Gregory **Grzesiak--Ferdinand**

Student in Engineering Physics

25000 Besançon, France

(+33) X XX XX XX XX | gregory@grzesiak.fr | www.grzesiak.fr | Gregory-GRZESIAK | Grégory Grzesiak

"Be the change that you want to see in the world."

Education

Marie and Louis Pasteur University
Besançon, France

CMI Program – Physics, Micro and Nanotechnologies, Time-Frequency (PICS) *2023 – 2025*

- Selected for the Cursus Master en Ingénierie (CMI), a selective academic program combining advanced physics, engineering, and interdisciplinary training.

Marie and Louis Pasteur University
Besançon, France

B.Sc. in Physics – Years 1 and 2 *2023 – 2025*

- Completed the first and second years of a Bachelor's degree in Physics, with a strong focus on both theoretical and applied physics.

Fenelon High School (Private)
Vaujours, France

French Baccalaureat – Science Track (Mathematics & Engineering Sciences) *2021 – 2023*

- Specialized in Mathematics and Engineering Sciences. Despite discontinuing Physics after the first year, independently studied the subject using textbooks and academic resources.

Project

Femto Engineering
Besançon, France

Internship – Independent Project *2025*

- Designed and tested a laser interferometer setup for displacement measurements (industrial & aeronautics applications). Solely carried out under the supervision of Mr. Romain Viala

CMI PICS – Integrated Project
Besançon, France

Project Lead – Research & Development Day (UNESCO International Year of Quantum) *2024*

- Coordinated the organization of a Research & Development Day as part of the UNESCO International Year of Quantum, including the scheduling of scientific conferences and the setup of interactive stands.
- Led a team in preparing and running a science outreach stand on quantum physics.
- Designed all event posters and communication materials.

CMI PICS – Academic Project
Besançon, France

Team Lead – Academic Project (Team of 3) *2024*

- Led a team of three in the theoretical conception of a torsion pendulum setup to precisely measure the gravitational constant G (low standard deviation, high accuracy).

Experience

Femto Engineering
Besançon, France

Intern – Laser Vibrometry System Design *May 2025 - Jul 2025*

- Designed and developed a low-cost laser vibrometer for measuring displacement, velocity, and acceleration across a wide frequency range.
- Adapted the system for practical use in machining, engineering education (student labs), and aeronautics applications.
- Conducted experimental testing, data analysis, and prototype optimization to ensure system reliability and performance.
- Documented design processes and created educational materials for future users.

Vertigo Project (Hacking Health)
Besançon, France

Project Lead & Developer – Medical Device *2024 - present*

- Conceived, developed, and prototyped an innovative device to assist healthcare professionals in diagnosing and managing vertigo in patients.
- Collaborated with a multidisciplinary team to design both the hardware and the software interface.
- Coordinated the project from concept to prototype validation, including medical feedback collection and technical documentation.
- Project approved for a medical thesis and funded by "Le Tube à Essai" (Hacking Health).

La Croissanterie
Collégien - France

Sales Assistant & Trainer *Jun 2022 - Aug 2023*

- Worked part-time during high school, assisting customers, handling sales operations, and managing cash registers.
- Took on additional responsibilities as shift manager and trained new staff members.

Skills

Programming & Scripting	Python, JavaScript (Node.js, TypeScript), C#, Arduino, ESP32, Raspberry Pi, LaTeX (advanced), Git
Modeling & Scientific Computing	MATLAB, Python (NumPy, SciPy), 3D Printing (FDM), SolidWorks, Fusion 360, Tinkercad
Web & Markup	HTML5, CSS3, Markdown, KaTeX (Notion)
Design & Media	Photoshop (basic), Illustrator (basic), Filmora
Office & Project Management	Microsoft Office Suite, Google Workspace, LibreOffice, Trello, Notion, Obsidian
Science Communication	Pedagogical outreach, popularization of physics concepts for all audiences
Languages	French (native), English (intermediate, B1), German (intermediate, currently refreshing)

Extracurricular Activities

Hacking Health 8 — *Besançon, France*

Core Member — *2024*

- Participated in the design and development of educational accessories for children with cystic fibrosis, aiming to improve awareness and patient engagement.
- The project was selected among the top three and received media coverage on local TV, news outlets, and newspapers.

Vertigo Team – Hacking Health 7 — *Dijon, France*

Core Member & Developer — *2023–present*

- Developed solutions to assist healthcare professionals in managing patients with vertigo, through both a web application and a physical device.
- The project was approved by medical faculties for a thesis and received funding from a Hacking Health-affiliated organization ("Le Tube à Essai").

Open House Day – Villeparisis Fire Station — *Villeparisis, France*

Volunteer Event Organizer — *2022*

- Contributed to the planning and organization of the fire station's public Open House event.
- Managed the lottery and event cash register during the day, ensuring smooth and reliable operations.

Christmas Market – Agricultural High School — *France*

Volunteer Organizer — *2021*

- Assisted in organizing the school's Christmas Market, including the setup of the event hall and food stand.
- Efficiently managed food service during the busy lunch rush, demonstrating adaptability and teamwork.

Writing

From Metamaterials to Optics: Concepts, Evolution, and Applications — *Academic Research Project*

Author — *2024 - 2025*

- Wrote an in-depth literature review (approx. 20 pages) on electromagnetic metamaterials, their physical principles, optical transition, and interdisciplinary applications.
- Conducted independent bibliographic research and synthesized recent advances, including statistical and bibliometric analysis.
- Project supervised by Mr. Philippe Boyer, Femto-ST Institute.

Science Outreach & Events

2025 **Co-creator & Developer – Scientific Escape Game (Physics),** — *Besançon, France*
Designed and tested an escape room for the general public to introduce core physics concepts through interactive puzzles.

2024 **Game Developer – Scientific Game Jam,** — *Montbéliard, France*
Developed video games aimed at making advanced physics concepts accessible to a wide audience during a scientific game jam.