



At the institute of Computer Science, Department of Computational Cell Biology in the faculty of Mathematics and Natural Sciences of Heinrich Heine University Düsseldorf a post as a

Scientific Employee (m/f/d)

(65 %, pay grade 13 TV-L)

is to be occupied at the earliest possible date. The employment is initially limited for a period of one year with an option for prolongation. It is a qualification position in the sense of the Act of Academic Fixed-Term Contract (Wissenschaftsvertragsgesetz – WissZeitVG), which is to promote the scientific qualification of the employee.

The research group for Computational Cell Biology is located in the Institute for Computer Science, but also belongs to the Department of Biology. Our work is at the interface between Biophysics, Biology, and Computer Science. We develop computer models to describe quantitatively the physiology and growth of biological cells and organisms. Our models are fully mechanistic, i.e., the calculations are based exclusively on the laws of physics and chemistry; however, at least for now, the set of available processes is constrained by what evolutionary history has provided.

Join the pioneering team at Heinrich Heine University Düsseldorf as we embark on a groundbreaking journey with our ERC-funded project, “MechSys”. This project offers an exciting opportunity to be at the forefront of developing the world’s first comprehensive plant models built entirely on the principles of physics and chemistry, with a particular focus on thermodynamics. We want to revolutionize our mechanistic understanding of plant anatomy and physiology; we want to understand how plants adapt to different environments and microclimates; and we want to provide blueprints for the engineering of crops that can feed a growing world population. The PhD position, under the guidance of Prof. Martin Lercher in the Computational Systems Biology group, is a gateway to innovative research in theoretical biophysics. With a contract initially for one year and the possibility of an extension to 3.5 years based on mutual satisfaction, you’ll dive deep into the mysteries of plant life, exploring different types of photosynthesis and beyond. We offer a stimulating work environment at 65% TV-L E13 public tariff level, inviting you to contribute to groundbreaking research.

Your tasks:

- Engage in high-impact research that aims to solve complex biological puzzles through physics and chemistry
- Collaborate with an interdisciplinary team of physicists, engineers, mathematicians, biochemists, and biologists
- Contribute to pioneering models based on differential equations and optimal control frameworks, focusing on the plant’s interaction with its environment and the theoretical optimization of enzyme kinetics

Our requirements:

- A completed scientific university education (M.Sc. / M.A. / Diploma / Magister) in the field of biophysics
- Passionate individuals with a strong background in physics, biophysics, chemical engineering, or related fields
- Creativity, analytical skills, and a keen interest in interdisciplinary collaboration
- Previous experience in modeling, simulation, or computational research is a plus

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.

Your contact person in case of questions is Prof. Dr. Martin Lercher; email: martin.lercher@hhu.de

Please submit your application documents citing reference no. 114.24 – 3.1 until 07.08.2024

preferably by email to:
martin.lercher@hhu.de

or in writing to:
Heinrich Heine University Düsseldorf
Faculty of Mathematics and Natural Sciences
Institute of Computer Science
Attn. Prof. Dr. Martin Lercher
Universitätsstr. 1
D-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).