Technische Universität Braunschweig is seeking to appoint two

Research associates (f/m/d)
remuneration group up to EG 13 TV-L position at 100% for at least 2 years

Ecohydraulics and biomechanics of salt marsh vegetation

The Technical University of Braunschweig offers 18,500 students and approx. 3,700 Employees a teaching and research spectrum with excellent equipment and at the same time personal atmosphere.

Technische Universität Braunschweig (TU Braunschweig) is seeking to appoint a personality with pronounced interdisciplinary competence to support the “Ecohydraulics and biomechanics of salt marsh vegetation” research consortium, funded by the German Research Foundation. Research work within the project focuses on wave vegetation interaction of salt marsh vegetation investigated through different methodologies such as field campaigns, material characterisation and physical modelling in the research lab, and the development of complex computational models. In this context, the project partners Leichtweiß-Institute for Hydraulic Engineering and Water Resources and Institute of Mechanics and Adaptronics are looking for support of the consortium through investigating ecohydraulic and biomechanical aspects of natural coastal systems focussing on salt marsh vegetation.

This is motivated by climate change driven needs for raised dikes and strengthened storm surge protection systems, which generally omit natural coastal systems regarding their defence mechanisms.

Research work offered here is focused on biomechanics, ecohydraulics, and wave vegetation interactions of salt marsh vegetation under storm surges, by transferring scientific results obtained from field and laboratory studies into numerical investigations.

Research associate at Leichtweiß-Institute for Hydraulic Engineering and Water Resources:
The advertised role as a PhD student and research associate involves the development and implementation of experimental campaigns to characterise the interaction between fluid and salt marsh vegetation.

Research associate at Institute of Mechanics and Adaptronics:
The advertised role as a PhD student and research associate involves the development and implementation of computational models to predict the biomechanical behaviour of salt marsh vegetation and its interaction with the surrounding fluid, and the experimental characterisation of the material behaviour of the salt marsh vegetation.

The recruitment requirements are defined in Section 25 of the Lower Saxony Higher Education Act (Niedersächsisches Hochschulgesetz).

The applicant should fulfil the following criteria:
For the position at Leichtweiß-Institute for Hydraulic Engineering and Water Resources:
  • A M.Sc. degree, with good results or better in civil, mechanical or hydraulic engineering, marine sciences, oceanography or related fields
Fundamental knowledge in the field of coastal engineering is desirable
Willingness to conduct field research

For the position at Institute of Mechanics and Adaptronics:

- A M.Sc. degree, with good results or better in mathematics, computer science, physics, civil, mechanical, or hydraulic engineering, marine sciences, oceanography or related fields
- Fundamental knowledge in computational science, numerical modelling, computational fluid dynamics is desirable

For both positions:

- Good knowledge of German and English
- Strong research communication skills
- Ability to work independently as well as in a team
- Willingness to participate in coastal engineering and publish results in high-ranking journals
- Intention to attain a doctoral degree

We are offering the following:

- Great working environment at one of the most renowned technical universities in Germany
- Working in an international division and participation in international networks
- Presenting research results at national and international conferences

At TU Braunschweig, we aim to increase the share of women in academic positions and therefore particularly welcome applications from women. Severely disabled persons will be given preference if they are equally qualified. Proof must be enclosed. The TU Braunschweig strives to reduce underrepresentation in all areas and positions as defined by the NGG. Therefore, women’s applications are particularly welcome. Applications from international scientists are highly welcome. A part-time appointment may be possible on request.

Please submit your written application including a CV with academic track record, motivation letter and university graduation transcripts via email to hyku@tu-braunschweig.de:

Technische Universität Braunschweig,
Leichtweiß-Institute for Hydraulic Engineering and Water Resources
Division Hydromechanics, Coastal and Ocean Engineering
Beethovenstraße 51a, 38106 Braunschweig, Germany

to be received by 2022/06/17 latest. Please combine your documents to a single PDF file when submitting. Personal data and documents relating to the application process will be stored electronically. Please note that application costs cannot be refunded. Please understand that hardcopy applications can only be returned against a self-addressed, sufficiently stamped envelope.

For further information, see the contact partners below.

Project Partners:

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