



# Arthur Gouinguenet (22)

Engineer in High Performance Computing

## Information



Nice, France



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## Computer skills

Python

C++

Fortran

OpenGL / Cuda / OpenACC

MPI / OpenMP

Blender

Abaqus

Unity

Latex / Office Suite

## Language skills

French: native speaker

English: B2 (Toeic 850)

Italian: A2

Good knowledge of LPC (it's the french cued speech, permitting to communicate with deaf persons)

## Interest

Tricking and gymnastics

Digital sculpting and modelling

Piano

## Education

- 2022-2023 **Specialisation Semester at Graduate School of Grenoble** *High Performance Computing*  
Followed computer graphics specialization with a focus on course-work covering HPC, GPU computing, rendering, animation and mathematical optimization.
- 2020-2023 **M.Sc at Graduate School of Bordeaux** *Mathematics and Mechanics*  
Learning to develop numerical simulation to solve solid and fluid mechanics real physical problems.
- 2018-2020 **C.P.G.E at Lycée Masséna** *Physics and Engineering Science*  
A 2-year intensive curriculum in mathematics and physics, preparing students for entrance examinations to engineering schools in France.
- 2015-2018 **High school at Lycée Masséna** *Science*  
Specializing in mathematics and physics.

## Experience

- 2024 **R&D Engineer HPC developer** *INRIA Shopia-Antipolis*  
(1 year) Porting DIOGENeS, a HPC nanophotonics code, on GPU using OpenACC. Performed numerical design optimisation of Meta-surface.
- 2023 **HPC Engineer Intern** *CERFACS*  
(6 months) Porting a fluid mechanics code on GPU using OpenACC and OpenMP. Developing coding tools for benchmarking and code autocompletion.
- 2022 **Engineer Intern** *I2M Bordeaux*  
(4 months) Developed a Python script to automate file testing for the non-regression of Notus, a massively parallel code for Computation Fluid Dynamics.

## Project

### Personal Project

- GPU Cloth:** Blender Add-on ([Blender extension page](#)) which uses Taichi python library to develop portable GPU code for simulating soft Body in real time, faster than Blender Simulation System.
- Simuscle:** Proof of concept product ([with website](#)) linked with Blender add-on to run muscle simulation. Simuscle is developed in C++, using OpenGL and DearImGui.

### School Project

Developed Various type of Code, Simulator and Application :

**Ray tracer,** **Motion capture app,** **Rigid body simulator,**  
**Pyrolysis simulation,** **Finger biomechanics,** **Ankle model code,**  
**Linear algebra solveur library**

Detail information for each project can be found on my [Github](#) page.

## — Other information —

### Review

Alice approaches Wonderland as an anthropologist, but maintains a strong sense of noblesse oblige that comes with her class status. She has confidence in her social position, education, and the Victorian virtue of good manners. Alice has a feeling of entitlement, particularly when comparing herself to Mabel, whom she declares has a “poky little house,” and no toys. Additionally, she flaunts her limited information base with anyone who will listen and becomes increasingly obsessed with the importance of good manners as she deals with the rude creatures of Wonderland. Alice maintains a superior attitude and behaves with solicitous indulgence toward those she believes are less privileged.

## — Color Palette —



myprimarycolordark



myprimarycolorlight



mysecondarycolordark

mysecondarycolorlight

