



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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Skills

- Data analysis and depiction
- Scientific presentations
- Project management

Knowledge

- Acoustic propagation in solids and fluids
- Numerical methods
- Waves in periodic guides
- Differential calculus and Linear Algebra
- Notions on Signal processing and instrumentation

Programming

- Python
- Latex
- Linux
- Web server and networks

Software

- COMSOL Multiphysics
- Inkscape
- Reaper
- Adobe Suite

Languages

French

native

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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
Sauzay exchange program

Curriculum

PhD thesis

LAUM, Le Mans Université

Le Mans, France

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 Université

Le Mans, France

Sept. 2020 - July 2022

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

L3 Erasmus

Czech Technical University

Prague, Czech Rep.

Sept. 2019 - June 2020

- Last year of Bachelor at CTU
- Prague

Licence SPI CMI

Le Mans Université

Le Mans, France

Sept. 2017 - June 2020

- Acoustics and vibrations bachelor
- Project: Acoustic study of a ball impact on a water surface
- Internship: Environmental acoustics at Nereis Environnement (Carquefou France)

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
- Numerical models for the scattering properties of multilayered structures with periodic cells (submitted to Int. J. Numer. Methods Eng.)
- Computation of leaky complex modes of a metaporous layer with rigid inclusions (submitted to Phys. Rev. B)

Interests

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