The research group Remote Sensing of the Department of Geodesy and Geoinformation of TU Wien is seeking a motivated

Project Assistant in microwave remote sensing (f/m/d) on the topic of

Retrieval of land surface variables with Sentinel-1

Soil and vegetation data with a high spatiotemporal resolution are crucial for the monitoring of droughts, floods, agricultural areas and ecosystems under pressure. Recent advances in the capability of spaceborne radar satellites, particularly from the Copernicus Sentinel-1 series, provide the opportunity to retrieve soil and vegetation information at resolution needed. However, at these scales different processes and characteristics of the land surface are influencing microwave observations. The Remote Sensing group is at the forefront of microwave remote sensing of land surface variables and was the first to develop a high-resolution operational surface soil moisture product from Sentinel-1 over Europe. The group consists of ~15 people in total, including PhD's, Post-Doc's and senior scientists, and is led by Prof. Dr. Wolfgang Wagner.

To support the research work of our team, we are looking for a Project Assistant (PhD or PostDoc) with a strong theoretical background in soil and vegetation modelling from backscatter observations and technological interest in big data and high performance computing. The selected candidate will be responsible for advancing existing and develop new algorithms and methods for the retrieval of soil moisture and vegetation from Sentinel-1 backscatter observations. This includes working from field and catchment scale to large scale such as Europe. Therefore, the candidate will work on the high performance computing facilities at TU Wien and the EODC Earth Observation Data Centre.

Your responsibilities:

- Developing scientific algorithms in the fields of radar remote sensing
- Contribution in software development using object-oriented programming language
- Prototyping, implementing, and testing of processing chains and generation of value-added products
- Writing scientific journal papers, technical documents and project reports

Your skills

- Master degree or PhD in remote sensing, earth sciences, environmental sciences, information sciences, geodesy, geoinformation sciences, physics, or similar
- Experience in (microwave) remote sensing and derivation of geophysical parameters from remote sensing observations (e.g. soil moisture, water bodies, vegetation, snow and ice, …)
- Excellent programming skills (preferably Python)
- Strong analytical and technical skills and problem-solving capability
- Good written and spoken communication skills in English

We Offer

- The opportunity to work in an innovative, dynamic and successful team
- A stimulating and friendly working environment at the department
- State-of-the-art IT and support staff
- Possibility to enroll in the PhD program of TU Wien and further develop and learn
- Freedom to discuss and implement your own ideas
- Flexible working hours
- Workplace close to city centre, metro and main train station and ample outdoor opportunities in the vicinity of Vienna

The salary for this position is based on the Austrian regulations for university staff. The monthly minimum gross salary ranges between € 1.105,10 (BSc level) for a 20 h/week employment and € 3058,60 (MSc level) for a 40h/week employment. The monthly salary is paid 14 times per year.

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

Candidate selection will start on **July 24th, 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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