

Florian Hérault

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EDUCATION

2021-Present

Ecole Nationale Supérieure des Mines de Nancy, (France)

- **Major in Energy and Fluids:** fluid mechanics, radiation and boundary layers, numerical methods, thermodynamics, statistical physics, quantum physics, continuum mechanics
- **Electives:** advanced quantum mechanics, environment, biodiversity and sustainability, environmental economics
- **Others:** probabilities, data analysis, machine learning, IT, management ...
- **Projects:**
 - Major project - Design and manufacture of a piezoelectric slab and adaptation of the recovered energy to power a screen at Insitut Jean Lamour laboratory (Nancy, France) -
 - Jig project at Georessources laboratory (Nancy, France): experimentation project on a jiggging machine to separate two types of minerals according to their features thanks to fluid dynamics.
 - Environment and sustainable development project - life cycle analysis, environmental courses

2019-2021

Classes Préparatoires aux Grandes Ecoles

Lycée Georges Clémenceau, Nantes, (France)

A 2-year undergraduate program for preparation to national competitive exams for admission to the most prestigious French graduate schools of engineering. Major in Advanced and Applied Mathematics, Computer Science & Physics, Engineering Science

- **Project:** Study of the stability of a tank truck according to the shape of its tank.
 - Study of fluid mechanics and building of what needed to perform the experiments
 - Construction of a miniature tank truck which can move at a constant acceleration speed.
 - First experiment with coloured fluid which was filmed. Goal: to study the evolution of the barycentre according to the time and the acceleration thanks to image processing on the films
 - Second experiment to study the pressure forces on the sidewalls of the tank thanks to pressure captors and accelerometers.
 - Variation of the acceleration to obtain curves representing the movement of the barycentre or points.
 - Numerical fluid simulations to compare the results of pressures forces and barycentre evolution with the experiments to find the best shape for the tank.

July 2019

French Baccalauréat in Sciences/Mathematics

Lycée Notre Dame de la Tourtelière, Pouzauges, Vendée (France)

French Baccalauréat in Science: Mathematics, Physics, Biology (high school leaving diploma), passed with Distinction

WORK EXPERIENCE

2021-2022

Summer job at **Batistyl**, Maulévrier, France

Duties: reception, sorting and storage of aluminum bars for window production.

Developed technical skills and ability to adapt, trained and managed the company's newcomers

- Jan.-Feb.2022 **Internship as a factory operator at Tell Systems, Maulévrier, France**
Duties:
- Manufacture of aluminum parts, PVC, etc. by turning and milling
 - Deburring and quality control of parts
 - Gained **rigour** and **efficiency** while being introduced to the industry world and its organization
- Jul.-Aug. 2019 **Summer job as a Farm labourer Saint Mars La Réorthe, France**
Duties: picking up duck eggs and inseminating female ducks
Introduction to the world of work and its requirements.

VOLUNTEER WORK

- 2022-2023 **HumaMines – Event division, Nancy, France**
HumaMines is a non-profit student organization which organizes charity events in order to earn money or material goods for persons in need, or to raise awareness about issues that people can suffer from
Duties: Handling the logistics side prior to an event, and responsible for the smooth running of all aspects on the day.
- 2022-2023 **Coach of the football team of Mines Nancy Nancy, France**
Duties: Organising women's and men's team practice and training teams and players. Select players for student competitions.
- 2022-2023 **Restos du cœur Nancy, France**
Recognised national French charity, which aims to help and provide voluntary assistance to the people in need, providing free meals and participating in their social and economic integration.
Duties: Weekly meal distribution to students in need.
- 2021-2022 **TEDxMinesNancy – partnership division, Nancy, France**
TEDx is a grassroots initiative, created in the spirit of TED's overall mission to research and discover "ideas worth spreading." TEDx brings the spirit of TED to local communities around the globe through TEDx events. Mines Nancy organises an annual one-day event on the college premises. The event is open to the public and welcomes hundreds of people to conferences, talks, interactive exhibitions on a chosen theme.
Duties: Searching for partners and canvassing by e-mail, telephone calls and direct contact in Companies.

LANGUAGES

- **French:** Mother tongue
- **English:** Fluent/C1 (Cambridge Certification in Advanced English, Grade C, 06/2022)
- **Spanish:** Intermediary/B2 (SIELE Certification: score 741/1000, 02/2023)
- **Portuguese:** Beginner A2/B1

SKILLS

Knowledge of first aid procedures:

- SST in 2022 (Health and safety at work certification)
- PSC1 in 2019 (first aid, Basic Life Supports, CardioPulmonary Resuscitation, Automated External Defibrillator certification)

IT skills:

- Python, Matlab, SQL, R, Fortran

Project management:

- Mooc Project management Certification (<https://certification.gestiondeprojet.pm/GdP18A/GdP18a-MiLWzCKAC.pdf>)

PERSONAL INTERESTS AND CLUBS

- Football practice since 6 y-o
- Running
- Woodwork