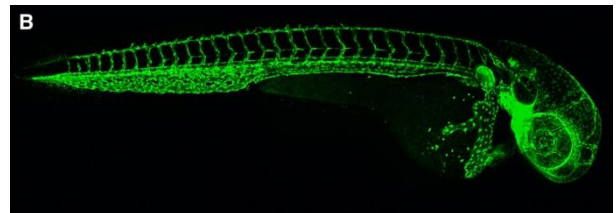




## Bachelor's/ Master's Thesis

# Development of the DiversityScanner-360° for fluorescence imaging of biological samples

New methods are being developed at the IAI for the comprehensive analysis of insects and zebrafish larvae. These include the DiversityScanner-360°, an automated device for digitizing and 3D modeling biological samples by capturing images from different perspectives with high depth of field [1]. The system is to be further developed to enable fluorescence photography [2]. New concepts are to be developed, tested, and evaluated for this purpose.



[3]

### Tasks:

- Development and implementation of new concepts for fluorescence photography
- Conducting tests and evaluating the system
- If master's thesis: subsequent image processing

### Education, experience and skills:

- High motivation and ability to work independently
- CAD knowledge (Creo Parametric)
- Experience with Python
- Thesis can be written in English or German

[1] L. Wühl et al. Diversityscanner-360°: An Automated System for Digitizing Invertebrate Bulk Samples, 2023

[2] C. Pylatiuk et al. Automated Versatile DIY Microscope Platform, 2018

[3] L. Bräutigam et al. Glutaredoxin regulates vascular development by reversible glutathionylation of sirtuin 1, 2013