Ruhr-Universität Bochum

Research Software Engineer (m/f/d)

Online seit 19.11.2025 | 2025-11-19-945254 | Wissenschaftliche:r Mitarbeiter:in

Stellenbeschreibung

Faculty of Electrical Engineering and Information Technology:
Chair of Applied Electrodynamics Chair of Simply Complex Lab and Chair of Nonlinearity Engineering

In order to fill a **fixed-term position in full-time (39.83 hours/week = 100%) at the earliest possible date**, we are looking for 1

Research Software Engineer (m/f/d)

We are looking for a Research Software Engineer (RSE) to join our interdisciplinary team working on phenomena ranging from soft condensed matter and statistical physics to laser physics, laser-matter interactions, and complex systems. The role is ideal for someone who enjoys writing code, solving technical challenges, and enabling cutting-edge scientific research.

You'll support world-class scientists by developing, maintaining, and optimising the software and infrastructure that power experiments and simulations. If you're passionate about clean code, scientific discovery, and helping others build robust tools, we'd love to hear from you. Your personality is characterized by: • Distinct organizational competence • Independent, structured and responsible way of working • Organizational talent, ability to work in a team and enjoy communication • Friendly, open-minded and professional appearance

Your tasks:

- Collaborate with researchers to translate scientific challenges into computational solutions.
- Develop and maintain tools for data analysis, simulations, modelling, automation, and visualisation, and improve existing software used in our research (mostly MATLAB and Python).
- Refactor and optimise code for performance, usability, and reproducibility, pply best practices, such as version control, testing, documentation, and packaging for reuse, ensuring research code is sustainable, scalable, and shareable across teams.
- Integrate software with experimental hardware and data acquisition systems.

- Manage and support high-performance computing (HPC) and cloud/cluster workflows, and help design, deploy, and run efficient computational pipelines for large datasets or parallel processing.
- Mentor and support researchers (PhDs, postdocs, staff) in developing their own tools, promoting good software practices, offering training and guidance on scientific programming workflows.
- Maintain group servers, data storage, monitor and troubleshoot experimental software/hardware systems, ensure reliable day-to-day IT operations for research.

Anforderungsprofil & Qualifikationen

Your profile:

- Degree in Computer Science, Physics, Engineering, or related field.
- Strong programming skills, ideally in scientific/technical contexts.
- Proficiency with at least two relevant languages, such as Python, MATLAB, C#, C/C++.
- Experience with Linux environments and shell scripting.
- Excellent communication and collaboration skills.
- Motivation to support research rather than lead it directly.
- Having experience with HPC and parallel computing (e.g. SLURM, MPI), reproducible workflows, version control, and testing, and prior working experience in research groups in any one of the following topics is considered an advantage: complex systems, statistical physics, nonlinear dynamics, condensed matter physics, and similar fields.

We offer:

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- Impactful Work: Contribute directly to high-impact scientific research.
- Collaborative Team: Work closely with physicists, engineers, and researchers.
- Skill Development: Expand your expertise in HPC, scientific software, and experimental systems.
- Intellectually Stimulating Environment: Stay close to innovation and discovery.
- Diverse Technical Work: From simulations to system maintenance, every day is different.

- Healthy Work Culture: Supportive, inclusive, and respectful of work-life balance.
- Trusted member: You'll have autonomy over your work, backed by a team that appreciates robust software and strong infrastructure.

Further information:

The position is salaried and based on the collective agreement of the Länder (TV-L). If the personal and collective agreement requirements are met, the employee will receive pay grade E13 TV-L.

Further information can be found at https://oeffentlicher-dienst.info/ (in German).

The place of work is Ruhr University Bochum.

If the position is funded by third-party funds the employee has no teaching obligation.

We look forward to receiving your detailed application, including a CV, a cover letter, and contact details for two references as one PDF file.

RUB sees itself as a university with an international presence. The campus languages are German and English. Competence in at least one of the two languages and the willingness to learn the other are a prerequisite. RUB provides corresponding free courses for employees.

German language courses are offered by the University Language Center (ZFA) in the field of German as a Foreign Language (DaF).
https://www.daf.ruhr-uni-bochum.de/sbgk/index.html.en

The Staff Council has the right to participate in all selection interviews. At the request of a candidate (m/f/x), it will ensure its participation in the entire procedure. Please contact **wpr@rub.de**.

The Ruhr-Universität Bochum is one of Germany's leading research universities, addressing the whole range of academic disciplines. A highly dynamic setting enables researchers and students to work across the traditional boundaries of academic subjects and faculties. To create knowledge networks within and beyond the university is Ruhr-Universität Bochum's declared aim.

The Ruhr-Universität Bochum stands for diversity and equal opportunities. For this reason, we favour a working environment composed of heterogeneous teams, and seek to promote the careers of individuals who are underrepresented in our respective professional areas. The Ruhr-Universität Bochum expressly requests job applications from women. In areas in

which they are underrepresented they will be given preference in the case of equivalent qualifications with male candidates. Applications from individuals with disabilities are most welcome.

Contact persons for further information:

Prof.'in Serim Ilday +49 170 1210085
Prof. F. Ömer Ilday +49 170 4807805.

Travel costs, accommodation costs and loss of earnings or other application costs for job interviews can unfortunately not be reimbursed.

We look forward to receiving your application via our **online application portal by 2025-12-15**. Please make sure to mention the reference number ANR 5113.

Vorteile für Mitarbeitende

- Vergünstigtes Jobticket
- Arbeitsplatz in lebendiger Metropolregion

Stellenmerkmale

Beschäftigungsart	**Wissenschaftliche:r Mitarbeiter:in**
Beschäftigungsumfang	**Vollzeit (befristet)**
Home Office	**Nein**
Bewerbungslink	**https://jobs.ruhr-uni-bochum.de/jobposting/3dc9083831e503201e5a9caa2e0a802b5c28f02b?ref=stellenwerk**

Kontaktdaten

Firma/Hochschule	**Ruhr-Universität Bochum**
Anschrift	**Universitätsstraße 150 44801 Bochum**
Kontakt	**Prof.'in Dr. Serim Ilday**

Telefon	**+492343227645**
E-Mail	
Webseite	**https://uni.ruhr-uni-bochum.de/de/stellenangebote**