

JÉRÔME EERTMANS

PhD student in Differentiable Ray Tracing for Telecommunications

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Greze-Doiceau, Belgium

in jérôme-eertmans-130ab1130

jeertmans

Driving License B

STRENGTHS

Multi-tasks Leadership

Sense of responsibility

Keen to learn Teaching

SOFTWARE & TOOLS

MATLAB Simulink Quartus

Labview perf regex

unix Windows SQLite

PostgreSQL Microsoft Suite

Travis CI Jupyter Notebook

CODE

Python C Matlab

VHDL SystemVerilog

Assembly Bash Javascript

LaTeX HTML CSS

LANGUAGES

French: Native

English: B2+ / C1

Dutch: B1

CERTIFICATES

Red-Cross Training
American (2015) & Belgian
(2019) Red-Cross

Full instructor training
LesScouts ASBL

EDUCATION

PhD student in Electrical engineering | [UCLouvain](#)

Sep 2021 – Present

Louvain-la-Neuve, Belgium

Working on a Differentiable Ray Tracing FOSS for Telecommunications.

Master's degree in Electro-mechanical engineering | [UCLouvain](#)

Sep 2019 – Jun 2021

Louvain-la-Neuve, Belgium

Majored in mechatronics. I undertook a variety of course topics: wireless communications, open source software, numerical simulations, digital design of ICs, mining pattern in data, etc., for a total of 112 % workload. *Graduated Magna Cum Laude.*

EXPERIENCE

Teaching Assistant | [UCLouvain](#)

Sep 2021 – Present

Louvain-la-Neuve, Belgium

Student Internship | [NXP Semiconductors](#)

Oct 2020 – Jun 2021

Leuven, Belgium

I helped the Personal and Health R&D team to enhance BLE product by developing software solutions to mitigate Wi-Fi interference and provide collision-free connection scheduling.

Scout chief | [LesScouts ASBL](#)

Sep 2015 – Sep 2021

Archennes, Belgium

From Sep 2015 until Jul 2019, "Louveteaux" chief (8 to 12 years old), and responsible chief from Sep 2018 to Jul 2019. From Sep 2019 until Jul 2021, "Eclaireurs" chief (12 to 16 years old) as the responsible chief.

Private Teacher | [Freelance](#)

Oct 2017 – Jun 2021

Belgium

First, via the Superprof platform, then via word of mouth, I have been a private teacher of 10+ students, aged from 12 to 20 years old. The subjects I teach are sciences and mathematics-related. I also helped a lot of friends in different subjects at university.

Punctual time | [LSM Conseil](#)

Oct 2019 – Apr 2021

Louvain-la-Neuve, Belgium

At multiple occasions, I have been engaged as a consultant for LSM Conseil contractors: (i) JavaScript/HTML frontend developer for a web application using the Ionic framework and (ii) signal filtering algorithm implementation on FPGA with speed, power and silicon constraints.

LEAdership program
Camp Hazen YMCA

SolidWorks CSWA
SolidWorks Authorized Training Centre

INTERESTS

Efficient Programming

Telecommunications

Low Level Design


Open Source Dev.


Hardware


Numerical Simulations

Machine Learning

MOST PROUD OF

 **Scout**
6 years as scout leader

 **Multi tasks**
Handling 6 students contracts, begin scout leader and scoring 17.3/20 in the same semester, taking 15% more ECTS than required.

 **Engineer contest finalist**
Reached finals of TheSmartestTrain-Brain contest during my 1st year of bachelor, where most contestants were last year master students.

HOBBIES

Gymnastic


Ultimate-Frisbee

Programming

Teaching


Junior Teaching Assistant | [UCLouvain](#)


 Sep 2018 – Jun 2021

 Louvain-la-Neuve, Belgium

Over 3 years, I gave multiple exercise sessions to engineering students in groups of 20-30 people. I also invested a lot of time and effort in producing pedagogical content, especially for the courses of Pr. Vincent Legat. In late 2018, I had the opportunity to give a lecture about efficient numerical programming in Python to 400+ students. In total, I have taught in 15 courses over 6 semesters, the detailed courses list is available on my [LinkedIn page](#).


Student's Buddy | [UCLouvain](#)


 Feb 2021 – Jun 2021

 Louvain-la-Neuve, Belgium

As part of the Unlock Student Success (USS) program, my role is to guide and help first year students in civil engineering studies to succeed their first year.

Student consultant | [UCLouvain](#)


 Aug 2019 – Dec 2020

 Louvain-la-Neuve, Belgium

At multiple occasions, I have been working for EPL faculty professors:

- Summer 2019, I developed a Python & Excel tool to optimize the exam's schedule (with Pr. Vincent Legat)
- Summer 2020, my role was to use public data to study the impact of land cover on radio waves and to build Python & QGIS tools around this (with Pr. Christophe Craye)
- Summer and 2nd semester 2020, I was in charge of porting a radar ray tracing software implementation from MATLAB to Python, as well as optimising it (with Pr. Claude Oestges)


Sport monitor | [Cesam Nature & Club de la Sauterelle](#)


 Aug 2016 – Jun 2020

 Belgium

I supervised, during the year and summer, groups of dozens of children for gymnastic lessons, birthday parties, or summer day camps.

English immersion | [Camp Hazen YMCA](#)


 Jul 2014 – Jul 2016

 Camp Hazen, Ct., USA

I went three times to a summer camp in the USA. In total, it lasted 7 weeks, and I was always the only French-speaking person, so it enforced the immersion.

OPEN SOURCE PROJECTS


ADE Scheduler – Scheduling tool for UCLouvain members | |

 Aug 2019 – Present

With 2 friends of mine, we created a tool that uses the ade API to create a user-friendly and more convenient experience to every student (and professor) in need of planning his activities.

- 3000+ accounts have been created
- 1000+ average daily users

texspell – Command line spell-checker tools for TeX documents |

 Jan 2021 – Present

Currently under active development, this pure Bash tool aggregates multiple command-line tools, such as detex and LanguageTools, to provide an easy to use grammar checker for TeX documents. This tool is developed by Louis Devillez and myself.