LAMBOLEY
Jimmy

born January 15th 1983
French nationality

CURRENT POSITION

Since September 2017, I am a full Professor (First class (PR1) since 2023) at Sorbonne university (previously called Université Pierre et Marie Curie) in Paris (France), in laboratory IMJ-PRG.

Since September 2025, I work at ENS Paris, in laboratory DMA

CURRICULUM AND CAREER

2025–	Professor at Ecole normale supérieure de Paris (ENS Ulm)
2023–	Promotion to first class of **Full professor** (decided by the National Committee for universities, CNU)
2018–2023	Principal Investigator of the **ANR project SHAPO** about Shape Optimization
2017–	**Full professor** at Sorbonne university
2016	**Habilitation à diriger des recherches**, in laboratory CEREMADE (Paris-Dauphine university)
2015–2017	Elected member of **CNU, National Committee for universities** section 26 (applied mathematics)
2009–2017	**Associate professor** at Paris-Dauphine university
2005–2008	**PhD in mathematics** under the supervision of Michel PIERRE, at ENS Cachan antenne de Bretagne, in the laboratory IRMAR in Rennes 1 university,
2004–2005	**Research's master in mathematics**, Université de Rennes 1, specialized in Analysis, *rank* 1 ; **Agrégation externe de mathématiques**, *rank* 20
2002–2006	Student at **École Normale Supérieure de Cachan**, antenne de Bretagne **Magistère of mathematics**, Université de Rennes 1

DISTINCTIONS

2011–2026	**"PEDR" : Bonus for PhD supervisory and research**
2024–2025	**CNRS delegation** in Institut Jean Kuntzmann in Grenoble (6 months)
2017–2018	**CNRS delegation** (6 months)
2013–2014	**CNRS delegation** (one year) ; invitation for 2 months at the semester about Free Boundary Problems and related topics in Newton's institute in Cambridge (England)

SCIENTIFIC RESPONSABILITIES

- **Principal investigator of the ANR project SHAPO 2018-2023** gathering 22 senior members and 12 junior members, over 4 sites in France : Grenoble, Montpellier, Nancy, Paris.
- **Scientific partner of the NLAGA2 project (Non Linear Analysis, Geometry and Applications)** whose PI is Diaraf Seck (Dakar university) for 2018-2023
- **Reviewer** for : Calculus of Variations and PDE ; Journal of Differential Equations ; Annales de l'IHP, Analyse non linéaire ; Journal de Mathématiques Pures et Appliquées ; Journal de l'école Polytechnique ; SIAM Journal on Control and Optimization ; ESAIM COCV...
- Member and head of the Parisian site for **ANR project OPTIFORM** for 2012-2016 (PI A. Henrot).

- Co-organizer of SPO “Parisian seminar of Optimization” at Institut Henri Poincaré since september 2022
- Creation and organization from 2013 to 2017 of **working group** CalVa about Calculus of Variations, between 4 laboratories in île de France

TEACHING RESPONSABILITIES

- **Deputy director** of studies at ENS Paris (around 200 students ; director D. Chafaï)
- **Head of the M2 program** about preparation to “agrégation externe de mathématiques” in Sorbonne university since june 2020 (between 50 and 60 students).
- **Head of the Bachelor program** L3 Mathematics in MIDO department in Paris-Dauphine university (around 150 students) from september 2014 to august 2017.

COLLECTIVES RESPONSABILITIES

- **Elected member of the UFR 929 council** in Mathematics at Sorbonne university since march 2022
- **Head of the team Combinatorics & Optimization** in IMJ-PRG since june 2021
- **Member of the PEDR (“Research and PhD supervisory bonus”) commission** in Sorbonne university in 2021 and 2022.
- Member of the **prospective and recruitment commission** at IMJ-PRG from january 2019 to june 2020.
- Member of the **PhD commission** at Sorbonne university since october 2017.
- **Elected member of CNU**, National committee for universities, section 26, from september 2015 to august 2017.
- Member of the administrative board of institut Henri Poincaré from june 2015 to august 2017.
- **Recruitment commission** : Chaire CNRS position in Analysis or Probability at Mines de Nancy/IECN in 2011, MCF position in Analyse in Paris-Dauphine university in 2012, MCF position in Analysis at IECN in 2016, MCF position in Pure Mathematics at Sorbonne university in 2019.

SUPERVISORY (PHD AND MASTER'S MEMOIR)

- **PhD advisor (3)** :
  - Sydney Segovia (30%, co-directed with Gisella Croce and Idriss Mazari) from 2025 to 2028,
  - Raphaël Prunier (75%, co-directed with Dorin Bucur) from 2020 to 2023,
  - Ilias Ftouhi (75%, co-directed with Antoine Henrot) from 2017 to 2020 (defended in january 2021). I. Ftouhi was hired as Maitre de conférence (assistant professor) in Nîmes university in 2025
- **Supervisor of Master's degree memoirs (3)**: Ftouhi Ilias in 2017, Raphaël Prunier and Matia Cwajgenbaum in 2020.

- **PhD reviewer (5)** : François Générau (advisors Edouard Oudet and Bozhidar Velichkov), Alexandre Delyon (advisors Antoine Henrot and Yannick Privat) in 2020, Mickaël Nahon (advisors Dorin Bucur and Alessandro Giacomini) in 2022, Ataa Al Kheir (advisor Marc Dambrine) in 2023, Francesca Bianchi (advisor Lorenzo Brasco) in 2024.

