

# Pascal MILLET

*Postdoctoral researcher*

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Citizenship: France

## Positions

Oct. 2023–2025 **Postdoc**, *FMJH Fellowship*, Ecole Polytechnique (CMLS).

## Education

2020 – 2023 **Ph.D.**, *Institut Fourier*, Université Grenoble Alpes.

2020 **ENS Diploma**, *Ecole Normale Supérieure of Paris (Ulm)*.

2018 – 2019 **Master in Mathematics (2<sup>nd</sup> year)**, *Paris-Sud University/ENS (Ulm)*.

Master "Arithmetic, analysis and geometry"

2017 – 2018 **Master student in Mathematics (1<sup>st</sup> year)**, *Ecole Normale Supérieure of Paris (Ulm)*.

2017 **Bachelor in Mathematics**, *Ecole Normale Supérieure of Paris (Ulm)*.

2014 – 2016 **Preparatory course ‘MPSI/MP’**, *Lycée Sainte-Geneviève (Versailles)*.

Two-year intensive course in mathematics and physics preparing for the competitive entrance examinations to the ENS / ‘Grandes Ecoles’ (highly-selective graduate schools)

2014 **French Baccalauréat**.

Scientific section

## Ph.D. thesis

**Title:** The Teukolsky equation on subextremal Kerr spacetimes

**Advisor:** Dietrich Häfner

**Referees:** Peter Hintz, Cécile Huneau

**Jury:** Olivier Graf, Dietrich Häfner, Cécile Huneau, Alain Joye, Jean-Philippe Nicolas, Jérémie Szeftel, Michał Wrochna

## Research Interests

Mathematical general relativity, Lorentzian geometry, partial differential equations on manifolds, spectral theory, microlocal and semiclassical analysis.

## Teaching Experience

2021–2022 **Teaching assistant:** "Functions of several variables and linear algebra", "Bilinear algebra" (52 hours).

2020–2021 **Teaching assistant:** "Mathematics for sciences and engineering", "Introduction to mathematical modeling and population dynamics" (63 hours).

2016 – 2017 **Examiner in preparatory course (MPSI)** at lycée Sainte-Geneviève.

## Conference and seminar talks

January 2024 **Sanya waves conference**, *TSIMF*, Sanya.

December 2023 **Séminaire Laurent Schwartz**, *CMLS-IHES*, Palaiseau.

November 2023 **Séminaire EDP**, *IRMAR*, Rennes.

July 2023 **Thematic program: Spectral Theory and Mathematical Relativity**, *ESI*, Vienna.

May 2023 **Seminar on mathematical General relativity**, *BIMSA*, Beijing.

May 2023 **Central European Relativity Seminar**, *Stockholm*.

- March 2023 **Séminaire de relativité générale**, *laboratoire Jacques-Louis-Lions*, Paris.  
March 2023 **Séminaire d'analyse et EDP**, *Cergy Paris Université*, Cergy.  
January 2023 **Séminaire de physique mathématique**, *Institut Fourier*, Grenoble.  
May 2022 **Seminar of the Ph.D students**, *IMB*, Dijon.  
October 2021 **Ph.D days**, *Institut Fourier*, Grenoble.

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## Publications

- 2024 Pascal Millet, "*Geometric background for the Teukolsky equation revisited.*", *Rev. Math. Phys.*.  
2021 Pascal Millet, "*The Goursat problem at the horizons for the Klein-Gordon equation on the De Sitter-Kerr metric.*", *J. Hyperbolic Differential Equations*.  
2018 Jérôme Gilleron, Thierry Goudon, Frédéric Lagoutière, Hugo Martin, Benjamin Mauroy, Pascal Millet, Magali Ribot and Cristina Vaghi, "*Modeling and analysis of adipocytes dynamic with a differentiation process.*", *ESAIM: Proceedings and Surveys*.

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## Preprints

- 2023 Pascal Millet, "*Optimal decay for solutions of the Teukolsky equation on the Kerr metric for the full subextremal range  $|a| < M$* ", <https://arxiv.org/pdf/2302.06946.pdf>, [Manuscript submitted for publication].