



## HiWi Position

A HiWi position is available in Prof. Dr. Couzin's group. The position involves annotating (and possibly processing) video data, which consists of underwater videos of marine iguanas foraging. The aim is having not only 3D reconstructions of the environment, but also of the posture and kinematics of the animal while feeding and exploring said environment.

The project can be continued as a Bachelor's or Master's thesis. Therefore, the position can also entail co-authoring papers out of the project if the HiWi contributes significantly.



**Task:** Hiwi will annotate body parts of animals in selections of frames as training data, and if capable, train deep learning algorithms to identify and track the same body parts over the whole video. A study will afterwards be conducted to analyze the interplay between the 3D structure of the environment and the actions and kinematics of the animal.

**Requirements:** Interests in any of the following disciplines: biological or computational physics, movement ecology, animal behaviour, mathematical biology, behavioural ecology, and wildlife science. A preliminary understanding of Python programming and computer vision, or modelling of 3D kinematics, would be beneficial, but not mandatory.

**When:** The position can be flexibly started in October for an initial period of 3 months with the possibility of extension.

Scope: 40 h/month

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