The Technical University of Munich (TUM) is one of Europe’s top universities. It is committed to excellence in research and teaching, interdisciplinary education and the active promotion of promising young scientists. The university also forges strong links with companies and scientific institutions across the world. TUM was one of the first universities in Germany to be named a University of Excellence. Moreover, TUM regularly ranks among the best European universities in international rankings. - The TUM School of Life Sciences on the TUM Campus Weihenstephan is specialised on the major geopolitical challenges of the 21st century, especially on pressing issues of global change and food security.

The geoarchaeological joint project DORACLE – Development of River-, Agricultural-, and City Landscapes on the European Lifeline Danube at Straubing/Sorviodurum offers the position of

1 Scientific Assistant or PhD student (E13 TV-L, 50-75%) from February 1st, 2022 or later as soon as possible and limited to 3 years.

The project investigates the paleoenvironment of the city of Straubing and its surrounding area with special regard to natural river course shifts and hydraulic engineering changes on the Danube and its tributaries, including the chronicle and damaging effects of extreme flood events. First hydraulic engineering measures are attested for the provincial Roman period, among others in the form of quays and piers, and are postulated for the preceding Celtic settlement phase at the same site. The reconstruction of the river landscape on the Danube around the turn of the Roman period is the first focus of the project. Outside the active river landscape, the development of the agricultural landscape since the beginning of agriculture about 7000 years ago via the immigration of the so-called Bandkeramiker are investigated as a second focus. Together with the history of the development of the Roman and medieval town of Straubing, a third focus is on the course diversion of the main discharge of the Danube in connection with the construction of the Sossauer Bschlacht in 1480. The fluvial geomorphodynamics and the paleo-river landscape before and after this measure are reconstructed. A fourth focus deals with the river engineering measures in the course of the establishment of steam navigation on the Danube up to the development to a federal waterway in the course of the RMD construction measures and relocation of the Straubing Danube port. This creates a link to the current socio-political discussion about climate change and flood protection on the Danube lifeline.

JOB DESCRIPTION
The Scientific Assistant or PhD student works in the labs of Prof. Jörg Völkel at TUM’s Campus of Life Sciences in Freising-Weihenstephan (http://geomorphologie.wzw.tum.de/). The Scientific Assistant or PhD student will be responsible for geoarchaeological investigations on paleosols, sediments, and peat bogs as well as anthropogenic excavation findings within the Old Settlement Area (Altsiedelgebiet) along the Danube River between Regensburg and Straubing with a focus on the cultural landscape development within and around the city of Straubing in close collaboration with the other subproject. This includes physicochemical analysis on sediment and soil samples, prospection of the shallow subsurface and geomorphological analysis.

TASKS
- Participation in geoarchaeological and geomorphological field work
- Sample preparation and physicochemical analysis of sediments and soils
- Data processing of geophysical measurements (optional)
- Palynological and/or Macro Rest Analyses (optional)
- Publication and presentation of the data
- Teaching responsibility (2 hours / week during lecture periods)
**REQUIREMENTS**

- MSc in one of the following disciplines: geoarchaeology, physical geography, geosciences, soil science or related disciplines
- Knowledge in geoarchaeology and soil/sediment analysis (field and laboratory)
- Ability to use GIS desirable
- Willingness to work in an interdisciplinary environment
- Very good German and English skills
- Driving licence

TUM aims to increase the number of women employees, and applications from women are expressly welcomed. People with disabilities, with essentially the same suitability and qualification, will be preferred. As you apply for a position at the Technical University of Munich (TUM), you provide personal data. Please note our data protection information according to Art. 13 Data Protection Basic Regulation (DSGVO) on the collection and processing of personal data in connection with your application http://go.tum.de/554159. By submitting your application, you confirm that you have taken note of the data protection information of the TUM.

The appointment procedure continues until the position is filled. If you are interested, please send your complete application with CV, letter of motivation, a brief statement of research experiences and interests, diplomas and the names and contact information of two references in a single PDF file to geo@wzw.tum.de

For more information and other vacancies like 1 PostDoc position in Geomorphology (E13 TV-L, 100%) and 5 PhD-positions within the interdisciplinary project *Landscapes under Climate Change BLIK II* see https://www.geomorphologie.wzw.tum.de/

Contact:

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