 SEK from Austrian Research Promotion Agency (FFG) - project ID: 4420298; Keep it traceable - Prototyping a satellite enabled, independent tool-kit system for GHG verification in Austria (GHG-KIT)

co-PI for UniVie contribution to Edu4ClimAte project (2022 to 2026); PI Andreas Stohl, **co-Pis Andreas Plach**, Marina Dütsch; UniVie received 2,100,000 out of 20,000,000 SEK from EU Horizon Europe funding - project ID: 101071247; European Higher Education Institutions Network for Climate and Atmospheric Sciences (Edu4ClimAte)

Main responsibility for projects

BREATHE project (2022 to 2024) UniVie as subcontractor; led by GeoVille Austria (private company; satellite remote sensing). Austrian Research Promotion Agency (FFG) – project ID: 4937419. I was the main contact point for the UniVie, and performed all scientific work (data analysis of observations related to wildfires in Turkey + FLEXPART simulations); responsible deliverables and reporting.

icoCEP project (2020 to 2022) UniVie as subcontractor; led by Univ. Bern; Swiss National Science Fund (SNF); project ID: 172550. I coordinated the UniVie part and performed all related scientific work: data analysis of Eddy-covariance meas. of a Swiss tall tower + FLEXPART simulations.

Committees

Non-tenured academic staff (Mittelbau) representative; elected (2020 to 2024)
Hiring committee member for PhD candidates (2), Postdocs (4) (2020 to present)

Outreach

Summer university for school kids (KinderUni) between 6 to 14 years old at Univ. Vienna (2023)
PhD winter school engaging with local audiences (climate science; two school classes (12/16 year olds) + local tour guides and representatives of a hiking association, Rosendal, Norway (2018)

PERSONAL QUALIFICATIONS

Additional Education

- Arctic glacier field course, Greenland (03/2018)
- Ice Core Analysis Techniques (ICAT) course, Copenhagen (09/2017)
- Karthaus Summer School on “Glaciers and ice sheets in the climate system”, Italy (09/2016)
- Advanced Climate Dynamics Course (ACDC) summer school on “Role of High Latitudes in Centennial to Millennial Scale Climate Variability”, Newfoundland (08/2016)
- Glaciology course (AG-825), Univ. Centre in Svalbard (UNIS), Longyearbyen, Norway (02/2016)
- Courses on: Ethics, Scientific Writing, Visualization, Glacier safety, Norway (2016 to 2017)
- Meteorological Internship, Central Institution for Meteorology and Geodynamics (now: Geosphere Austria), Headquarter Styria, Graz; Validated particulate matter (PM10) forecasts. (08/2007)

Research stays & field work

One week **research stay at the Norwegian Norwegian Institute for Air Research (NILU), Oslo.** Presented at the Joint Oslo seminar in atmospheric, ocean and climate science (02/2024).

Three month **research stay at the Centre for Ice and Climate (CIC), Univ. Copenhagen.** Presented at two international workshops / a steering committee meeting (East Greenland Ice-Core Project; https://eastgrip.org/). Co-organized an international workshop (10/2017 to 12/2017).

One month **field work on the Greenland ice sheet;** EastGRIP project; catalogued ice cores, participated in surface science program, and monitored atmospheric radar measurements (07/2017 to 08/2017).

One month **research stay at the Atmosphere and Ocean Research Institute (AORI), Univ. Tokyo, with Prof. Ayako Abe-Ouchi.** Presented at the Climate Division seminar, at an international conference, and at an international workshop (06/2016).

One week visit at the **Continuous Flow Analysis (CFA) melting campaign** of the Renland ice core, **CIC, Univ. Copenhagen** (10/2015).

Semester abroad at the **Univ. New Brunswick, Fredericton,** Canada (09/2009 to 12/2009).

Languages

GERMAN mother tongue ENGLISH European level C2 NORWEGIAN European level B1

IT Knowledge

CODING Python, Bash, Fortran, R, C++, web design (HTML, CSS, JavaScript), IDL, Mathematica

SOFTWARE LaTeX, LibreOffice, Gimp, Inkscape, MS Office, ArcGIS, Erdas Imagine

GENERAL IT comfortable in Linux environments, experience with numerical simulations, high-performance computer (HPC) clusters, and version control like svn and git