

Job ID: ISF039PD224

The Acoustics Research Institute ([ARI](#)), an interdisciplinary research institution of the Austrian Academy of Sciences ([OeAW](#)), Austria's leading non-university research facility, invites applications for a

POSTDOC POSITION (F/M/X)

(part-time / 20h per week)

This position is associated with the WWTF project "ANIML – Analysis of Nonhuman Intercommunication with Machine Learning", in which state-of-the-art signal processing and machine learning are combined to establish an efficient workflow for the recording, analysis, and study of animal vocalizations in challenging lab environments. In particular, the project is concerned with the situation where the animals of interest are confined to a known area, but many animals may vocalize simultaneously. Multimodal recordings will be conducted in ARI's budgerigar laboratory, to be separated by source (animal), automatically pre-segmented and -classified with methods developed and implemented by ANIML's signal processing team, in close cooperation with the biology team, which is responsible for further analysis of the signals and their use in behavioral experiments.

In addition to this position, the project will employ a PhD student responsible for the implementation of the source separation algorithm, and a postdoc with a background in bioacoustics who will be responsible for interpreting the acoustic output as well as conducting behavioural experiments with the birds to verify and adjust its output. The successful candidate of this position will work with both the signal processing and biology teams to aid with the development of automated individual vocal data software and conduct behavioural experiments. The candidate will also be responsible for developing software that can be used by other research groups after the end of the project.

Your tasks:

- Support the machine learning PhD student in to develop a processing scheme capable of creating a corpus of cleaned, high-quality bird call recordings with various meta-data from the multi-modal, multi-channel recordings that will be acquired in the ANIML project
- Cooperate with ANIML's biology and signal processing team on various tasks related to the acquisition and processing of said animal recordings
- Support the biology postdoc in conducting behavioural experiments
- Develop the resulting algorithms into software that can be used by other research groups
- Communication of scientific results in scientific publications and at scientific meetings
- No teaching duties

Your profile:

- A PhD with a focus on implementing automated methods to track animal behaviour
- Excellent knowledge and understanding of written and oral English
- Prior experience with video and/or audio processing, in particular in a multi-channel setting, will be beneficial
- Willingness to work in a team

The position is limited to 4 years. The starting date is June 01st, 2024. The successful candidate will be a member of the biology cluster at ARI. The annual gross salary is € 33.250,70, according to the OeAW's collective agreement.

Candidates should send a CV, copies of relevant certificates, and a brief statement describing your motivation to join this project, personal qualification, and research interests by e-mail to marisa.hoeschele@oeaw.ac.at, **no later than April 23rd, 2024**. Please send your informal inquiries and questions to the same address.

The Austrian Academy of Sciences (OeAW) pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity. Individuals from underrepresented groups are particularly encouraged to apply.