

PhD position in biophysical protein evolution

Domain

Structural bioinformatics, evolution, protein function

Project

We offer a unique opportunity to explore the biophysical properties of proteins using an evolutionary perspective at the (IB)² Interuniversity Institute of Bioinformatics in Brussels (<http://ibsquare.be/>). Whereas the prediction of how a protein folds has recently been essentially solved, the study of protein dynamics and of the ambiguous behavior of proteins that switch between different shape is becoming increasingly important, as such features of proteins play a key role in crucial cellular functions. In this fundamental research project, with many potential industrial applications, the selected applicant will investigate the relationship between the sequence, structure and biophysical conservation of proteins for a range of (mostly micro)organisms that inhabit drastically different environments. You will use state-of-the-art statistical approaches to disentangle the footprint of common ancestry from the influence of the environment. The PhD candidate will be based in Brussels at the Bio2Byte group of the VUB (<https://bio2byte.be/>), with expertise in the prediction of protein properties from their sequence, and at the EEG (Ecological & Evolutionary Genomics) group of ULB (<https://ebe.ulb.ac.be/ebe/Flot.html>), with expertise in genome assembly, comparative genomics and molecular systematics. The project will be conducted in collaboration with Dr. Danny Ionescu, a specialist in microbial ecological genomics at the IGB (Leibniz-Institute of Freshwater Ecology and Inland Fisheries) in Berlin.

Requirements

We are looking for a candidate with a Master's Degree (MSc) in Sciences, with a strong background in **biology and statistics** and excellent computational skills, preferably in (structural) **bioinformatics**. Prior experience working with protein sequences on **evolutionary** issues will be an asset for the position. Candidates must have an excellent track record (*e.g.* involved in publications or conference presentations) and be fluent in English.

Practical information

The position is initially for one year, starting on 1st October or as soon as possible thereafter, with possibility to extend for three more years to complete a full PhD. The key work locations will be the (IB)² Interuniversity Institute of Bioinformatics in Brussels (<http://ibsquare.be/>; VUB Etterbeek).

Applications and further information

Please contact Wim.Vranken@vub.be and/or jflot@ulb.ac.be for more information.

For a valid application, please fill in the form at <https://bit.ly/biophysevo>. Each submitted application will be reviewed until a suitable candidate is found.

Your application must include 1) a CV (including contact information for at least 2 reference persons familiar with your previous achievements), 2) the complete transcripts of records from your BSc and MSc, and 3) a detailed motivation letter.