



At the Institute of Biomedical Physics at the Faculty of Mathematics and Natural Sciences of Heinrich Heine University Düsseldorf a post as a

scientific employee (m/f/d)

(65,00 %, pay grade 13 TV-L)

is to be filled by 1 January 2023. The employment is initially limited until 31 December 2025. Within the DFG-SPP 2332 „Physics of Parasitism“ <https://www.uni-wuerzburg.de/forschung/physics-of-parasitism/start/> it is a PhD student position in the sense of the Act of Academic Fixed-Term Contract (Wissenschaftszeitvertragsgesetz - WissZeitVG), which is to promote the scientific qualification of the employee.

Your tasks:

In this project, we will build “virtual parasites” from high-resolution image data as basis for a precise data-driven understanding of parasite biophysics. You will use deep learning segmentation to create a 3D structural model of *Trypanosoma brucei* based on image data. In a second step, you will perform in silico mechanical tests using Finite Element Analysis and validate them on experimental data. The results will be made available as a web-based resource for visualizing and exploring the „virtual parasite“. The PhD thesis offers many opportunities for networking and interdisciplinary exchange with other young researchers within the „Physics of Parasitism“ program.

Our requirements:

- A completed scientific university education (M.Sc./M.A./Diploma/Magister) in the field of (bio-)physics, (bio-)informatics or a comparable discipline
- Experience with one or several of the following topics: image processing with deep neural networks, biomechanics, computer simulations, web-based 3D visualization

The pay scale grouping will be, depending on the personal qualification of the applicant, up to pay grade 13 TV-L.

In principle, the employment can also take place part-time, if no compelling official reasons are opposed in an individual case.

Heinrich Heine University Düsseldorf aims at increasing the percentage of employed women. Applications from women will therefore be given preference in cases of equal aptitude, ability and professional achievements unless there are exceptional reasons for choosing another applicant. Applications from suitably qualified severely disabled persons or disabled persons regarded as being of equal status according to Book IX of the German Social Code (SGB – Soziales Gesetzbuch) are encouraged to apply.

Your contact person in case of questions is Prof. Philip Kollmannsberger; email: Philip.Kollmannsberger@hhu.de; phone number: 0211-8115256.

Please submit your application documents (CV, covering letter, certificates) citing reference no. 157.22 – 3.1 until 27.12.2022 preferably by email to

Philip.Kollmannsberger@hhu.de

or by mail to :

Heinrich Heine University Düsseldorf
Faculty of Mathematics and Natural Sciences
Institute of Biomed. Physics/Geb. 25.23.01
Attn. Prof. Philip Kollmannsberger
Universitätsstraße 1
40225 Düsseldorf



Please do not submit application materials in folders and be sure to send copies only, as documents will not be returned (they will be destroyed after the selection procedure has been completed).