

The Institute of Geotechnical Engineering of the University of Natural Resources and Life Sciences, Vienna invites application for the following position in the framework of the project STRECROPA funded by the Austria Science Fund (FWF):

PhD researcher

for the numerical modelling of construction of cross passages of shallow tunnels

Key information

- Project start: 04.10.2021
- Project duration: 36 months
- Workplace: Institute of Geotechnical Engineering, Feistmantelstraße 4, 1180, Vienna, Austria
- Salary: EUR 39780 per annum
- Application deadline: 30.06.2021

University overview

The University of Natural Resources and Life Sciences, Vienna (BOKU) is one of the best sustainability universities in Europe and brings together scientific, technical and socio-economic topics. BOKU sees itself as an innovation leader in the green economy, with the goal of integrating sustainability into all processes in society.

Project description

The main goal of this project is to improve the understanding of stress redistribution along the main tunnel due to the construction of the cross passages in soft soils. To attain this objective, the magnitude and extent of the area of the stress-strain increase in the main tunnel will be ascertained and the sensitivity of the results to different parameters and modelling features will be explored.

Job description:

The successful candidate will perform 3D numerical analysis with a state of the art constitutive model for partially saturated soils. The tasks to perform include the extension of the hypoplastic constitutive model to partially saturated soils, the implementation of the new constitutive model into the designated FEM software, the calibration of the constitutive model based on geotechnical testing, the execution of the numerical testing programme.

Prerequisites

- Master's degree in civil engineering with specialisation in geotechnics or related area
- Candidates from other scientific disciplines with a solid computational background are also welcome
- A high level of competence in numerical mathematics and scientific computing is a must
- Programming skills and an aptitude for the implementation and experimental exploration of numerical algorithms is a plus

Further qualifications

- Excellent command of written and spoken English
- Outgoing personality with strong communication skills across different cultures
- Drive for excellence and scientific mind-set
- Ability to work in a team and independent working style

Application and additional information

Please send your application to the Institute of Geotechnical Engineering with subject "STRECROPA- NUM" at geotech@boku.ac.at alongside the following documents:

- A detailed curriculum vitae or resume outlining the academic and industry achievements and the educational background. A list of publications and completed projects or products should be included if applicable
- A short cover letter of maximum one page introducing yourself and describing how the position matches your skills and interests

BOKU values diversity and inclusion and recognizes employment opportunities must not be limited by socio-economic background, race, religion or gender. Hence, BOKU actively encourages applications from women and candidates from culturally and linguistically diverse backgrounds and its selection panel strives for the gender balance among its employees.

For more information please contact the Principal Investigator, Dr. Enrico Soranzo at enrico.soranzo@boku.ac.at