Technische Universität Dresden (TUD), as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world's most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the Faculty of Environmental Sciences, Department of Hydro Sciences, Institute of Urban and Industrial Water Management, the Chair of Process Engineering in Hydro Systems offers a position as **Research Associate / PhD student / Postdoc (m/f/x)** (subject to personal qualification employees are remunerated according to salary group E 13 TV-L) starting **as soon as possible**. The position comprises 75 % of the fulltime weekly hours. The position is initially limited for 3 years. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz-WissZeitVG). The position aims at obtaining further academic qualification (e.g. PhD / habilitation thesis). The aim is further to increase up to 100% of the fulltime weekly hours through third-party funds.

**Tasks:** Participation in teaching activities of the chair, in particular scientific preparation and implementation of courses (seminars, exercises, internships) and supervision, training and further education of other doctoral candidates and students. Independent organization and work in research projects, starting from proposal writing towards project management and problem solving in collaboration with partners from the chair, other universities and industry as well as publication, presentation and documentation of the research results at conferences and in scientific journals. The scientific work and research interest shall focus on separation processes in chemical-physical water and wastewater treatment processes with main emphasis on membrane and related hybrid processes in water treatment, including corresponding modelling and simulation of the processes. The latter refers not only to the simulation of flowing or stationary fluids and multiphase systems, but also to the description of interface phenomena, mass transfer and reaction processes and their coupling with each other. Hence, the focus is set on the development of coupled fluid dynamic models and their numerical solution using CFD software (ANSYS Fluent, ANSYS CFX, COMSOL Multiphysics; OpenFOAM).

**Requirements:** Above average university degree and – if applicable- PhD degree in the field of fluid mechanics, mechanical engineering, computational engineering, water management, etc.; very good knowledge in handling CFD software; good command of English for the preparation of high-quality publications and participation in international conferences; a high degree of commitment and team spirit as well as an independent way of working. Knowledge in membrane processes and general process engineering of hydro systems as well as an above-average doctorate are advantageous. Good command of German is desirable. We offer a varied, highly topical and demanding teaching and research activity in an interdisciplinary team, excellent contacts to partners from research and
industry as well as an independent organisation of research work with a high degree of personal responsibility.

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your comprehensive application including the usual documents by January 2, 2023 (stamped arrival date of the university central mail service applies) to: TU Dresden, Fakultät Umweltwissenschaften, Fachrichtung Hydrowissenschaften, Institut für Siedlungs- und Industriewasserwirtschaft, Professur für Verfahrenstechnik in Hydrosystemen, Herrn Prof. Dr.-Ing. Lerch, Helmholtzstr. 10, 01069 Dresden, Germany or via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf-document to andre.lerch@tu-dresden.de. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis.