

Within the Collaborative Research Center “Wave phenomena – analysis and numerics” (CRC 1173) we are currently seeking to recruit, as soon as possible, a

**Doctoral Researcher (f/m/d – 75 %) in Mathematics
for the project
“Quantized vortices and nonlinear waves”**

The CRC has been funded by the German Research Foundation (DFG) since 2015. Its goal is to analytically understand, numerically simulate, and eventually manipulate wave propagation under realistic scenarios by intertwining analysis and numerics.

The proposed doctoral project concerns the mathematical analysis of dispersive phenomena in fluid flows related to the propagation of nonlinear waves and their properties.

We seek ambitious doctoral researchers with an interest in analysis and PDEs. Within the project, you will learn and combine techniques from mathematical fluid mechanics and nonlinear dispersive PDEs. You will become part of the established research group “Nonlinear PDEs” at the Institute of Analysis and you will have the opportunity to attend courses, conferences, workshops, and summer schools. Engagement in teaching is encouraged.

The following qualifications are required:

- Excellent Master’s or an equivalent degree in Mathematics.
- Strong background in analysis and partial differential equations.
- We expect good writing and oral communication skills in English, along with the ability to work independently within an international team.

The remuneration is based on the wage agreement of the civil service in TV-L E13 (75%). Contract duration is 3 years with a possibility of extension.

Applications should include a cover letter, a curriculum vitae, a statement of research interest, contact information for two referees, and copies of degree certificate(s) in one PDF.

We offer an inspiring, attractive, interdisciplinary, and internationally recognized scientific environment. We provide an attractive and modern workplace with access to excellent facilities of KIT, diverse and responsible tasks, a wide scope of advanced training options within our integrated research training group. Funds for travel and guests can be obtained through the CRC. Supplementary pension with the VBL (Pension Authority for Employees in the Public Service Sector), flexible working time models, a job ticket (BW) allowance, and a cafeteria/canteen are also available.

Our CRC aims at the implementation of equal opportunities, it promotes diversity and supports persons with childcare or eldercare responsibilities as well as persons with disabilities. We prefer to balance the number of employees (f/m/d). Therefore, we kindly ask female applicants to apply for this job. Recognized severely disabled persons will be preferred if they are equally qualified.

Please apply electronically via office@waves.kit.edu until **July 31st, 2025**. For further information about the project, please contact Dr. Lars Eric Hientzsch lars.hientzsch@kit.edu and visit <https://www.math.kit.edu/iana10/en>.

Further details can be found on our website <https://www.waves.kit.edu> and on KIT’s website <https://www.kit.edu>.

Karlsruhe Institute of Technology (KIT) – The Research University in the Helmholtz Association creates and imparts knowledge for the society and the environment. It is our goal to make significant contributions to mastering the global challenges of mankind in the fields of energy, mobility, and information. For this, around 9800 employees of KIT cooperate in a broad range of disciplines in research, academic education, and innovation.