

Master Internship

AI for microfluidic microscopy

Supervision: [Matthias Függer](#) and [Thomas Nowak](#)

Place: LMF, ENS Paris-Saclay, France

Context

Microfluidics is a field that studies the manipulation of microliter volumes on a chip, often coupled with imaging techniques like microscopes. The technique allows one to observe and control the behavior of microbiological systems at single-cell level.

Research question

Processing of microscopy data is time-consuming and error-prone since videos are currently annotated manually or in semi-automated pipelines. In this internship you will work on a pipeline for AI-based tracking of single bacterial cells. Depending on your interests, the internship may also involve the design of an improved microscopy setup for single-cell tracking with a raspberry Pi, camera, LED panels. We also have the possibility to test the AI-pipeline and the microscopy setup in a wet-lab setup.

Team

You will be part of an interdisciplinary research team at ENS Paris-Saclay, working on synthetic biology, distributed computing, and circuit design.

Required skills

Most important is a curious, driven attitude. An ideal candidate is inclined to work on AI-based tracking of cells in videos, embedded systems design and coding (Python).

You'd like to join?

Write a short statement of interest to: mfuegger@lsv.fr and thomas@thomasnowak.net. If you have questions do not hesitate to contact us.