Job Vacancy
University of Regensburg | Number 23.290

The University of Regensburg with its more than 20,000 students is an innovative and interdisciplinary oriented campus university with a broad range of academic disciplines and research activities for young people from Germany and abroad. The chair "Computational Immunology" performs research at the interface between the method-driven, data science side and the hypothesis-driven, biological side of bioinformatics (https://erhard-lab.de). We develop statistical methods to extract quantitative parameters from molecular high-throughput data, and to integrate heterogeneous data sets. A network of experimental collaborators allows us to apply these new methods to specifically generated data to gain entirely new and exciting insights into the world of immunology. We invite applications for the position of a

Doctoral Researcher (Ph.D. candidate) (m/f/d)
to start at the earliest convenience. This is a full-time position (40,1 hours per week) based on a fixed-term contract valid for a period of 3 years. The position is suitable for part-time work. The salary is according to TV-L E13 (100%).

Project

Single cell RNA-seq is a powerful technology to analyze the expression of thousands of genes in tens of thousands of cells. However, a limitation is that each cell can only be analyzed once. Metabolic RNA labeling combined with single cell sequencing developed by us (Erhard et al. Nature 2019) offers a solution to this problem by allowing for a look into the past of each cell, and also provides much more details about the temporal dynamics of gene regulation. In this project, new computational methods for the analysis of such data will be developed and applied to data sets that were generated to pursue exciting questions in virology and immunology.

Your responsibilities:

- Development and implementation of statistical methods for the analysis of single cell RNA sequencing experiments (especially involving metabolic RNA labeling) in collaboration with other researchers in the group.
- Application of the developed methods for the analysis of primary data sets.
- Presentation of your research at international conferences and publication in scientific journals.
- Support of teaching activities at the Chair of Computational Immunology and supervision of undergraduate students (teachingobligation: 5h / week)

We seek:

- A university degree in bioinformatics, statistics, computer science, data science or a related discipline is necessary.
- Programming experience (preferably in R, Java and/or Python) and hands-on approach as well as theoretical knowledge of statistical methods is required.
- Experience in working with biological molecular high-throughput data is desired.
- We expect good communication skills, willingness to conduct research in an interdisciplinary team, and a high degree of intrinsic motivation to engage with both the methodology and biology of our questions.
We offer:

- As part of a young and international team, you will conduct research on exciting topics in immunology using bioinformatics methods.
- Our lab has excellent funding and many highly renowned collaboration partners allowing you to apply all developed methods to primary data from cutting-edge research projects with a strong potential for high-ranking publications.
- The methodological part of the project contributes to our GRAND-SLAM/grandR toolkit, which is used by many researchers worldwide to study the kinetics of gene expression for a wide range of questions.
- You will acquire knowledge in both theoretical and practical bioinformatics research and learn to communicate your work in these two very different research fields of data science and biology.
- Your PhD project will be supported by personal and structured supervision and lively teamwork.
- We offer flexible work organization.

The University of Regensburg aims to increase the proportion of women and therefore expressly encourages qualified women to apply. The University of Regensburg is particularly committed to support reconciliation of work and family life (for details visit https://www.uni-regensburg.de/universitaet/personalentwicklung/familien-service).

Candidates with registered severe disabilities are given preference over non-disabled applicants who do not otherwise have statutory preferential status if their overall personal aptitudes, skills and qualifications are equal. Please, indicate the existence of a severe disability so that a representative for people with disabilities can be invited to the interview if requested.

Please, also note that we will not cover travel and other expenses for personal interviews.

If you have any questions, please contact Prof. Dr. Florian Erhard (E-Mail: florian.erhard@informatik.uni-regensburg.de). We look forward to receiving your detailed application (letter of motivation, CV, abstract from master thesis, contact information from two academic references), which should be sent in a single PDF file until January 26th 2024 to: jobs@erhard-lab.de

Our representative publications:


This is the English translation of a German job advertisement published by the University Regensburg at https://www.uni-regensburg.de/universitaet/stellenausschreibungen/lehre-forschung/index.html.

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