

Pietro Mesquita Piccione

Résumé

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Education

- 2022 – 2025 **PhD in Mathematics**, *Institut des mathématiques de Jussieu*, Sorbonne Université, Paris, France
Advisors: Sébastien Boucksom and Tat Dat Tô
- 2021 – 2022 **Master's Degree in Mathematics**, *Institut des mathématiques de Jussieu*, Sorbonne Université, Paris, France
- 2017 – 2021 **Bachelor's degree in Mathematics**, *Universidade de São Paulo*, USP, São Paulo, Brazil
Prize for outstanding performance.

Research projects and grants

- 2022 – 2025 **MathInParis2020**, *Scholarship for a PhD in Paris*, Cofunded by Marie Skłodowska-Curie Actions, FSMP
- 2021 – 2022 **PGSM Scholarship**, *Scholarship for a Master's degree in Paris*, Fondation Sciences mathématiques de Paris
- 2020 – 2021 **Morse Theory**, *Undergraduate Research Project*, FAPESP
Grant FAPESP 2020/04871-0

Articles

- 2024 **A non-Archimedean theory of complex spaces and the csc-K problem**, *preprint*, arXiv:2409.06221

Talks

The non-Archimedean approach of the Yau–Tian–Donaldson conjecture

- 2024 **Séminaire de géométrie algébrique de Jussieu**, ENS, Paris, France
- 2024 **Complex Analysis Seminar**, University of Bayreuth, Bayreuth, Germany
- 2024 **Geometric Analysis Seminar**, BICMR, Beijing, China
- 2024 **KASS Seminar**, Chalmers University, Gothenburg, Sweden
- 2024 **Algebraic Geometry Seminar**, University of Glasgow, Scotland
- 2024 **Any Complex Geometry Seminar**, University of California Berkeley, US
- 2024 **Graduate Student Seminar Series**, SLMATH, Berkeley, US
- 2024 **Séminaire des Thésards**, IMJ-PRG, Université Paris Cité, France
- 2024 **Demi-Journée des doctorant.e.s de l'équipe TGA 2024**, IMJ-PRG, Sorbonne Université, France

A counterexample for the periodic orbit conjecture

- 2022 **Groupe de Travail : Dynamiques Sauvages**, IMJ-PRG, Sorbonne Université, France
- 2022 **A5 seminar**, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil

To the general public

- 2021 **A Tale of Geometry**, *S4*, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
- 2020 **Morse Theory in 15 Minutes**, *Senior Thesis Presentation*, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
- 2020 **Is the Earth flat? A talk about curvature**, *S4*, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
- 2020 **How to solve any equation, with some conditions**, *S4*, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil

Professional

Visits

- 2024 **Special Geometric Structures and Analysis**, *SLMath*, Berkeley
Two months visit to the program.

Events attended

- 2024 **Summer school on Complex Geometry and canonical metrics**, *CRM*, Montréal, Canada
2023 **Global invariants of arithmetic varieties**, *CIRM*, Luminy, France
2023 **Summer School and Workshop "Advances in special Kähler metrics"**, Le Croisic, France
2023 **Complex analysis and geometry: celebrating the 70+1th birthday of László Lempert**, *Rényi Institute*, Budapest, Hungary
2022 **Géométrie : échanges et perspectives**, *Insitut Henri Poincaré*, Paris, France
2021 **Géométrie : échanges et perspectives**, *Insitut Henri Poincaré*, Paris, France
2019 **32nd Brazilian Mathematics Colloquium**, *IMPA*, Rio de Janeiro, Brazil
2018 **ICM 2018**, *International Congress of Mathematicians*, Rio de Janeiro, Brazil

Events Organized

- 2022 **MaThematical Days : Paul Erdős**, *Universidade de São Paulo*, São Paulo, Brazil
2021 **MaThematical Days : Emmy Noether**, *Universidade de São Paulo*, São Paulo, Brazil
2021 **MaThematical Days : Élie Cartan**, *Universidade de São Paulo*, São Paulo, Brazil

Teaching Assistantships

- 2025/1 **Introduction to Riemann Surfaces**, Campus Pierre et Marie Curie, Sorbonne Université, France
2024/2 **Topology and Differentiable Calculus I**, Campus Pierre et Marie Curie, Sorbonne Université, France
2024/1 **Functional Analysis**, Campus Pierre et Marie Curie, Sorbonne Université, France
2023/2 **Topology and Differentiable Calculus I**, Campus Pierre et Marie Curie, Sorbonne Université, France
2020/2 **Introduction to Algebraic Topology**, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
2019/2 **Introduction to Analysis**, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
2019/1 **Differentiable functions and series**, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
2018/2 **Calculus II**, *Escola Politecnica*, Universidade de São Paulo, Brazil

Academic Services

- 2021 **Organizer of the A5 Group**, *A student runned academic group*, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
Over 25 weekly seminars organized
2019 **Deputy Student Representative in the Mathematics Department Council**, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil
2018 **Deputy Student Representative in the Mathematics Department Council**, Instituto de Matemática e Estatística, Universidade de São Paulo, Brazil

Other Writings

- 2022 **L^2 techniques in Complex Geometry**, *Master Thesis*, Sorbonne Université
2021 **Morse Theory**, *Undergraduate Thesis*, Universidade de São Paulo

Other Info

Related Activities

- 2021 – 2022 **Reading Seminar on Wild Dynamics**, *Groupe De Travail Dynamiques Sauvages*, IMJ-PRG, Sorbonne Université
2021 **Summer IMPA**, *Differential topology graduate course*, IMPA, Rio de Janeiro, Brazil
Online

2020 **Summer IMPA**, *Functional Analysis graduate course*, IMPA, Rio de Janeiro, Brazil
with financial support

2018 **Summer IMPA**, *Real Analysis*, IMPA, Rio de Janeiro, Brazil
with financial support

Languages

Portuguese Native Speaker

Italian Native Speaker

English Fluent

Spanish Fluent

French Fluent

Catalan Intermediate

Links

Lattes <http://lattes.cnpq.br/7822745238118143>

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References

Reference I Sébastien Boucksom

Reference II Tat Dat Tô

Reference III Tamás Darvas

Reference IV Ruadhaí Dervan