EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Mathematisch-Naturwissenschaflliche Fakultät
Zentrum für Angewandte Geowissenschaften
Umweltphysik

The University of Tübingen is looking for an

PhD student (m/f/d)

with a master degree in

Meteorology, Physics, or Engineering

working on

Measuring turbulence using UAS in mountains

The position is embedded in the project '**HOTSPOT - Horizontal Shear Production Over complex Terrain – Uncrewed Aircraft Measurements of Turbulence for Model Parameterization**' funded by the German Research Foundation (**DFG**) in cooperation with the University of Innsbruck. The overall aim of the project is to use novel **uncrewed aircraft systems** to measure wind, turbulence and air pollutants in a mountain valley in order to improve **numerical weather models** in complex terrain, as part of the international **TEAMx** research programme.

The Environmental Physics group at the University of Tübingen, Germany, studies turbulent atmospheric flows using small automatically operating uncrewed aircraft systems (**UAS**). Our main interests are the turbulent energy and momentum exchange between the earth surface and the lower atmosphere (boundary-layer meteorology), the interaction of turbulent flows with wind turbines and orography, and aerosol particle transport in the lower atmosphere. We develop fast meteorological sensors (especially for our UAS), calibration methods and software for data analysis.

Currently, we are looking for a **PhD student.** The **tasks** for the position in the project include:

- performing flights with the UAS of type multi-rotary on meteorological field campaigns
- development and maintenance of the UAS (with focus on autopilot system, data acquisition, fast response turbulence sensors, aerosol particle samplers)
- analysis of experimental and numerical meteorological data

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The position requires a university master degree in the field of atmospheric science, physics, electronics, or informatics with a strong experimental focus and hands-on experience in:

- environmental measurement technology and sensors
- Raspberry Pi, microcontroller
- data analysis and statistics in atmospheric science and fluid dynamics
- UAS / model aircraft operation and control
- machine learning

With its long tradition, the University of Tübingen is one of the most respected universities in Germany and one of Germany's universities distinguished with the title of excellence. Tübingen has also proven its status as a leading research university in many national and international competitions. With its broad spectrum of subjects, the University of Tübingen provides a wealth of opportunities for interdisciplinary collaboration. And such close cooperation on research extends beyond the University and around the world. The University of Tübingen has joint research projects at all levels with other institutions of higher education, with research institutes and with industry.

The position is available from **1st June 2025** on and will be open until filled. Salary will be according to the German public service (75 % of E13 TV-L). The position is limited to 36 months. In case of equal qualification and experience, physically challenged applicants are given preference. The University of Tübingen aims at increasing the share of women in research and teaching and encourage female scientists to apply.

Please send your application (including application letter, motivation, a statement of research interests, CV, and certificates) in **one single PDF file (!)** referring to announcement code '*umphy-2025-HotSpot* ', **until 27th April, 2025**, by e-mail to

PD Dr. Andreas Platis: **andreas.platis@uni-tuebingen.de**