- **Defense's jury member (12)** : Loïc Le Treust in 2013, Marc Pegon in 2019, François Générau in 2020, Alexandre Delyon in 2020, Idriss Mazari in 2020, Ilias Ftouhi in 2021, Mickaël Nahon, Marco Michetti and Romain Petit in 2022, Raphaël Prunier, Ataa Al Kheir and Arthur Sahakian in 2023.

These papers can be found on my webpage
https://webusers.imj-prg.fr/~jimmy.lamboley/

[1] **Lamboley J.**, Nahon M. *Boundary regularity of a fourth order Alt-Caffarelli problem and applications to the minimization of the critical buckling load*, Submitted, 2026

[2] Acampora P., **Lamboley J.** *Sharp quantitative Talenti's inequality in particular cases*, Submitted, 2025

[3] Bucur D., **Lamboley J.**, Nahon M., Prunier, R. *Sharp Quantitative Stability of the Dirichlet spectrum near the ball*, Communication in Pure and applied mathematics, 2025

[4] **Lamboley J.**, Prunier, R. *Regularity in shape optimization under convexity constraint*, Calculus of variations and PDE, 2023

[5] **Lamboley J.**, Novruzi A., Pierre M. *Polygons as maximizers of Dirichlet energy or first eigenvalue of Dirichlet-Laplacian among convex planar domains*, Advances in calculus of variations, 2022

[6] Ftouhi, I., **Lamboley J.** *Blaschke-Santaló diagram for volume, perimeter and first Dirichlet eigenvalue*, SIAM Analysis, 2021

[7] **Lamboley J.**, Sicbaldi P., *Existence and regularity of Faber-Krahn minimizers in a Riemannian manifold*, Journal de Maths Pures et Appliquées, 2020

[8] **Lamboley J.**, Sire Y., Teixeira E., *Free boundary problems involving singular weights*, Calc. Var. and Partial Differential Equations, 2020

[9] Dambrine M., **Lamboley J.**, *Stability in shape optimization with second variation*, Journal of Differential equations, 2019

[10] Chambolle A., **Lamboley J.**, Lemenant A., Stepanov E., *Regularity for the optimal compliance problem*, **SIAM Analysis**, 2017

[11] De Philippis G., **Lamboley J.**, Pierre M., Velichkov B. *Regularity of the minimizers of shape optimization problems involving the perimeter*, **J. Maths. Pures Appl.**, 2016

[12] **Lamboley J.**, Laurain A., Nadin G., Privat Y., *Properties of minimizer for the principal frequency with indefinite weight and Robin condition*, **Calc. Var. and Partial Differential Equations**, 2016

[13] **Lamboley J.**, Novruzi A., Pierre M. *Estimates of first and second order shape derivatives in nonsmooth multidimensional domains and applications*, **Journal of Functional Analysis**, 2016

[14] Dambrine M., Kateb D., **Lamboley J.**, *An extremal eigenvalue problem for the Wentzell-Laplace operator*, **Annales de l'IHP, Analyse non linéaire**, 2016

[15] **Lamboley J.**, SICBALDI P., *New examples of extremal domains for the first eigenvalue of the Laplace-Beltrami operator in a Riemannian manifold with boundary*, **IMRN**, 2015

[16] Harrell E., Henrot A., **Lamboley J.** *About local minimizers of the Mahler functional*, **Journal of Convex Analysis**, 2015

[17] **Lamboley J.**, Novruzi A., Pierre M. *Regularity and singularities of Optimal convex shapes in the plane*, **Archive for Rational Mechanics and Analysis** 205, 1 (2012) 311-343

[18] Bucur D., Fragalà I., **Lamboley J.**, *Optimal convex shapes for concave functionals*, **ESAIM Control and Optimization**, Volume 18, Issue 03, July 2012, pp 693-711

[19] Fragalà I., Gazzola F., **Lamboley J.** *Sharp bounds for the p-torsion of convex planar domains*, proceedings of the INdAM Workshop "Geometric properties for parabolic and elliptic PDE's", 2011

[20] **Lamboley J.**, *About Hölder-regularity of the optimal convex shape for λ_2*, **Applicable Analysis**, **90** (2011), no. 2, 263–278

[21] **Lamboley J.**, Novruzi A., *Polygon as optimal shapes with convexity constraint*, **SIAM Control and Optimization**, **48** (2010), no. 5, 3003–3025

[22] Briançon T., **Lamboley J.**, *Regularity of the optimal shapes for the first eigenvalue with volume and inclusion constraints*, **Annales de l'IHP, Analyse non linéaire**, **26** (2009), no. 4, 1149–1163

[23] Fragalà I., Gazzola F., **Lamboley J.**, Pierre M., *Counterexamples to Symmetry for Partially Overdetermined Elliptic Problems*, **Analysis** (Munich) 29 (2009), no. 1, 85–93

[24] **Lamboley J.**, Pierre M., *Structure of shape derivatives around irregular domains and applications*, **Journal of Convex Analysis** 14 (2007), No. 4, 807–822

BOOK CHAPTERS

[25] **Lamboley J.**, Pierre M. *Regularity of Optimal Spectral domains,* Chapitre du livre "Shape Optimization and Spectral Theory" édité par A. Henrot et publié par De Gruyter, 2017