PostDoc/PhD in Computational Ecology
Insect-Plant-Microbe Interactions

Background: We are currently looking for a highly motivated PostDoc (50-100% E/A13) or PhD student (65% E13) at the Faculty of Biology, group of Cellular and Organismic Networks of Prof. Alexander Keller, with an as early as possible starting date. The position is currently limited to a 3-year contract, however (only on PostDoc level), can be prolonged by 3 further years if evaluation criteria are met. The group works with interaction networks between insects, plants and microorganisms, more infos here: https://molecular.eco

Scientific research tasks will be to perform computational analyses as statistical syntheses, modelling, bioinformatics and deep-learning in the context of bi- and tri-partite interaction networks between insects, plants and microorganisms. Topics of interest are hereby for example variability of interaction and traits, environmental filtering and cost-benefit tradeoffs. For this, data obtained from previous projects and such of public databases should be combined. Challenges are to clean up, harmonize and integrate such heterogenous and big-data sources. Further, algorithmics, coding, and development of tools and models will be part of the work. Additional data may be obtained in field and lab. Some teaching will be mandatory (2.5 - 5 LVS), either on computational biology or interaction ecology.

On PostDoc level, this position also provides the opportunity for habilitation in the German scholar system, i.e. requires self-responsibility and independence conducting projects. Beyond that the position allows for application of own third-party funding according to prior agreement as long as the intended research falls within the scope of the group's interests. The group is integrated into various coordinated research endeavors, which can serve as a basis to build up an own research network.

Requirements:

- Strong scientific interest in at least two of computational ecology, biodiversity and interaction ecology, coevolution and species traits.
- Skills and experience in analysis of big and heterogeneous data. Previous knowledge on data synthesis, bioinformatics and deep-learning are of benefit.
- Routine with R and/or Python for data analyses. Other coding skills and programming languages are of benefit.
- PostDoc level: PhD in natural sciences or equivalent, particularly in the areas of ecology, bioinformatics or evolutionary biology with focus on computational analyses in the dissertation.
- PhD level: MSc in topics as above.
- High motivation for a career in science; willingness and aptitude for self-responsible and independent work.
- Publications with relevance to mentioned tasks.
- Good writing, reading and communication skills in English.

Salary and conditions: Salary and benefits are according to public service positions in Germany (TV-L). Start date: as early as possible. Our young research group offers a friendly and stimulating working atmosphere in an international team and strong support for your career. Our labs are equipped with state-of-the-art tools and techniques. We are part of a vivid faculty at the largest German university, working at the HighTechCampus Planegg-Martinsried. A balanced work-life relationship is important to us, we offer options to make this position also as a part time contract, flexible working times or with part time remote home-office. The LMU signed the "Charta of Diversity" and advocates gender and background equality. Women and minorities are therefore strongly encouraged to apply. Equally qualified handicapped applicants will be given preference.

Please send your application as **one single pdf file** per email to Prof. Alexander Keller (keller@bio.lmu.de) latest until **31. July 2022**. Interviews will be conducted already until the deadline, so please submit at your earliest convenience. Applications should include a cover letter, a short summary of research interests, CV, if applicable third-party funding, complete certificates, and the names (with email addresses) of two potential referees.