



In a research project funded by the **Human Frontier Science Program (HFSP)**, the labs of Björn Siemers (MPI for Ornithology, Seewiesen – sensory ecology), Lutz Wiegerebe (LMU München – psychophysics) and Nachum Ulanovsky (Weizmann Institute of Science, Rehovot, Israel - electrophysiology) will jointly investigate the **perception and neural encoding of mirror images in biosonar**.



In the frame of this HFSP project, we offer a

## Post-Doc Position in Sensory Ecology

to work on

### Mirror image perception in echolocating bats

in the Sensory Ecology Group, Max Planck Institute for Ornithology, Seewiesen (close to Munich/Starnberg), Germany.

The task of this position will be to tackle some of the following questions in naturalistic, ecologically-relevant paradigms: Which echo-acoustic features represent water in the echo-world of bats (behavioural characterization of mirror geometry)? Do natural acoustic mirror images from water surfaces impair bats' performance in avoiding obstacles and catching insects? How do bat species adapted to foraging above water deal with mirror images compared to other species? How do bats perceive unnatural vertical mirrors (physical cognition)? A set of behavioural experiments in combination with 3D tracking of bat flight paths and echolocation behaviour shall be used to solve these questions. Research will be carried out both in the field and in a large flight room at our field station in Bulgaria as well as in the labs of all three PIs for this HFSP project.

We are looking for a highly motivated person whose scientific creativity is reflected by publications in international peer-review journals. The ideal candidate will have a strong background in physics, bioacoustics and computation as well as an interest in behaviour and ecology. Profound MATLAB skills are essential. Experience in 3D analysis of animal movement, solid practical experience with behavioural experiments and the proven ability to work in the field will be considered as major advantages. High social skills, team work ability and personal integrity are the prerequisite for fruitful and enjoyable work at our field station.

Remuneration will be on a stipend basis according to the regulations of the Max Planck Society or according to TVöD. The position is initially for two years and can be prolonged.

The Max Planck Society is committed to employing more handicapped individuals and encourages especially disabled persons to apply. Handicapped persons with comparable qualifications receive preferential status.

The position is available from November 2009 or later. Review of applications will begin immediately and continue until the position is filled.

Please send curriculum vitae, certificates, list of publications and addresses with phone numbers of three references as one PDF to [siemers@orn.mpg.de](mailto:siemers@orn.mpg.de)

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