

Sergio Maciel

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Education

2021-current **Bachelor's degree in mathematics** , *University of São Paulo*, São Paulo, Brazil

Research projects

- Aug 2022 - **Simplicial and dendroidal homotopy theory**
current Grant CNPQ:117105/2022-8
- Sep 2022 - **The underlying infinity category of a model category**
Dec 2022 A project from the *twoples* program
- Aug 2021 - **Topological methods in dynamics: the Conley index**
Aug 2022 Grant CNPQ:118747/2021-5
- Apr 2021 - **Axis-symmetric solutions to Poisson equation**
Sep 2021 research project from the PIC-ON program

Talks

Conference talks

- 2022 **The Hilbert's third problem and Dehn invariants**
X biennial of mathematics - Brazilian mathematical society
- 2022 **Topological methods in dynamical systems: the Conley index**
Presentation at the International Symposium of the University of São Paulo

Other talks

- 2022 **Groups, tilings and a theorem**, *S₄ group*
- 2021 **Qualitative theory of differential equations**, *S₄ group*

Written work

Published

- 2022 **Hilbert's third problem and Dehn invariants**, Annals of the X biennial of mathematics of the Brazilian mathematical society
- in portuguese;
 - how Dehn solved Hilbert's third problem and the state of the generalized problems;
 - available [here](#).

Other work

- 2022 **The underlying infinity category of a model category**
- how an ∞ -category arises from a model category, describing the same homotopy theory;
 - available [here](#).

Grants and awards

2022 **Third prize**, *International mathematics competition for undergraduate students*

Related courses

2021 **Real analysis**

Summer course at the Federal University of Rio de Janeiro (UFRJ)

Other activities

2022-current **S4 group**, *Organizer*

A student-run seminar group aiming to present mathematical topics in an accessible way