Funded PhD position

Designing automated systems for sampling animal biodiversity and measuring the environment

Agriculture and ecology rely on accurately monitoring animals and environmental drivers that affect the production of agricultural commodities and our biodiversity capital. We need to be able to measure those to understand how they affect us and ultimately, to optimise the management of our agricultural and natural landscapes. We strive to develop high-throughput monitoring devices that gather big data for addressing questions of agroecological relevance.

We have opportunities to rapidly step into existing projects, to develop devices in-house with cutting-edge technology, and worldwide connections to deploy the devices internationally. The project could build on existing components to rapidly develop working devices for use in current projects, and then progressively integrate cutting-edge technologies to develop dedicated chips. **The position will be based in the Sustainability, Agriculture, and Technology Lab, Westlake University, China and research will be conducted across China**. There are ample opportunities for collaborations in China and internationally.

Job Responsibilities

You will develop automated devices that monitor biodiversity (mammals, insects, birds, bats, etc.) during day and night, as well as the environment (temperature, humidity, wind, etc.).

Specifically, you will:

- combine existing components (infrared and thermal imagery, full-spectrum acoustic recorders, LED illuminators) to build prototypes
- Test prototypes in the field with standard measurement procedures
- Refine the device by designing dedicated boards and components
- Outsource the assembly work and develop products
- write scientific publications

Job Requirements

We are looking for highly motivated PhD students with

- a MSc in Electronics engineering or related fields, and willing to substantially broaden their scope of work.
- skills in one or more of the following areas: camera traps, printed circuit board design, machine learning, computer vision, sensor integration, biodiversity monitoring
- good language skills in English and Chinese are required.
- ideally publications in scientific journals.

The candidates are expected to work well both individually, in a team, and to integrate in an interdisciplinary and international group.

Compensation and Benefits

Competitive PhD Salary. Start date: 1st of April 2021 or as agreed. The planned duration of the project is three years. The doctoral thesis will be done as a series of English manuscripts. We offer the membership in an international research team and modern facilities. **Ideally, candidates can join the lab immediately as paid visiting students.**

How to apply

Please use the online-portal (https://en.westlake.edu.cn/admissions_aid/graduate/) to submit your application in English **latest by 1st of March 2021.** Application document must include a cover letter, a short summary of research interests, CV, complete certificates, and the names (with email addresses) of two potential referees. Interviews of invited candidates will be held in March/April 2021.

For questions please contact **Dr. Kevin Darras** (kdarras@westlake.edu.cn) or **Prof. Thomas C. Wanger** (tomcwanger@westlake.edu.cn)