Job Announcement

The University of Potsdam was founded in 1991 and has firmly established itself within the scientific landscape and developed into an outstanding economic factor and growth engine for the region. The University of Potsdam excels in acquiring third-party funds, has received multiple teaching awards, has a very service-oriented administration, and has been honored several times for its family-friendly culture. About 21,000 students and 3,000 employees study and work at three campuses – Am Neuen Palais, Griebnitzsee and Golm – at one of Germany's most scenic institutions of higher education.

The **Faculty of Mathematics and Natural Sciences, Institute of Environmental Science and Geography** at the **University of Potsdam** invites applications for the following position limited to 24 months, which will be filled **as soon as possible**:

Academic Staff Member
Research Software Engineer/PostDoc
ID no. 421/2023

The successful candidate will work 40 hours per week (100 %). The position is classified within remuneration group 13 of the collective wage agreement among the German states (TV-L). The fixed term of employment is in accordance with Section 2 subsection 1 of the German Act on Limited Scientific Contracts (*Wissenschaftszeitvertragsgesetz* or WissZeitVG). If necessary, an extension is possible if personal and legal requirements are met.

Your Field of Work:
We are seeking a skilled and motivated Research Software Engineer to join our team for the DFG-funded project "TopoToolbox 3 – improving the quality and reuse of a research software for terrain analysis" to contribute to the further development of TopoToolbox, a versatile and widely used open-source toolbox for digital elevation model (DEM) analysis. The aims of the project are i) to improve the usability and accessibility of TopoToolbox by a broad academic research community, ii) to improve the quality assurance in the software's development process, and iii) to increase the involvement of the research community in the ongoing development of TopoToolbox.
As a Research Software Engineer on the project, you will play a crucial role in expanding TopoToolbox's functionality, enhancing its sustainability and usability, and ensuring it remains a valuable resource for the geoscientific and environmental research community. You will work closely with an engaged team of researchers from the geosciences and computational sciences, utilizing your expertise in high-level programming languages such as Python, MATLAB, R, and low-level languages like C or C++. This position offers an excellent opportunity to kick-start a career as a Research Software Engineer in a geoscientific and environmental setting.

The Scope of Your Responsibilities:
- collaborate in the team to identify and prioritize software development needs
- development of methods for elevation model analysis
- design, develop, and maintain TopoToolbox modules and functions, focusing on efficient algorithms
- perform software testing, debugging, and documentation to ensure the reliability and usability of the toolbox
- stay up-to-date with the latest developments in geoscientific and environmental research to integrate cutting-edge methodologies into TopoToolbox

- engage with the user community to gather feedback and incorporate user-driven improvements
- contribute to research, publications and presentations

Further scientific qualification (post-doctoral thesis (*Habilitation*)) is possible. At least one-third of working hours is available for in-depth scientific work.

Your Qualifications:
- Master's/Doctoral degree (or equivalent) in software engineering as well as computer science, geosciences, environmental sciences, or a related field
- proficiency in at least one high-level programming language (Python, MATLAB, or R) and one low-level language (C or C++)
- strong software development skills, including design, implementation, testing, and documentation of software projects
- strong problem-solving skills and the ability to work both independently and collaboratively
- familiarity with version control systems (e.g., Git) to manage and collaborate on software development projects
- excellent communication skills, including the ability to convey complex technical information to a diverse audience
- knowledge of terrain analysis and image processing, and an interest in geoscientificand environmental research is a plus
- very good written and spoken English skills

Benefits:
- collaborative and inclusive work environment
- contribution to open-source software development and the geoscientific community

What We Offer:
As a university, we combine the developmental strength of a teaching and research institution with the attractive working conditions of the public sector. The University of Potsdam is a reliable employer that supports its employees with a variety of offers and benefits:

- Develop yourself and your professional as well as interdisciplinary competencies in various continuing education and networking opportunities offered by the University of Potsdam.
- All locations have good transport connections. They can receive a monthly subsidy for the public transport job ticket and use campus bicycles.
- Benefit from a company pension plan, a special annual payment and asset-building services.
- Take advantage of the diverse offers from occupational health management as well as university sports.
- To improve work-life balance, the University of Potsdam offers its employees flexible working hours and proportional home office hours. You have 30 vacation days per year and are also exempt from work on December 24 and 31. Our service for families can advise you on issues relating to the reconciliation of work and family life.

You can find more information about working at the University of Potsdam at
https://www.uni-potsdam.de/de/arbeiten-an-der-up/arbeitgeberin/uebersicht

For more information about this position, please contact Mr. Dr. Wolfgang Schwanghart by email: schwangh@uni-potsdam.de.

Your Application
Please send us your application **by the deadline of November 30, 2023** and provide the **ID no. 421/2023**, preferably by email to schwangh@uni-potsdam.de.

Application Instructions: To apply for this position, please submit the following materials:

- A cover letter detailing your qualifications and interest in the position.
- A current CV/resume.
- Contact information for at least three professional references.
- A code sample, Github/lab repository, or portfolio (if available) showcasing your programming skills.

The University of Potsdam values the diversity of its community and pursues the goals of equal opportunity regardless of gender, nationality, ethnic and social origin, religion/belief, disability, age, and sexual orientation and identity. Applications from abroad and from persons with an immigrant background are expressly encouraged. The university strives for a balanced gender ratio in all employment groups; in areas where women are underrepresented, women are given preference in case of equal suitability (Section 7 paragraph 4 of the Brandenburg Higher Education Act). People with disabilities are given preferential consideration in cases of equal qualifications. In aptitude tests and selection interviews, individual disadvantage compensations are granted that are appropriate to their disability. If a person with a disability would like to make use of individual disadvantage compensation, please state this in the application letter.

Potsdam, November 3, 2023