Job Advertisement (19/Wi12)

Doctoral position working with bats at the University of Greifswald

DIG-IT! – "Digitalization of natural complexity for the solution of socially relevant ecological problems" – is a new research consortium at the University of Greifswald in the framework of the Excellence Research Programme of the State of Mecklenburg-Western Pomerania "Digitization in research". For a period of 36 months, starting 01.07.2019 and subject to the final allocation of funds, our research group "Applied Zoology and Conservation", which is a member of the abovementioned research consortium, is seeking **1 position** as part-time research assistants (65 per cent) for the purpose of doctoral studies (**doctoral student**; remuneration according to salary group 13 TV-L Wissenschaft)

General Project Background of Dig-IT

By exploring the opportunities of digitalization for ecological sciences, *DIG-IT!* will meet pressing ecological questions of high societal relevance with a future-oriented arsenal of methods and thereby qualify digitally competent ecologists and ecologically experienced biomathematicians and computer scientists. *DIG-IT!* will address a broad array of questions including (but not limited to) service functions and stability of ecosystems under climate and land use change, species protection and innovative environmental monitoring. The overarching goal is to facilitate a "quantum leap" for the field of ecology through the development of universally applicable methods using self-learning algorithms ("Deep Convolutional Neural Networks"), because in the digital age the challenge no longer lies in the amount of available primary data, but in its evaluation. For this purpose, *DIG-IT!* will combine the developmental expertise concerning the automated analysis of image data (Fraunhofer Institute for Computer Graphics, Rostock and Biomathematics, University Greifswald) with the application to urgent ecological questions (Botany / Landscape Ecology / Zoology, University Greifswald).

The advertised position in detail:

For the automated inventory of native species, visual methods (e.g. camera traps) are increasingly used, especially for mammals such as bats, which are difficult to detect, nocturnal and strictly protected. At the same time, the widespread use of automatic acoustic bat detectors creates large amounts of digital data for species identification. Both methods are now standard in bat monitoring. Still missing is an automated coupling and evaluation of these digital data. The candidate will take part in the development of an automated digitalization of image and audio data, such as image and call files of bats flying in/out of hibernacula in order to achieve automated monitoring of bat populations in the future. The established method is to be tested exemplarily on other relevant animal species (e.g. otters). Moreover, with the obtained results, relevant questions in the fields of conservation biology and behavioural ecology of bats can be answered.

Hiring requirements:

We are looking for highly motivated candidates with above-average qualifications, enthusiasm for, and experience in research as well as the willingness to actively participate in the joint inter-disciplinary project.

Successful candidates for doctoral positions have:

- An M.Sc. degree (or comparable university degree) in biology, landscape ecology, computer science, biomathematics or another relevant subject,

- solid knowledge in ecology and evolutionary/conservation biology,

- experience with methods and/or organisms relevant to the position (here bats/mammals),

- excellent written and spoken English (all courses are held in English)

- motivation to participate in an interdisciplinary research and teaching environment.

A driver's license for passenger cars is of advantage, as is knowledge of German or the willingness to learn German.

The University would like to increase the proportion of women in areas in which they are underrepresented and thus applications from women are particularly welcome and will be treated with priority if they have the same qualifications and as long as there are no clear reasons which make a fellow applicant more suitable. Preference will be given to severely disabled applicants if they can provide equal qualifications. This call is addressed to all persons irrespective of their gender. Unfortunately, the application costs will not be reimbursed by the state of Mecklenburg-Vorpommern. You can find the legally binding text of the job advertisement at www.uni-greifswald.de.

Applications (with reference to 19/Wi12) comprising the common set of documents (curriculum vitae, copies of academic certificates, list of publications, letter of motivation) should be sent by **April 14th, 2019**, in electronic form (one pdf-file) by email, to **Prof. Dr. Gerald Kerth** gerald.kerth@uni-greifswald.de.