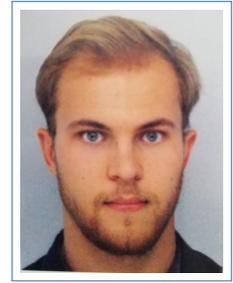


Alexis de Villeroché

PhD Student

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I am a second year PhD student under the supervision of Dorin Bucur and Giuseppe Buttazzo. I work in the field of shape optimization, more specifically, I focus on non monotonous cost functionals and spectral optimization. My most recent work concerns the stability of the Dirichlet spectrum near the minimum of the second eigenvalue (a paper is in preparation). In my work, depending on the context, I'm lead to use both a theoretical and a numerical approach that complement each other.

Higher Education

- 2022-2023 **Université Paris-Saclay**
 - Master 2 - Master in Optimization
- 2022-2023 **ENSTA Paris**
 - Engineering Student 3rd year , Modelization and Simulation track
- 2019-2022 **ENS de Lyon**
 - Master 2 of Advanced Mathematics, Specialization : PDEs
 - Master 1 of Advanced Mathematics
 - Licence 3 of Fundamental Mathematics
- 2018-2019 **Lycée Louis le Grand**
 - PC* (5/2) *third year of preparation class*
- 2016-2018 **Lycée Janson de Sailly**
 - PC* (3/2) *second year of preparation class*
 - PCSI *first year of preparation class*

Internships

- April - September 2023 (6 months) **Formes optimales pour des fonctions coût non monotones**, under the supervision of Dorin Bucur, LAMA, Université Savoie Mont Blanc
- April-July 2022 (16 weeks) **On some classes of optimal control problems governed by elliptic PDEs**, under the supervision of Giuseppe Buttazzo, Dipartimento di Matematica, Università di Pisa
- June - July 2021 (8 weeks) **Equation de Burgers périodique lisse avec petite viscosité**, under the supervision of Sergei Kuksin, IMJ, Université Paris Diderot
- June - July 2020 (6 weeks) **Pavages Hyperboliques**, under the supervision of Frank Loray, Université Rennes 1

Diplomas

- 2023 **Master 2**, Master in Optimization delivered by Université Paris-Saclay
- 2023 **Diplôme d'ingénieur de l'ENSTA Paris**, Specialization in Modelisation and Simulation delivered by ENSTA Paris
- 2022 **Master 2**, of Advanced Mathematics, Specialization in PDEs delivered by École Normale Supérieure de Lyon
- 2020 **Licence 3**, de Sciences, Technologie et Santé, Mention Mathématiques delivered by Université Lyon 1
- 2020 **Certificate in Advanced English**, C2 level
- 2016 **Baccalauréat S**, mention très bien, delivered by Académie de Caen