Two PhD positions in Evolutionary Genetics available

We seek two enthusiastic students interested in pursuing a PhD in the EvoGen lab (https://tgossmann.github.io/, principal investigator Prof Toni Gossmann) at TU Dortmund University (https://www.tu-dortmund.de/). Our new lab focuses on experimental approaches and data analysis to identify imprints of selection in natural populations, making use of newly available biodiversity data produced through next and third generation sequencing approaches.

Projects

(I) What genomic regions are involved in short-term climate adaptation? The aim of the project is to address this fundamental question by investigating the role of genomic and epigenomic responses in avian species across the species spectrum, using the great tit (*Parus major*) species complex as a model. This study will combine fieldwork, computational approaches (e.g. simulations, bioinformatics) as well as novel sequencing approaches and their data analysis+interpretation. A participation in fieldwork is anticipated, but trainign will be provided.

(II) How can we trace adaptive evolution over extremely short and long evolutionary time-scales? Aim of this project is to apply and develop new methods to detect the action of adapation in the evolutionary process. This project will investigate adaptation through time-series data as well as a major contributor to long-term evolution using comparative approaches and ancestral reconstruction of DNA.

Requirements and position details

The applicant needs to hold a **Master or equivalent degree** in biology, bioinformatics or a related discipline at time of start date (a Bachelor degree is not sufficient) with a background and/or interest in at least one of the following subjects:

- evolution
- third/next generation sequencing
- climate change
- genomics and biodiversity
- disease biology

Anticipated start date for both PhD positions is summer semester 2023 (**1.4.2023**), though the exact start date is negotiable. The position is open to National and International students (EU and worldwide) and funded for 3 years (TV-L E13, 65%).

Some exposure to statistics and programming is expected, though mastery of these tools is not required and there will be ample opportunity to continue to build and refine your skills through mentorship and collaboration in our lab. Wet-lab (e.g. DNA extraction from tissues) and/or field work experience is a plus.

How to apply

Interested students are encouraged to send the following materials:

- Cover letter discussing their interest in science and joining their lab indicating which project they prefer
- CV
- Copies of undergraduate and (if applicable/possible) graduate transcripts

to **Prof. Toni Gossmann** (toni.gossmann@gmail.com) preferably as a **single PDF** including the identifier **PhD position Evogen** in the Email subject line. Review of applications will begin 23.1.2023.

About TU Dortmund University

Since its founding more than 50 years ago, TU Dortmund University has developed a special profile encompassing 17 departments ranging from science and engineering to social sciences and culture studies. The university has about 32,843 students and 6,900 employees, including approx 300 professors. TU Dortmund University has a strong focus on research. The university's disciplines, e.g. mechanical engineering with its emphasis on production and logistics, physics, biochemical- and chemical engineering, statistics and computer science, as well as education research, are well known for their outstanding research achievements both nationally and internationally. TU Dortmund University is becoming more and more international. More than 4,000 students from around 115 countries are enrolled here; they make up about 13 percent of all students.