

MSC/PHD RESEARCH OPPORTUNITY

ACCESSIBLE 3D OPTICAL IMAGING

☀️ INSPIRED BY THE SUN, SEA, AND SCIENCE OF THE ALGARVE! 🐟🔬

About the Project

This MSc/PhD research project focuses on developing **low-cost, open-source 3D optical imaging tools** to enhance biological imaging. It aims to make advanced techniques, such as **light-sheet fluorescence microscopy** and **optical projection tomography**, more accessible to researchers, thereby facilitating studies in developmental biology and disease modeling.

Key Objectives

- Design an improved version of QBI's low-cost 3D optical imaging system.
- Innovate advanced illumination and detection strategies.
- Integrate deep learning for faster scans and analysis.
- Develop methods as plugins for Napari/ImageJ.
- Test the system with zebrafish and marine organisms.
- Share results through publications, open-source code and presentations.

Candidate Profile

Open to MSc and PhD candidates with:

- An MSc (First/Upper Second) in Physics, Engineering, or related fields.
- Experience in optical imaging instrumentation.
- Proficiency in Python or C++ for development of acquisition/control software.
- Strong problem-solving skills and capacity for independent and collaborative research.

Location

The project will be developed at the Quantitative Bio-Imaging Lab (QBI) at CCMAR in Faro, Portugal, within a multidisciplinary team.

Funding

Limited funding may be available; applicants are encouraged to apply for external funding options. Guidance will be provided for competitive applications.

How to Apply

Send a CV, research interests statement, and contact details for two referees to Dr. Teresa Correia at tmcorreia@ualg.pt.

