Postdoctoral position in multisensory coordination in animal signalling.

A postdoctoral position in the area of Neurobiology and Behaviour is available from 1 October 2016 for five years (with a year probationary period) at the Department of Behavioural Ecology, Adam Mickiewicz University (AMU). The successful candidate will work with Paweł Ręk, Ph.D. as well as other research group members.

The role of this position is to contribute to the project "Functions and mechanisms of acoustic and visual coordination in animal signalling." directed by Paweł Ręk at the AMU. The project aims at investigating the perception and functional adaptations of temporal coordination in acoustic, visual, and audio-visual signals of animals. It will be based on experimental analysis of the audio visual signalling in the European starling (*Sturnus vulgaris*), audio-visual cooperative signalling in the Australian magpie lark (*Grallina cyanoleuca*), and additionally audio-visual perception in humans.

Key questions addressed include: What is temporal coordination from the sender and perceiver’s perspective? How senders and perceivers cope with the problem of the loss of coordination due to delay of sound relative to vision and the problem of acoustic phase shift among multiple sounds coming from spatially isolated sources? Do sensory illusions play any role during the production and perception of coordinated signals?

The post-doc will contribute to this research program through the design of experiments, selection of materials and locations, participation in fieldworks, data processing and statistical analysis, and active participation in conferences and publication of results. The project will involve consecutive stages: 1) precise recording and analysis of the fine temporal scale of the repertoire of audio-visual displays; 2) visualisation of movements and predictive modelling of the fine scale of acoustic and visual components; 3) construction, programming, and animation of robotic models based on predicted configurations of parameters of temporal coordination; 4) experimental verification of predictive models in the field with the use of robotic models, and application of results in consecutive rounds of modelling and implementation.

Solid mathematical background is required and knowledge in programming, electronics, and software tools is highly advisable. The ideal candidate should have a good publication record in his or her area of expertise; yet, candidates should use their record as a way to demonstrate their independency at consecutive stages of their prior research rather than as a portfolio of credits. A candidate should treat the ideas from the project only as a point of reference and be able to develop them accordingly.

The position will be based primarily in Poznań, Poland; however, the researcher will be encouraged to participate in the Australian part of the project, time permitting. The position comes with research setup and ongoing research support costs, including costs associated with field-works, equipment, and participation in conferences, plus some possibilities for limited teaching.
Net Salary: ~ 50,000 zlotys per annum (~ 67,000 zlotys gross)

Fixed Term: 5 years

Enquiries contact: Paweł Ręk  P: +48 62 829 5705 : rek@amu.edu.pl

Application Information

In order to apply for this role please make sure that you upload the following documents:

- A 2+ page statement addressing the candidate’s suitability for the project and potential ideas.
- A current CV which includes the names and contact details of at least two referees (preferably including a current or previous supervisor).
- Other documents, if suitable.