

BENJAMIN GALLOIS

- Desktop developer C++/Qt -

Trained as a physicist, I did a Ph.D. in biophysics where I developed open-source software such as FastTrack, a multiple object tracking software, and several experimental device control software combining graphical interface (C++/Qt) and open-source hardware (Arduino, Raspberry) to study the chemical perception of the young zebrafish.

Date of birth: 18 april 1993
Nationality: French
Website: gallois.cc
E-mail: benjamin@gallois.cc

EXPERIENCE

● 2017-2021 | Ph.D.

PHD thesis under the supervision of Raphaël Candelier at Laboratoire Jean Perrin. Study of the chemical perception of the young zebrafish and development of a multitracking general-purpose tracking software.

● 2017 | Master research intern

Six months internship under the supervision of Emmanuel Farge in the Curie Institute. Study of the mechanical induction of the beta-catenin pathway in Nematostella Vectensis embryos.

● 2016 | Master research intern

Three months internship under Vincent Fleury's supervision in the MSC laboratory in collaboration with Antonio Claudio Tedesco (university of São Paulo). Study of vascular proprieties on chick embryos, and test of cancer treatment.

● 2015 | Bsc research intern

Five weeks internship under the supervision of Vincent Fleury in the MSC laboratory. Study of viscoelastic proprieties on chick embryos.

EDUCATION

● 2017-2021 | Ph.D. in biophysics

Study the chemical perception of the young zebrafish at Laboratory Jean Perrin Sorbonne University. Physics, neuroscience, data analysis, image processing, unit testing, CI/CD and software development.

● 2016-2017 | Magister & MSc in physics

Study fundamental physics at the University Paris 7 Diderot with a specialization in biophysics. Lectures on hydrodynamic, statistical physic, relativity, quantum mechanic, computer science, electromagnetic, solid state, soft matter, biology, microbiology.

● 2012-2015 | BSc in physics

Study fundamental physics at the University Paris 7 Diderot. Lectures in classical physics.

SKILLS

Python	● ● ● ● ●
C++	● ● ● ○ ○
C++/Qt	● ● ● ● ○
HTML/CSS	● ● ● ● ○
CAD	● ● ● ○ ○

PUBLICATIONS

• Gallois, Benjamin, and Raphaël Candelier. "FastTrack: An open-source software for tracking varying numbers of deformable objects." PLoS computational biology 17.2 (2021): e1008697.

• Richard, Sophie, Amanda Brun, Antonio Tedesco, Benjamin Gallois, Naoual Taghi, Philippe Dantan, Johanne Seguin, and Vincent Fleury. "Direct imaging of capillaries reveals the mechanism of arteriovenous interlacing in the chick chorioallantoic membrane." Communications biology 1, no. 1 (2018): 1-11.

• Fleury, Vincent, Ameya Vaishnavi Murukutla, Nicolas R. Chevalier, Benjamin Gallois, Marina Capellazzi-Resta, Pierre Picquet, and Alexis Peaucelle. "Physics of amniote formation." Physical Review E 94, no. 2 (2016): 022426.

LANGUAGES

French	● ● ● ● ●
English	● ● ● ● ○

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