

## PhD student in mathematical biology



# FOSTIER LOUIS

## Contacts

6 Allée Jean Roy

37000 Tours

06 75 34 44 80

[louis.fostier@inria.fr](mailto:louis.fostier@inria.fr)

 [louis-fostier](#)

## PROGRAMMING SKILLS

Knowledge of

- Matlab, Scilab
- Python
- C/C++, Fortran 90
- FreeFem++,
- Comsol Multiphysics

## LANGUAGES

- English: Advanced
- Italian: Advanced
- French: Native

## HOBBIES

- Sport: 15 years of soccer and 3 years of athletics
- Music: composition with CAD software (FL studio)
- Exact sciences (biology, physics)
- Nature, hiking

## EDUCATION

### THESIS MATHEMATICAL MODELING OF OOGENESIS IN FISH

Inrae Val de Loire Center, BIOS team, MUSCA INRIA team, 2022-Current

Modeling, theoretical study of the model (size-structured population model), implementation and numerical simulation, inverse problem

### MASTER DEGREE SCIENTIFIC CALCULATION AND MODELING, specialty in numerical analysis, Summa cum Laude

University of Rennes 1, 2020-2022

Physical modeling, Analysis, Numerical analysis, Numerical simulation, Parameter estimation, Scientific calculation

### BACHELOR'S DEGREE MATHEMATICS FOR RESEARCH, with highest honour

University of Rennes 1, 2017-2020

Linear and bilinear algebra, Differential equations, Differential calculus, Topology, Lebesgue integral, Numerical analysis...

## WORK EXPERIENCES

### Teaching :

**Part-time teaching assistant - University of Tours - 01/23-04/23**

Tutorial in Algebra and Analysis - L1, 54h

**Contract agent-University of Rennes 1 - 09/20-06/21**

Assistance and support for disabled students (pedagogical support)  
Educational tutoring for students in L3 mathematics

**Private teacher - 09/20-04/22**

Mathematics homework help (first level students)

### Internships and Hackathons :

**Hackaton Scientific Machine Learning CEMRACS 07/23-08/23**

Development of a SINDy-like method applied to the discovery of function and ODE

**M2 internship - INRIA and INRAE - Saclay - 04/22-09/22**

### *Modeling fish oogenesis*

Modeling the dynamics of oogenesis using a PDE formalism, Study of the existence/uniqueness of solutions, stationary problem, Resolutions and numerical simulation (python), data analysis

**M1 internship - IRMAR and NuMeCan - Rennes - 06/21-07/21**

### *Scientific calculation for biofilms, from adhesion to detachment*

Modeling the adhesion of bacteria on a surface, development of a cellular automaton model of biofilm growth (programming in Matlab), experimental validation Contribution to the writing of a scientific article

### Other :

**Order picker - OCP Distribution - 06/21**

**Dock agent - GEODIS and Mondial Relay - 05/20-06/20**

**Deliverer - DARTY - 06/19-07/19**

**Handling - Design by Perspective and GLS - 05/18-06/18**