

Thiago Brevidelli **Garcia**

GRADUATE STUDENT

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Education

IMT (Institute of Mathematics of Toulouse)

Toulouse, France

MASTERS IN MATHEMATICS

2023 – 2024

- Masters in Mathematics at the *M2 Research & Innovation* (<https://departement-math.univ-tlse3.fr/m2-research-innovation>) program.

IME-USP (Institute of Mathematics of the University of São Paulo)

São Paulo, Brazil

BACHELOR IN MATHEMATICS

2019 – 2022

- Weighted Average: 8.6/10

Grants

Mint Fellowship

Toulouse, France

MASTERS

2023 – 2024

- Fellowships for the second year of Masters.

CNPq PIBIC Grant

São Paulo, Brazil

SCIENTIFIC INTERNSHIP PROJECT

2021 – 2022

- Grant CNPq-PIBIC 2021-730

Research Projects

Representations of Finite Groups

São Paulo, Brazil

INTERNSHIP

2020 – 2021

Internship with professor Iryna Kashuba. Here we studied complex representations of finite groups.

Representations of Lie Groups and Algebras

São Paulo, Brazil

INTERNSHIP

2021 – 2022

Internship with professor Iryna Kashuba. Here we studied unitary representations of compact Lie groups and representations of semisimple Lie algebras.

Irreducible Weight Modules

São Paulo, Brazil

INTERNSHIP

2022

Internship with professor Iryna Kashuba. Here we studied Olivier Mathieu's classification of the irreducible weight modules of reductive Lie algebras.

Extracurricular Activity

Summer Course on Vertex Algebras

IMPA – Rio de Janeiro, Brazil

ATTENDANT

Summer 2023

- Attended Jethro van Ekeren's course on vertex algebras at IMPA's summer graduate program.
- Final score: A

Geometry & Mathematical Physics Workshop

IME-USP – São Paulo, Brazil

ORGANIZER

December 2022

- The *Geometry & Mathematical Physics* workshop (<https://fismat.pablopie.xyz>) was organized by a group of undergraduate and graduate students of IME-USP as part of the *Topics in Mathematical Physics* course.
- Gained experience in organizing academic events.
- Presented a lecture at the event.

Summer Course on Gelfand-Tsetlin Representations

IME-USP – Online

ATTENDANT

January 2022

- Attended Enrique Ramirez's minicourse on Gelfand-Tsetlin representations of $gl_n \mathbb{C}$ at IME-USP's summer graduate program.

Summer Course on Characteristic Classes

IME-USP — Online

ATTENDANT

January 2022

- Attended the minicourse on characteristic classes at IME-USP's summer graduate program.

34th Brazilian Colloquium of Mathematics

IMPA — Rio de Janeiro, Brazil

ATTENDANT

2023

- Attended several of the panels of the colloquium.

33th Brazilian Colloquium of Mathematics

IMPA — Rio de Janeiro, Brazil

ATTENDANT

2021

- Attended several of the panels of the colloquium.
- Enrolled in a minicourse on the geometry of 3-manifolds.

A5 Group

IME-USP — São Paulo, Brazil

ORGANIZER

2021 — 2022

- The A5 Group (<https://www.ime.usp.br/~acinco/>) is a student run academic group focused on introducing research level maths for undergraduate and early graduate students at IME-USP.
- Gained experience in organizing weekly seminars and other academic events.

S4 Group

IME-USP — São Paulo, Brazil

ORGANIZER

2020 — 2023

- The S4 Group is a student run seminar group focused on introducing advanced topics in an intuitive fashion to freshmen at IME-USP.
- Gained experience in organizing weekly seminars.
- Presented numerous lectures over the years.

Written Work

Semisimple Lie Algebras & their Representations

ENGLISH

2023

- My undergraduate dissertation on the representation theory of Lie algebras, with an emphasis in the classification of simple weight modules.
- Available at <https://math.pablopie.xyz/pdf/lie-algebras-and-their-representations.pdf>

Global Analysis & the Banach Manifold of Class H^1 Curves

ENGLISH

2022

- Riemannian Geometry course project on the manifold $H^1(I, M)$ of class H^1 curves on a Riemannian manifold M and its applications to the geodesics problem.
- Available at <https://math.pablopie.xyz/pdf/global-analysis-n-the-manifold-of-class-h1-curves.pdf>

A Brief History of Representation Theory

ENGLISH

2022

- History of Algebra course project on the history of group representation theory, with an emphasis on how we get from Frobenius' group determinants to Brauer's modular representation theory.

Language Skills

Portuguese Native

English Fluent

Spanish Fluent