



PhD Position in Statistical Phylogenetics (Species Tree Estimation)

I invite applications for a doctoral position in computational phylogenetics in my research group at the GeoBio-Center of the Ludwig-Maximilians-Universität (LMU), München. The position is funded by the DFG Emmy Noether program. The position is 75% and research only (no classes and teaching required). The position should start between 1st October 2019 and 1st April.

The main research topic for the PhD project is to develop methods for species tree estimation. Traditionally, estimates of gene trees have been used as a proxy to infer species trees. However, different genes have different evolutionary histories because of various biological processes (e.g., incomplete lineage sorting, gene flow and hybridization, gene duplication and losses). The focus of the PhD thesis will be on developing new statistical methods to estimate species phylogenies while accounting for gene tree variation and apply these methods to estimate species phylogenies from genomic data.

Applicants should have a Master's degree, completed or completion imminent, in bioinformatics, biostatistics, computer science, evolutionary biology or a related field. The key skills required are proficiency programming (C, C++ or Java) and good communication skills (oral and written English). Basic knowledge in phylogenetics and statistical inference (especially Bayesian statistics) is beneficial but not required. Training in these skills will be provided depending on need. The thesis will be written in English. No knowledge of German is required but some basic knowledge will be helpful outside of work. Enthusiasm, determination and the capacity to work independently are essential. The candidate is highly encouraged to develop their own research ideas complementing the current research direction.

My group is broadly working on theory and computational methods for Bayesian inference of phylogeny (<https://hoehnalab.github.io>). The research directions include phylogeny inference, divergence time estimation, diversification rate estimation and model testing. All of our methods are implemented in the open-source program RevBayes (<http://www.RevBayes.com>) which is the successor software of the popular program MrBayes. The successful applicant will be part of our vibrant RevBayes group and will contribute to further development of the program. There will be opportunities for the successful applicant to work with and visit the research groups of my collaborators in Europe and the USA. Furthermore, I expect the candidate to become actively involved in our RevBayes workshops and hackathons.

My group is located at the GeoBio-Center of the LMU Munich, one of Germany's and Europe's top Universities (#32 world-wide; #8 in Europe; #1 in Germany; <https://www.timeshighereducation.com/world-university-rankings/lmu-munich>). The GeoBio-Center is located at the Königsplatz which is in walking distance to the historic city center (Marienplatz) and English Garden (city park with 3.75 km² area). The GeoBio-Center is highly interdisciplinary and consists of researchers from different departments including paleontology, molecular and evolutionary biology, zoology and botany.

The position will be compensated according to the standard DFG salary scheme (75% of TVL-E13; approx. 2750€ monthly gross salary; approx. 1650€ monthly net salary). The salary includes benefits such as health care, 30 days of vacation per year, pension, unemployment insurance and child support (if applicable).

LMU Munich is an equal opportunity employer. We strongly encourage applications from female candidates. LMU Munich intends to enhance the diversity of its employees. Furthermore, disabled candidates with essentially equal qualifications will be given preference.

Further information can be found at (<https://hoehnalab.github.io>), and questions should be directed to Sebastian Höhna (hoehna@lmu.de). Applications, including a letter of motivation and your research interests (1 page), current CV and names and contact details of two referees should be sent to Sebastian Höhna before the deadline of 31 August 2019. After the deadline I will start reviewing all applications and invite selected candidates for an interview.