Mathieu **Maréchal**

3rd year PhD student • Acoustics

Here is a small text that discusses the goal of my application and presents myself quickly something. I will not discuss extensively any precise topics, simply do a presentation with a few key elements, basically an abstract of an appended cover letter for the application to the job I would like to apply to.

Contact

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1, rue Notre Dame
72000 Le Mans, France

Skills

- Data analysis and depiction
- Presentations
- Project organisation
- Problem solving with numerical tools

Knowledge

- Wave propagation (EM
- acoustics)
- Poroelastic waves in periodic geometries
- Numerical methods
- Guided waves
- Differential calculus
- Linear Algebra
- Signal processing
- instrumentation

Programming

- Python
- Latex
- Linux
- Web server and networks

Software

- COMSOL Multiphysics
- Inkscape
- MS Office
- Adobe Suite

Languages

French — native

- /

English — C2 (CEFR)

- Fluent technical level
  Erasmus program (2 semesters) in Prague with english courses

German — B1 (CEFR)

- Lived 2 month as part of the Brigitte

Curriculum

PhD thesis — Le Mans, France
LAUM, Le Mans Université — Oct. 2022 - December 2025

- University doctoral Scholarship at Laboratoire d'Acoustique de l'Université du Mans
- Research on metaporoelastic surfaces and interfaces for the joint mitigation of acoustic and elastic energies
- Numerical methods for the computation of dispersion relations
- Teaching experience: Master course on TMM and bachelor-level acoustics practicals sessions

MSc Degree in Wave Physics and Acoustics — Le Mans, France
Le Mans Université — Sept. 2020 - July 2022

- International Master's degree in Wave physics and Acoustics
- 2 year-long project on acoustic absorption by metaporoelastic materials
- Education on academic research and various topics on wave propagation and phenomena

L3 Erasmus — Prague, Czech Rep.
Czech Technical University — Sept. 2019 - June 2020

- Last year of Bachelor at CTU
- Prague
- Projects on wireless communication and radio antennas and acoustic event detection with a microphone array

Licence SPI CMI — Le Mans, France
Le Mans Université — Sept. 2017 - June 2020

- Licence de sciences pour l'ingénieur (engineering sciences)
- acoustics and vibrations
- Internship: Acoustic study of a ball impact on a water surface

Baccalauréat scientifique — Clermont de l'Oise
Lycée Cassini — July 2017

- Mention très bien

Publications

- A general spectral collocation method for computing the dispersion relations of guided acoustic waves in multilayer dissipative structures in J. Appl. Phys. 137 (10) 104902. 2025

Interests

- Sound Synthesis and Modular synths
- Experimental electronic music
- Film photography
- Electronic for audio
- Guitar
- bass and banjo
- Reading
- Bouldering