1-2 PhD positions in data-driven biodiversity research using metabarcoding

Uppsala University is a comprehensive research-intensive university with a strong international standing. Our ultimate goal is to conduct education and research of the highest quality and relevance to make a long-term difference in society. Our most important assets are all the individuals whose curiosity and dedication make Uppsala University one of Sweden's most exciting workplaces. Uppsala University has over 54,000 students, more than 7,500 employees and a turnover of around SEK 8 billion.

The Department of Organismal Biology teaches and explores the evolution, development and function on the organismal level. For more information see www.iob.uu.se.

[Read more about our benefits and what it is like to work at Uppsala University](#)

The position is placed in the Andermann research group (https://katalog.uu.se/empinfo/?id=N22-999) within the Systematic Biology program at the Department of Organismal Biology (Evolutionary Biology Center, Uppsala University). The position will be part of the SciLifeLab Data-Driven Life Science (DDLS) research school (https://www.scilifelab.se/data-driven/about/), including unique training and course opportunities within the DDLS network.

At the Andermann lab, we are working on the intersect of computational biology and biodiversity research, developing new computational methods and fieldwork/labwork workflows to quantify the complexity of biodiversity, focusing on terrestrial systems. Our vision is to one day be able to reliably capture the complete biodiversity at a given site in a standardized and reproducible manner. We are a young and dynamic

research group with the mission of contributing through our research to alleviating the ongoing biodiversity crisis. We value innovative ideas, a collegial and non-hierarchical atmosphere, and high-quality and high-impact research. And above all we enjoy what we are doing!

Duties/Project description

The focus of this PhD position will be to apply and further develop existing environmental DNA sampling and processing techniques, with the aim to comprehensively capture the biodiversity at a given site across the whole tree of life. This work will take place in collaboration with other research groups specialized in environmental DNA, both based at Uppsala University as well as at other national and international institutions. Depending on the candidate's background and interest, the PhD position may include the following tasks: i) testing combinations of different eDNA sampling techniques in the field, ii) developing lab-protocols to extract and amplify genetic markers for multiple organism groups from eDNA samples, iii) developing bioinformatic pipelines to automatically process, catalogue, and analyze samples (in collaboration with the SBDI ASV portal - https://asv-portal.biodiversitydata.se/about), iv) compiling diversity metrics based on taxonomic as well as genetic diversity. In case of multiple suitable applicants, up to two applicants with complementary backgrounds may be accepted for this call.

Requirements

Completed university education of 240 university points (högskolepoäng, hp) of which at least 60 hp must be on advanced level, corresponding to a master's degree in a relevant field. Relevant fields include biology, bioinformatics, genomics, phylogenetics, macroevolution/macroecology, or related. We are looking for highly motivated candidates who enjoy challenges and can independently explore new ideas. The ideal applicant has a background in working with genomic data, preferably within an environmental DNA or general metabarcoding context. Fieldwork and/or labwork experience are valued equally as bioinformatic skills. Candidates should have excellent communication skills (spoken and written English).

Additional qualifications

In filling this position, the university aims to recruit the person who, in the combined evaluation of competence, skills and documented qualifications, is judged most suitable to carry out and develop the work-in-hand and to contribute to a positive development of the department. Additional valuable qualifications include coding

experience in Python, R, or similar, as well as experience with working on computing clusters. Experience with phylogenetic methods, spatial analyses, and long and short read assembly methods are additional merits that are relevant for the position.

Position

The PhD-student position is a 4-year appointment, and the candidate will primarily devote the time to his/her own research studies. Other departmental work, such as teaching or administration can be part of the position (maximum 20 %, extending the position to a maximum of 5 years). Salary placement is in accordance with local guidelines at Uppsala University. The applicant must be eligible for PhD studies at Uppsala University.

Information about research education can be found at the web site of the Faculty of Science and Technology, https://www.teknat.uu.se/education/postgraduate/.

Application

The application should include 1) a letter of intent describing yourself, your research interests and motivation of why you want to do a PhD, 2) a short description of your education, 3) a CV, 4) a copy of your master degree and course grades, 5) the names and contact information (address, email address, and phone number) of at least two reference persons, 6) relevant publications (including master thesis). The application should be written in English.

Rules governing PhD students are set out in the Higher Education Ordinance chapter 5, §§ 1-7 and in Uppsala University's rules and guidelines http://regler.uu.se/?languageId=1.

About the employment

The employment is a temporary position according to the Higher Education Ordinance chapter 5 § 7. Scope of employment 100 %. Starting date 01-01-2023 or as agreed. Placement: Uppsala

For further information about the position, please contact: Tobias Andermann, tobias.andermann@ebc.uu.se.

Please submit your application by 31 august 2022, UFV-PA 2022/2450.

Are you considering moving to Sweden to work at Uppsala University? If so, you will find a lot of information about working and living in Sweden at www.uu.se/joinus. You are also welcome to contact International Faculty and Staff Services at ifss@uadm.uu.se.

Please do not send offers of recruitment or advertising services.

Submit your application through Uppsala University's recruitment system.

Placement: Department of Organismal Biology

Type of employment: Full time , Temporary position longer than 6 months

Pay: Fixed salary

Number of positions: 1

Working hours: 100 %

Town: Uppsala

County: Uppsala län

Country: Sweden

Union representative: ST/TCO tco@fackorg.uu.se
Seko Universitetsklubben seko@uadm.uu.se
Saco-rådet saco@uadm.uu.se

Number of reference: UFV-PA 2022/2450

Last application date: 2022-08-31

Apply for position