# Eduardo Ventilari Sodré

*Curriculum Vitae*

✉ *eduardo_ventilari_sodre@brown.edu*
🖥 *evsmath.github.io/*

## Education

| | |
|---|---|
| 2023 – | **Brown University**, *Ph.D. in Mathematics*, Providence, USA |
| 2019 – 2022 | **University of São Paulo (IME-USP)**, *B.Sc. in Mathematics*, São Paulo, Brazil |

Weighted average: 9.8/10, 1$^{st}$ in class

*Undergraduate thesis: Introduction to Riemannian Geometry*

*Undergraduate advisor: Prof. Claudio Gorodski*

## Publications and Preprints

2023    *Revisiting Arnold's topological proof of the Morse index theorem.* (arxiv: math.DG/2307.00655)

2021    *Classification of linear operators satisfying $(Au, v) = (u, A^r v)$ or $(Au, A^r v) = (u, v)$ on a vector space with indefinite scalar product* (with V. S. Borges, I. Kashyba, V. V. Sergeichuk & A. Zaidan). Linear Algebra and its Applications, v. 611, p. 118-134, 2021. `https://doi.org/10.1016/j.laa.2020.12.005`

## Scientific Initiation Projects

| | |
|---|---|
| 2021 – 2022 | **Introduction to Riemannian Geometry** (FAPESP project 2021/10816-4) |
| 2021 | **Introduction to Smooth Manifolds** (CNPq) |
| 2019 – 2020 | **Introduction to Discrete Dynamical Systems** (PUB and CNPq) |
| 2018 | **Axiomatic Synthetic Geometry** (PIC Jr.) |

## Grants and Scholarships

| | |
|---|---|
| 2021 – 2022 | **FAPESP Undergraduate Research Scholarship** |
| 2019 – 2021 | **CNPq Undergraduate Research Scholarship** |
| 2020 | **IMPA Summer Program Scholarship** |
| 2019 | **PUB Undergraduate Research Scholarship** |

## Prizes and Awards

2023    **Institute of Mathematics and Statistics Best Student Prize**, *IME-USP*, Class of 2022

### Olympiads and Competitions

**International Mathematics Competition**, *University College London*

| | |
|---|---|
| 2022 | First Prize |
| 2021 | First Prize |
| 2020 | Second Prize |

**Competencia Iberoamericana Interuniversitaria de Matemáticas**, *Universidad Antonio Nariño*

| | |
|---|---|
| 2022 | Gold Medal |
| 2020 | Silver Medal |

**Brazilian Universitary Mathematics Olympiad**, *SBM & IMPA*

| | |
|---|---|
| 2023 | Silver Medal |
| 2022 | Gold Medal |
| 2020 | Silver Medal |
| 2019 | Silver Medal |

**Elon Lages Lima Mathematics Competition**, *SBM & IMPA*

| | |
|---|---|
| 2022 | Gold Medal |
| 2021 | Gold Medal |
| 2020 | Silver Medal |

## Other Activities

## Talks

Sep. 2023    **Graduate Stundent Seminar at Brown**, *A Glipmse on Holomorphic Dynamics*

Aug. 2023    **Geometry Research Group Seminar at IME-USP**, *Revisiting Arnold's Topological Proof of the Morse Index Theorem*

## Summer Courses

2021    **Introduction to Complex Dynamics**, *IMPA*
Masters Level Course: A+

2020    **Introduction to Number Theory**, *IMPA*
Masters level course: A+

## Minicourses

2023    **Geometry of Painlevé Equations**, *34th Brazilian Colloquium of Mathematics*

2022    **Introduction to Characteristic Classes**, *IME-USP*

2021    **A Gentle Introduction to the Topology and Geometry of $3$-manifolds**, *33rd Brazilian Colloquium of Mathematics*

## Seminar Groups

2022    **Geometry Research Group Seminar at IME-USP**

2022    **Quasiconformal Maps and Teichmüller Theory**, *online*

2020 – 2022    **S4 Student Seminar Group**, *IME-USP*
Organizer and presenter

2021    **Exploring the Mandelbrot Set, reading The Orsay Notes**, *IMPA*
Doctoral level reading course: A-

2019 – 2020    **Matrix Problems and Quiver Representations in Linear Algebra**, *IME-USP*

2019    **Aleph 1 Student Seminar on Set Theory**, *IME-USP*

## Teaching and Tutoring

2021    **TA in "Introduction to Complex Analysis"**, *IME-USP*

## Events Attended

2023    **34th Brazilian Colloquium of Mathematics (CBM)**, *IMPA*, Rio de Janeiro, Brazil

2022    **Complex Dynamics in the Tropics**, *IMPA*, Rio de Janeiro, Brazil
Financial support by CNPq and FAPERJ

2022    **6th TWAS Young Affiliate Network Thematic Workshop in Mathematics**, *IME-USP*, São Paulo, Brazil
Local organizing committee

2022    **São Carlos Conference in Geometry**, *ICMC-USP*, São Carlos, Brazil
Poster "The Sasaki Metric and the Geodesic Flow"

2021    **33rd Brazilian Colloquium of Mathematics (CBM)**, *IMPA*, online

2020    **International Symposium of Scientific Initiation and Technology of USP**, *USP*, online
Poster "A Generalization of the Theorem on Tangent Bifurcations"

## Languages

Portuguese    Native

English    Fluent      TOEFL iBT Score: 118/120, 2022