Raphaël Prunier

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EDUCATION

2020 – 2023	**PhD Thesis of mathematics** supervised by Jimmy Lamboley and Dorin Bucur, *Sorbonne Université*, Paris. The thesis entitled *Regularity and stability in shape optimization under geometric constraint* was defended on the 22$^{\text{nd}}$ of June, 2023.
2019 – 2020	**Master's Degree in applied mathematics** "Mathématiques de la modélisation", *Sorbonne Université*, Paris. With honors.
2019	**"Agrégation" competitive exam in mathematics.** National rank : 18$^{\text{th}}$.

PUBLICATIONS

Published article

- *Regularity in shape optimization under convexity constraint*, written in collaboration with J. Lamboley, published in "Calc. Var. Partial Differential Equations", 62(3):Paper No. 101, 44, 2023.

Accepted article

- *Fuglede-type arguments for isoperimetric problems and applications to stability among convex shapes*, accepted for publication in "SIAM Journal on Mathematical Analysis".

Submitted article

- *Sharp Quantitative Stabiity of the Dirichlet spectrum near the ball*, written in collaboration with D. Bucur, J. Lamboley, and M. Nahon.

SEMINARS & POSTERS

Seminars

- Journée d'équipe Combinatoire et Optimisation de l'IMJ-PRG, Paris (France), May 2023.
- Réunion ANR SHAPO, Paris (France), April 2023.
- Shape Optimization, Geometric Inequalities, and Related Topics, Naples (Italy), January 2023.
- GT CalVa, Orsay (France), November 2022.
- Rencontre en Calcul des variations, Nancy (France) December 2021.

Posters

- Summerschool on Analysis and Applied Mathematics, Münster (Germany), September 2022.
- Congrès des Jeunes Chercheuses et Chercheurs en Mathématiques Appliquées, École Polytechnique, Palaiseau (France), October 2021.

TEACHING & ORGANIZATION EXPERIENCES

2020 – 2023	In charge of the exercice sessions of courses given by the Mathematics departement of *Sorbonne Université* (Paris).

2022 – 2023 «Mathématiques approfondies» (1st year undergraduate).
2021 – 2022 «Mathématiques pour les études scientifiques», (1st year undergraduate).
2020 – 2021 «Algèbre et arithmétique» (2nd year undergraduate), «Analyse Fonctionnelle» (3rd year undergraduate).

2021 – 2023	Co-organizer of the IMJ-PRG PhD students' seminar (Paris).
2018 – 2019	In charge of tutoring classes of Mathematics at *Sorbonne Université* (Paris) (2nd and 3rd year undergraduate).

LANGUAGES

– French.
– English.

PROGRAMMING SKILLS

– Python.
– Latex.