

# Hugo LEVY-FALK

THIRD-YEAR PHD STUDENT IN PHYSICS AT UNIVERSITÉ PARIS-SACLAY, FRANCE.

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## Education

### Université Paris-Saclay

Orsay, France

PHD IN PHYSICS

Oct. 2020 - today

- Development of a new synthesis method for caesium-lead-bromide nanocrystals.
- Investigation of optical properties of Graphene Quantum Dots on Perovskite substrates.
- Development of a fluorescence microscopy platform, Time-resolved photoluminescence, Data analysis.

### Imperial College London

London, United Kingdom

MASTER OF SCIENCE IN OPTICS AND PHOTONICS

Oct. 2019 - Sept. 2020

- Imaging, Optical devices and measurements, Lasers, Optical communications, Information theory, Non linear optics, Advanced Topics in Nanophotonics, Photonic structures, Optoelectronics, Fibre optics. High focus on laboratory work.
- Master's thesis on Hybrid chiral lasers

### CentraleSupélec

Metz, France

DIPLÔME D'INGÉNIEUR DE L'ÉCOLE SUPÉRIEURE D'ÉLECTRICITÉ

Sept. 2017 - Sept. 2020

- Physics (Electromagnetism, quantum physics, condensed matter physics), Signal processing, Electronics and Computer Science.

## Skills

#### Physics

Spectroscopy, Condensed-matter physics, Optics

#### Data processing

Information theory, Digital filtering, Fourier-space analysis, Data fitting.

#### Software development

Julia, Python, C, AVR Assembly.

#### Prototyping

3D CAD, 3D printing, Arduino, Electronic design.

#### Commonly used softwares

TeX, LibreOffice, FreeCAD, KiCAD, NeoVim, GNU/Linux.

#### Transferable skills

Critical Thinking, Collaboration, Tutoring, Public Speaking, Autonomy, Literature review.

#### Languages

French (native), English (IELTS : 7.5, CEFR Level : C1), German (A2).

## Experience

### ENS Paris-Saclay

Paris-Saclay, France

TUTORIAL SESSIONS AND LAB WORKS

Sept. 2020 - today

Practical work supervisor for optics lab works in M2 Monabiphot and M2 Quantum, Light, Materials and Nano Sciences. Teaching fellow for physics first years (L3) for the optics and lasers course. Project tutor for physics second years (M1).

### CEA / DRF / IRFU / DPHP

Paris-Saclay, France

ASSISTANT ENGINEER INTERN

17 Jun. 2019 - 31 Aug. 2019

Wrote a monitoring interface to NectarCAM Camera, for the Cherenkov Telescope Array. Wrote a script to look for magnetic monopoles.

## Extracurricular Activity

### Free/Libre Open Source Software (FLOSS) and Open Source Hardware (OSH)

The Internet and beyond

FREE HARDWARE AND SOFTWARE ENTHUSIAST.

2015 - today

- Experience in using FLOSS, such as GNU/Linux, NeoVim, FreeCAD, LibreOffice or Julia both in personal and professional life.
- Participates in FLOSS development through code contributions and open-sourcing my own projects. See my GitHub page.
- Core developer of Re2o, a utility to manage student networks, such as Rézo, that has been used in four different associations.
- Writes tutorials and vulgarisation posts on community-driven websites such as zestedesavoir.com.

### Rézo Metz

France

FORMER ACTIVE MEMBER AND PRESIDENT OF THE RÉZO ASSOCIATION

Sept. 2017 - Sept. 2019

- Rézo is the association that brings the Internet to the student dormitories in the Metz campus of CentraleSupélec.
- Became a member in 2017, then president and leader of the tech team in 2018. As such, managed a small team and its projects.
- Personally rewrote the main firewall of the network and designed the architecture of the main router.
- Participated in FedeRez, the french federation of student associations that bring internet to their dormitories.

## Honors & Awards

2018 **Semifinalist**, ActInSpace world hackathon

Toulouse, France

2018 **First prize, creativity prize and entrepreneurship prize**, ActInSpace Luxembourg hackathon

Luxembourg