



## Open PhD student (m,f,d) position “ (Sub-) cortical control of vocalizations in interacting zebra finches”

### Vallentin Lab

Neural circuits for vocal communication  
Max Planck Institute for Ornithology  
Eberhard Gwinner Str.  
82319 Seewiesen

<https://www.orn.mpg.de/4262507/research-group-vallentin>

Hiring date: At the next possible date

Pay category: Tvl, E13, 65 %

Many species use vocalizations to communicate with each other. These vocalizations range from affective, innate utterances to learned complex vocal sequences. How these diverse levels of complexity are accomplished and how the vocal neural network produces the vocal variety is not well understood. The Vallentin Lab aims to answer this question by studying calling behavior in zebra finches. Zebra finches are songbirds which produce thousands of calls per day. The calls per se are innate but are often coordinated with social partners in a sophisticated manner. We aim to understand whether and how these precisely timed social interactions are learned during development. Further, our goal is to characterize the differential neural mechanisms underlying call production due to arousal and/or during vocal turn taking events directed towards a social partner.

We are looking for a highly motivated candidate with an academic university degree (master or equivalent) in the field of neuroscience, computer science, physics, mathematics, biomedical engineering, biology, or related disciplines to join our team. The project involves behavioral experiments, electrophysiological techniques in behaving animals, pharmacological manipulations and sophisticated data analysis. The candidate should be highly motivated and enthusiastic about fundamental neuroscience research and willing to actively participate in scientific exchange in a multidisciplinary work environment as well as the national and international research community.

The Max Planck Institute for Ornithology (MPIO) is located in Seewiesen, 40 km southwest of Munich. The MPIO has around 150 employees and maintains close cooperation with a number of international institutions with shared research interests. Applicants with disabilities who possess essentially equal qualifications will be given preference. The MPIO is an equal opportunity employer committed to excellence through diversity, and therefore explicitly encourages women to apply.

### Applicant's profile:

- Background in Neuroscience
- Programming skills, preferably in Matlab
- Fluency in English
- Sense of responsibility in animal training
- interest for microelectronics
- enthusiasm for fundamental research
- motivated to publish in peer-reviewed journals; experience in preparing publications is a plus
- expertise in electrophysiology is a plus
- Computer based analysis of behavioral experiments

### Applicant's responsibilities:

- conduct research (including data acquisition, analyses and interpretation) in the context of vocal communication
- prepare and participate in project-based publications

- participate in and present research at national and international conferences and workshops
- support and help organize project-based events and activities
- participate in organizational and administrative tasks

Please submit the following application documents electronically to Dr. Daniela Vallentin (daniela.vallentin@orn.mpg.de):

As one pdf file:

- (1) Application letter (letter of motivation)
- (2) Curriculum vitae
- (3) Degree certificates
- (4) Names and email-addresses of two referees
- (5) List of publications (if applicable)