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, 1st 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 Student 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