



YOANN DE FIGUEIREDO

RESEARCH | NANO-OPTICS | STATISTICAL PHYSICS | ACTIVE MATTER

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EDUCATION

2022 – 2025

PhD - Active matter at the nanoscale

LOMA with the MMB team in Optoflow thematics with the Physics and Engineering Doctoral School

- Synthesis of nanomotors and study of their non-equilibrium dynamics using a home-made experimental device.
- Active Matter, Nano-optics, (Non-equilibrium) Statistical Physics, Colloidal physics, Optofluidics

2021 – 2022

M2 - EUR Light S&T

University of Bordeaux

- Specialization Courses : Biophysics, Optics of Nanomaterials, Light-Manipulation of Matter, Advanced Statistical Physics, etc.
- Laboratory Courses : Physics simulation, Research project (self-propelled robots), etc.

2020 – 2021

M1 - Fundamental Physics and Applications

University of Bordeaux

- Specialization Courses : Fluid and Plasma, Advanced Quantum Mechanics, Electrodynamics, etc.
- Experimental Research Work : Spectroscopy, Condensed Matter, Plasma, Nuclear Physics.

2016 – 2020

Bachelor of Science - Physics

University of Paris-Est Créteil

- Specialization Courses : Quantum Physics, Statistical Physics, Mechanics of Continuous Media , etc.
- Additional Courses : Molecular Symmetry, Crystallography, Mechanics of Deformable Systems

INTERNSHIP

February to July 2022

3-photon fluorescence microscopy for in-depth brain and liver tissue analysis

LP2N with Cognet Research Group

- Construction and calibration of different parts of a custom-made microscope in order to perform 3-photon fluorescence microscopy and FCS. (work in progress)

january to may 2022

Study of the behavior of self-propelled robots pair structure (LabProject)

LOMA with the MMB team in turbulence and instabilities thematics

- Investigation into a new structure for active robots like its impact on its movement.

December 2021

High content imaging of spheroids using the soSPIM 3D imaging platform (LabProject)

IINS with Sibarita Team

- Investigation of the effect of the FBS on HEPG2 cells by the characterization of the dynamics of spheroids with three different concentration of FBS.

April to June 2021

Implementation of FCS custom-made microscope to study the dynamics of nanometric self-propulsion

LOMA with the MMB team in Optoflow thematics

- Optimization and characterization of a FCS setup
- Preparation of synthesized nanoparticles sample to study nanoparticles' dynamics

SKILLS

Adaptability and Autonomy

- Realization of various summer-job and internship with autonomous work.
- Self study on different courses like Nonlinear optics, Laser, etc.

Team Work

- Practice sport team (15 teammates) and experimental works/projects (2 colleagues).

LANGUAGE

French	Native language
English	B2
Spanish	B1

TECHNICAL SKILLS

- 🌐 **Programming language**
Python, Matlab, LaTeX.
- ♥ **Analysis software**
ImageJ, OceanView.

INTEREST

- Rugby XIII**
5 years of practice
in Paris and Bègles
- Handball**
7 years of practice
in Nangis (77)

SPORT

SPORT