



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 mapping and modeling underwater topography, vegetation and objects with green lasers mounted on airborne platforms? 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 PhD addresses one or more of the following open research questions in topo-bathymetric laser scanning:

- Evaluation of laser echo waveforms in complex topo-bathymetric multi-target situations
- Improvement of the accuracy and depth measurement performance of laser bathymetry
- Precise detection and modelling of dynamic water surfaces
- Detection and modelling of submersed macrophytes
- Determination of water turbidity and turbidity separation layers from laser echo waveforms

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

Your responsibilities:

- Data processing and research in the scientific field described above, e.g., laser waveform analysis, water surface detection, turbidity estimation, modeling of submersed macrophytes
- Design and implementation of scientific algorithms
- Writing scientific journal papers and project reports

Your profile:

- Master (or equivalent) degree in geodesy, geoinformation sciences, geomatics, hydrography, informatics, mathematics, physics or similar
- Programming skills (Python, C/C++, ...)
- Experience in laser scanning point cloud processing
- Basic signal processing skills
- 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 minimum is € 3.277,30 for a PhD. The monthly salary is paid 14 times per year. The position is for two years and may be extended for additional two years based on a positive evaluation by the funding body.
- 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 Apr **1st, 2023** 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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