



The research units photogrammetry and engineering geodesy of the Department of Geodesy and Geoinformation, TU Wien are currently looking to recruit a motivated

PhD student (f/m/d)

You enjoy working in a scientific environment at the leading edge of research? You are interested in drones? You want to answer scientific questions and find excellent technical solutions, embedded in a team? If the answer is yes, then this job is for you!

Our groups together comprise about 35 staff members currently working on approximately 25 projects supported by various national and European programs and funding sources. The specific project is a collaboration between TU Wien (photogrammetry and engineering geodesy) and Skyability, a service provider focused on high-precision drone mapping of infrastructure, topography and bathymetry. The aim is to improve the flight trajectory accuracy by combining measurements from robotic total stations on the ground and imaging sensors on the drone.

To strengthen the research work of our team, we are looking for a skilled geo-data scientist with a background or interest in mathematics, geomatics, robotics, or geospatial sciences.

Your Responsibilities:

- Processing and analysis of geodetic and photogrammetric measurements (GNSS, total stations, laser scans, images)
- Analysis and optimization of measurement configurations
- Development of calibration procedures under laboratory conditions to reduce systematic deviations of total stations employed for kinematic measurement tasks
- Research, development and implementation of a concept for strict synchronizations of multiple devices (RTS, IMUs, GNSS, laser scanners, cameras) in a sensor network
- Research, development and implementation of scientific algorithms for optimized trajectory estimation
- Planning and conducting field measurement campaigns
- Writing scientific journal papers, technical documents and project reports

Your Profile:

- Master (or equivalent) degree in geodesy, geoinformation sciences, geomatics, informatics, mathematics, physics or similar
- Basic programming skills (Python, C/C++, ...)
- Profound understanding of engineering geodetic and photogrammetric measurement processes
- Experience in point cloud processing and/ or 3D modeling

- Strong analytical and technical skills and problem solving capability
- Solid knowledge of mathematics, parameter estimation and statistical methods
- Good written and spoken communication skills in English

We Offer:

- The opportunity to work in an innovative, dynamic and international team
- The salary for this (40 hours/week) position is based on the Austrian regulations for university staff for PhD positions. The monthly gross salary paid 14 times a year is € 3.058,60 for a PhD. The position will be limited to three years. Possibilities for an extension are available.
- It is expected that the candidate pursues a PhD within the PhD program of TU Wien
- Flexible working hours
- Workplace close to city center, metro and main train station
- A stimulating and friendly working environment at the department

If this job opportunity fits your career development plans, we are looking forward to receiving your application in English (cover letter, CV, publications – if available - and references) and in one single PDF file via e-mail to photo-sek@geo.tuwien.ac.at

Candidate selection will start on Nov **15th, 2022** and will continue until a suitable candidate is found. TU Wien will not refund any cost occurred in the course of an application.

Ass.Prof. Dr. Gottfried Mandlbauer (photogrammetry)
Prof. Dr. Hans-Berndt Neuner (engineering geodesy)
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