The Cluster of Excellence “Physics of Life” offers, subject to granted funds, a position in the Junior Research Group Bio-image data science, as

Research Associate/ Software Engineer in Bio-Image Data Science (m/f/x)  
(subject to personal qualification, employees are remunerated according to salary group E 13 TV-L)

starting as soon as possible. The position is initially limited to 36 months. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG). Balancing family and career is an important issue. The post is generally suitable for candidates seeking part-time employment. Please indicate the request in your application.

The Cluster of Excellence PoL (https://physics-of-life.tu-dresden.de/en) is an interdisciplinary research center for biology, biophysics and computer science, which is funded by the German Research Foundation (DFG) and offers a wide range of support structures. You will be part of the Junior Research Group Bio-image data science (Bids) at PoL and work in a highly interdisciplinary environment. The mission of the Bids is to develop modern and sustainable bio-image data analysis, big-image-data management and image-data-mining solutions. Projects are typically conducted in small interdisciplinary teams. Like all Bids members, you know how to work independently, you take the initiative if necessary, you are a team player, and are comfortable with leading a project team. Knowledge exchange plays a major role, especially when working in teams that span multiple research groups and multiple disciplines.

Tasks: Your research will focus on extending and maintaining the MASTODON Fiji plugin (https://github.com/mastodon-sc) together with the Bids team, its collaborators on this project and their teams (Michalis Averof / IGFL Lyon France, Pavel Tomancak / MPI-CBG Dresden Germany, Jean-Yves Tinevez / Institut Pasteur Paris France). In this project, you will implement modern data science and machine learning methods so that these are accessible from within MASTODON, giving end-users a unique tool in their hands for studying developmental biology. You will work closely together with biologists who use the MASTODON software for their research and you will collaborate with computer scientists who develop the underlying software libraries BigDataViewer, Imglib2 and Fiji. Together with these two communities, you will further develop MASTODON by strengthening its data science capabilities, e.g. introducing modern machine learning methods, to answer scientific questions which are hardly approachable with the current methods and tools.

We invite applications from open-minded candidates who value knowledge sharing and building bridges between disciplines. We encourage scientists to apply who do not yet have deep expert knowledge in biomedical image data science yet but strive to acquire that knowledge and skills.

Formal Requirements:
- university degree in computer science, mathematics, physics, biology, engineering, or natural science
- 3 years of relevant work experience are required. Alternatively, PhD degree is desired
- advanced experience in programming Java
- experience in using data science algorithms such PCA, t-SNE, UMAP, k-means clustering, hierarchical clustering, etc is a plus
- experience in continuous integration, e.g. using github and/or gitlab is a plus
- experience in python programming is a plus
- english communication skills (B2)
- experience in open-source software development is a plus
- Experience in biological physics, wet-lab biology, computational biology, or systems biology is a plus.

**What we offer**

We offer an interdisciplinary and international research environment of high standing and visibility with challenging mid-term projects on diverse research topics. You will be part of the PoL community, the Dresden Campus, and our extensive international network. We offer the opportunity to work on novel approaches to image data science, combined with the possibility to develop your academic or professional career. We provide the possibility to acquire project management skills, team leading skills, and teaching skills. Employment conditions include a comprehensive package with full social benefits, and remuneration according to the State Tariff for Civil Servants (TV-L).

Applications from women are particularly welcome. The same applies to people with disabilities.

Please submit your application, including a cover letter explaining your motivation to apply for this position, a CV including a list of your publications and/or open-source projects, and a copy of the certificate of your highest academic degree by regular mail until **February 22, 2022** (stamped arrival date applies) preferably by email in one single PDF document via the SecureMail Portal of the TU Dresden, [https://securemail.tu-dresden.de](https://securemail.tu-dresden.de) to [robert.haase@tu-dresden.de](mailto:robert.haase@tu-dresden.de) (subject line ‘Research Associate in Bio Image Data Science’) or to: **TU Dresden, Exzellenzcluster „Physik des Lebens“, z.H. Herrn Dr. Robert Haase, Arnoldstrasse 18, 01307 Dresden.** Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

**Reference to data protection:** Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: [https://tu-dresden.de/karriere/datenschutzhinweis](https://tu-dresden.de/karriere/datenschutzhinweis)