



The photogrammetry research unit of the Department of Geodesy and Geoinformation, TU Wien is 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 understanding and monitoring natural processes? 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 group comprises about 20 staff members currently working on approximately 15 projects supported by various national and European programs and funding sources. The specific project is an international collaboration between TU Wien and TU Dresden aiming at substantially improving the accuracy of photo bathymetry by strict consideration of the dynamic water surface in the photogrammetric data processing pipeline.

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

Your Responsibilities:

- Processing and analysis of through-water multimedia photogrammetry point clouds for 3D reconstruction of water bottom topography
- Spatio-temporal modeling of dynamic water surfaces based on stereo images from Unmanned Aerial Vehicles (UAV aka drones) or terrestrial platforms
- Research, development and implementation of a concept for concurrent image acquisition with multiple UAVs (drone fleet)
- Research, development and implementation of scientific algorithms in the fields of multimedia stereo photogrammetry (image orientation, sparse and dense surface reconstruction) for hydrographic applications
- 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
- Programming skills (Python, C/C++, ...)
- Experience in point cloud processing and/ or 3D modeling
- Experience in photogrammetry (bundle block adjustment, Structure-from-Motion, Dense Image Matching)
- 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 (30 hours/week) position is based on the Austrian regulations for university staff for PhD positions. The monthly minimum is € 2.293,95 for a PhD. The monthly salary is paid 14 times per year. 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 1st, 2022 and will continue until a suitable candidate is found. TU Wien will not refund any cost occurred in the course of an application.

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