



Universität Hamburg

DER FORSCHUNG | DER LEHRE | DER BILDUNG

As a University of Excellence, Universität Hamburg is one of the strongest research universities in Germany. As a flagship university in the greater Hamburg region, it nurtures innovative, cooperative contacts to partners within and outside academia. It also provides and promotes sustainable education, knowledge, and knowledge exchange locally, nationally, and internationally.

The Department of Physics, Institute for Nanostructure and Solid State Physics (HARBOR) invites applications for a

RESEARCH ASSOCIATE FOR THE PROJECT “BETTER MODELS FOR X-RAY CRYSTALLOGRAPHY AND CRYO-EM” - SALARY LEVEL 13 TV-L -

The position in accordance with Section 28 subsection 3 of the Hamburg higher education act (Hamburgisches Hochschulgesetz, HmbHG) commences on 1st of March 2021.

This is a fixed-term contract in accordance with Section 2 of the academic fixed-term labor contract act (Wissenschaftszeitvertragsgesetz, WissZeitVG). The term is fixed for a period of 36 months. The position calls for 39 hours. This position is also suitable for part time employment.

RESPONSIBILITIES:

Duties include academic services in the project named above. Research associates may also pursue independent research and further academic qualifications.

SPECIFIC DUTIES:

Macromolecular X-ray structures define molecular biology. However, the large discrepancy between the measured X-ray data and the structural models we use to interpret these data (as evidenced by R-values of 15-25%) clearly shows that something is amiss. This PhD project aims to discover what is missing through statistical analyses and practical experiments. Similarly, we are aiming to improve the modelling of single-particle Cryo-EM data utilizing neuronal networks. This knowledge will then be used to improve how all structures of biological macromolecules are modelled and ultimately, to enable structural biologists to answer more challenging biological questions.

We offer a 36-month full-time position at the University Hamburg, with a competitive 65% TV-L E-13 salary (approximately 33 000 € p.a.), funded as part of the DFG project “Towards a better understanding of macromolecular X-ray structures”. This rewarding and challenging research project will allow you to acquire skills in applied structural biology and its theoretical foundations as well as data analysis including programming and machine learning.

* Full-time positions currently comprise 39 hours per week.

You will have access to state-of-the-art equipment and our group is well-connected; you will have the opportunity to visit several international collaboration partners. You will have a personal thesis committee to guide you and benefit from an extensive transferable skills program including career service. You will get access to national and public-service pension schemes (VBL), health care, and 30 days of holiday per year. Hamburg welcomes international candidates with language classes and practical advice - and the University also offers support for researchers with children.

As well as carrying out the research project outlined above, the successful candidate will be expected to complete a PhD.

REQUIREMENTS:

A university degree in a relevant field. We are looking for someone who is curious, likes to learn and is interested in solving this long-standing problem that affects all of macromolecular crystallography and enabling researchers to solve structures by utilizing neural networks. You should have a good working knowledge of Linux and at least basic understanding of crystallography and statistics. Previous experience with programming, wet lab work and machine learning are a bonus. You should be well-organized, reliable and be able to develop your own scientific ideas. A good command of English is a prerequisite; you will be expected to present your work at in-house and international meetings, and to contribute to teaching and outreach. If you do not speak German, you will be expected and supported in learning it during your PhD.

The Free and Hanseatic City of Hamburg promotes equal opportunity. As women are currently underrepresented in this job category at Universität Hamburg according to the evaluation conducted under the Hamburg act on gender equality (Hamburgisches Gleichstellungsgesetz, HambGleiG), we encourage women to apply for this position. Equally qualified and suitable female applicants will receive preference.

Qualified disabled candidates or applicants with equivalent status receive preference in the application process.

For further information, please contact Dr. Andrea Thorn or consult our website at www.thorn-lab.de.

Applications should include a cover letter, a tabular curriculum vitae, and copies of degree certificate(s). Please send applications by 15th of January 2021 to: andrea.thorn@uni-hamburg.de. Your cover letter should specifically state why you are interested in this position specifically, your CV should detail any data analysis, programming and structural biology qualifications and three addresses of referees. Generic applications will not be considered.

Please do not submit original documents as we are **not** able to return them. Any documents submitted will be destroyed after the application process has concluded.