

# Luiz Felipe Silva Marques

Born in Natal, RN, Brasil, 15 May 2000

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## EDUCATION

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### DM–UFPB Universidade Federal da Paraíba

PhD in Mathematics

João Pessoa, PB, Brasil

2025–Current

- Research interests include Partial Differential Equations and Geometric Analysis.

### IME–USP Universidade de São Paulo

BSc in Mathematics

São Paulo, SP, Brasil

2020–2024

- Average grade: 9.6/10.
- Undergraduate thesis: Several Complex Variables and Hartog’s Theorem.
- Advisor: Paulo Domingos Cordaro.

## EXPERIENCE

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### IME–USP Universidade de São Paulo

Undergraduate research project in Analysis

São Paulo, SP, Brasil

2022–2024

- Supervised by Prof. Paulo Domingos Cordaro.
- Supported by a grant from the São Paulo Research Foundation (FAPESP).
- Studied several topics in Analysis, including integration theory,  $L^p$  spaces, topological vector spaces, distribution theory, the Fourier transform, and Sobolev spaces. The project was guided by Terence Tao’s book “An Epsilon of Room, I: Real Analysis”.

### ICMC–USP Universidade de São Paulo

Summer program: Mathematics research days for undergraduates

São Paulo, SP, Brasil

Jan–Mar 2024

- Supported by a grant from the São Paulo Research Foundation (FAPESP).
- A highly selective summer program admitting approximately ten undergraduate students and offering a research-oriented experience aimed at achieving original contributions in some mathematical fields. Further information is available on the [program’s website](#).

### TUM Technische Universität München

Exchange semester

Munich, Germany

2023

- Supported by the Merit Scholarship from Universidade de São Paulo.
- Completed two graduate courses during the program: Functional Analysis and Probability Theory.

### IME–USP Universidade de São Paulo

Undergraduate research project in Dynamical Systems

São Paulo, SP, Brasil

2020–2022

- Supervised by Prof. Sônia Regina Leite Garcia and Prof. Manuel Valentim de Pera Garcia.
- Supported by the PUB Scholarship from Universidade de São Paulo (USP).
- Studied some topics in discrete dynamical systems, including hyperbolicity, the quadratic family, symbolic dynamics, topological conjugacy, chaos, structural stability, Sharkovsky’s theorem, the Schwarzian derivative, and bifurcation theory.

## TEACHING

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| <b>Teaching Assistant</b> at IME–USP<br>Calculus I, 1st semester undergraduate course                    | 2024.1 |
| <b>Teaching Assistant</b> at IME–USP<br>Analysis on $\mathbb{R}^n$ , 4th semester undergraduate course   | 2023.2 |
| <b>Teaching Assistant</b> at IME–USP<br>General Topology, graduate course                                | 2023.1 |
| <b>Teaching Assistant</b> at IME–USP<br>Introduction to Number Theory, 1st semester undergraduate course | 2022.1 |
| <b>Teaching Assistant</b> at IF–USP<br>Calculus II for Physics, 2nd semester undergraduate course        | 2021.2 |

## SCHOLARSHIPS AND AWARDS

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| <b>FAPESP Scientific Initiation Scholarship</b><br>Undergraduate research project in Analysis                 | 2022–2023<br>Grant <a href="#">22/01477-4</a> |
| <b>ICMC–USP Summer Program Scholarship</b><br>Mathematics research days for undergraduates                    | 2024  |
| <b>USP Merit Scholarship</b><br>Exchange program at Technische Universität München, Germany                   | 2023  |
| <b>USP Scientific Initiation Scholarship</b><br>Undergraduate research project in Dynamical Systems           | 2020–2022                                     |
| <b>IMECC–UNICAMP Summer Program Scholarship</b><br>Linear Algebra course, grade obtained: A+                  | 2022  |
| <b>Bronze Medal Elon Lages Lima Math Competition</b><br>Organized by the Brazilian Mathematical Society (SBM) | 2021  |

## TALKS

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| <b>Locally Convex Topological Vector Spaces</b><br>31° <a href="#">SIICUSP</a> International Symposium on Scientific and Technological Research, USP | 2023 |
| <b>The Krein-Milman Theorem and Some Applications</b><br>Functional Analysis student seminar group, IME–USP  | 2023 |
| <b>Recurrence and Transience in Simple Random Walks</b><br>S4 student seminar group, IME–USP   | 2023 |
| <b>Symbolic Dynamics: an Introduction Through the Logistic Function</b><br>S4 student seminar group, IME–USP   | 2022 |

## EVENTS ATTENDED

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| <b>31° SIICUSP International Symposium on Scientific and Technological Research</b><br>IME-USP, São Paulo, SP, Brasil | 2023 |
| <b>34th CBM Brazilian Colloquium of Mathematics</b><br>IMPA, Rio de Janeiro, RJ, Brasil                               | 2023 |
| <b>XXIV Undergraduate Mathematics Symposium</b><br>ICMC-USP, São Carlos, SP, Brasil                                   | 2021 |

## EXTRACURRICULAR ACTIVITIES

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| <b>1st Pure Mathematics Week at IME-USP</b><br>Co-founder and organizer  | 2024      |
| <ul style="list-style-type: none"><li>First edition of an undergraduate-led academic event promoting pure mathematics within the IME-USP community.</li></ul>                |           |
| <b>Undergraduate Mathematics Program Committee at IME-USP</b><br>Elected Student Representative  | 2022      |
| <ul style="list-style-type: none"><li>The committee consists of one student and four professors. It is responsible for discussing and enhancing program logistics.</li></ul> |           |
| <b>Volunteer math tutor at Salvaguarda</b><br>Provided tutoring for Brazilian public high school students  | 2021–2023 |
| <ul style="list-style-type: none"><li><a href="#">Salvaguarda</a> is a national program which provides free tutoring for public school students.</li></ul>                   |           |

## LANGUAGES

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- **English:** C1
- **Portuguese:** Native
- **French:** A2, currently learning

## REFERENCES

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- **Prof. Paulo Domingos Cordaro**  
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