

We are a young, innovative university located in the heart of the Ruhr metropolis. We pride ourselves in outstanding research and teaching, think in terms of opportunities rather than limitations and develop ideas with a view to the future. Diversity is an integral part of our culture as we promote potential and are committed to upholding genuine equity in education.

The **University Duisburg-Essen (UDE)** is seeking at the **Campus Essen** in the SFB RESIST

Doctoral researcher in Ecotoxicological Modelling (f/m/d)
(salary classification 13 TV-L, 65 %)
(brutto 38.560 € - 54.807 €)

The RESIST Collaborative Research Centre investigates how stressors individually and in combination affect the biodiversity and functions of streams and rivers, and how previously stressed ecosystems recover. RESIST investigates the effects of stressors on all components of the food web of running waters (from viruses to fish) and on ecosystem functions. Field studies, large collaborative mesocosm experiments, a wide range of analytical (especially genomic) and modelling methods are used.

The doctoral researcher will be embedded in Project A18, which investigates how stressor effects at the individual level scale up to population and community responses. The project combines empirical analyses, meta-analyses, and mechanistic modelling to quantify the role of physiological tolerance, dispersal, and biotic interactions (Asymmetric Response Concept, ARC) under both degradation and recovery scenarios.

Your tasks

- Develop and apply mechanistic models to investigate stressor effects from individuals to populations and communities.
- Analyse and synthesize ecological and ecotoxicological data, including meta-analytical approaches.
- Evaluate the relative importance of key ecological processes (e.g. physiological tolerance, dispersal, biotic interactions) using modelling and empirical data.
- Contribute to scientific publications and interdisciplinary collaboration within the Coordinated Research Centre

Your profile

- Above-average university master's degree in environmental sciences, ecology, ecotoxicology, physics, applied mathematics, or a related quantitative field.
- Strong interest in mechanistic modelling of ecological or ecotoxicological processes.
- Experience with programming (preferably R; Python or similar advantageous).
- Background in population and community ecology, ecological modelling, or environmental stress biology is desirable.
- Experience with meta-analysis, statistical modelling, or handling large datasets is advantageous.
- Excellent command of written and spoken English.
- High degree of self-initiative, analytical thinking, creativity, and ability to work collaboratively.

The successful candidate is expected to pursue a cumulative PhD within the framework of the project.

We offer

- An interesting PhD topic under excellent supervision at one of the world's most prestigious research institutions in the field of water research
- Varied, multifaceted area of responsibility in a lively working environment with international exchange
- Working environment with respectful, appreciative cooperation
- Pleasant working atmosphere in a dynamic team

- Opportunity to pursue a doctorate in the CRC graduate school with numerous support programmes
- Family friendliness through childcare facilities for your children
- Counselling for family care responsibilities
- Wide range of further education and training programmes, individual induction training
- Excellent public transport connections and free parking spaces
- Attractive sports and health programmes (university sports)
- home office possibilities

Start Date as soon as possible
Contract Duration 3 years
Working Hours 65 %
Application Deadline 2026-08-06

Application

Please send your electronic application with the usual documents, quoting reference number 324-26, to Prof. Dr. Bernd Sures, University of Duisburg-Essen, Department Aquatic Ecology, 45141 Essen, Email:

bernd.sures@uni-due.de

You'll find information about the faculty under: https://www.uni-due.de/aquatiscche_oekologie

The University Duisburg-Essen aims at promoting the diversity of its members (see <http://www.uni-due.de/diversity>)

The University Duisburg-Essen has been awarded for its effort to promote gender equality with the "Total-E-Quality-Award". It aims at increasing the share of women in the scientific staff and therefore explicitly encourages women to apply. Women will be preferentially considered when equally qualified according to the state equality law.

Applications from disabled or equivalentents according to § 2 Abs. 3 SGB IX are encouraged.

