Postdoctoral Fellow - Heidelberg Human Bioinformatics (HD-HuB)

Location: Heidelberg, Germany
Staff Category: Postdoctoral Fellow
Contract Duration: 3 years
Grading: N/A
Closing Date: 31 July 2016
Reference Number: HD_00909

Job Description

The Zeller Team is seeking a postdoctoral researcher to develop computational tools and data analysis strategies for human microbiome data. Drawing on state-of-the-art concepts from biostatistics and machine learning, we develop new analysis tools to meet the standards of clinical studies. To leverage these tools in order to gain a better understanding of the microbiome’s role in human disease and treatment response, we collaborate with other computational and experimental research groups at EMBL. The group moreover benefits from its embedding in the context of the bioinformatics infrastructure initiative HD-HuB / de.NBI and contributes to delivering excellent bioinformatics services in this context.

The postholder will:

- develop new analytical methods for microbiome data analysis and implement / maintain these as software packages (in R/Bioconductor or Python);
- analyse metagenomics data sets from clinical microbiome studies in collaboration with other researchers from the Zeller Team and the Bork Group, capitalizing on her/his in-depth understanding of the methodologies and to showcase the potential of her/his tools in cutting-edge research projects;
- integrate tools into pipelines and workflows (e.g. in Galaxy) and optimize their interoperability, efficiency, usability and portability (via virtualization);
- interact with other scientists and bioinformaticians from the Huber and Korbel Groups at EMBL and partners from the HD-HuB / de.NBI / Elixir networks.

As a research position in an academic service context, it is ideally suited for applicants who:

- envision a career in applied research or scientific infrastructures;
- enjoy programming, scientific software development and are eager to expand their repertoire of sophisticated data analysis skills;
- like to work in a team, network with other bioinformaticians at EMBL and beyond (e.g. by participating in EMBL’s Bio-IT project), and support their user community;
- are excited to work in a young dynamic team ingrained in EMBL’s collaborative, interdisciplinary, and culturally diverse research environment.

The European Molecular Biology Laboratory (EMBL) is one of the highest ranked scientific research organisations in the world. The Headquarters Laboratory is located in Heidelberg (Germany), with additional sites in Grenoble (France), Hamburg (Germany), Hinxton (UK) and Monterotondo (Italy).

Qualifications and Experience

Essential qualifications include:

- a PhD in computational biology or related field preferably with a focus on computational method development;
- advanced programming skills, including R, Python, Unix/Bash as well as familiarity with basic concepts of computer science;
• strong interest and experience in **biological data analysis** (in genomics or related field).

The following optional qualifications are considered advantageous:

• experience in **software development**, maintenance and/or user support;
• knowledge of (and/or work experience with) **biostatistics** and machine learning;
• experience with **large-scale data analysis** using software pipelines in an HPC and/or cloud computing environment;
• research experience in **metagenomics**, working with NGS data;
• basic knowledge of HTML and **web service development**.

**Application Instructions**

Please apply online through [www.embl.org/jobs](http://www.embl.org/jobs)

**Additional Information**

For more information, please (informally) contact Georg Zeller [zeller@embl.de](mailto:zeller@embl.de).

EMBL is an inclusive, equal opportunity employer offering attractive conditions and benefits appropriate to an international research organisation.

Please note that appointments on fixed term contracts can be renewed, depending on circumstances at the time of the review.