

Artur Bicalho Saturnino

✉ bsatur@sas.upenn.edu • 🌐 www.math.upenn.edu/~bsatur/

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Education

PhD in Mathematics, University of Pennsylvania 2017–2022

Studying Geometric Analysis with Prof. Davi Máximo. Interested in minimal and constant mean curvature surfaces, scalar curvature and Ricci flow.

MSc in Mathematics, University of São Paulo 2015–2017

Dissertation: “Focal radii of orbits” advised by Prof. Claudio Gorodski.

BSc in Computational Mathematics, Federal University of Minas Gerais 2011–2015

Publications and manuscripts

1. *Capillary surfaces: stability, index and curvature estimates* (2021), with H. Hong, available at [arXiv:2105.12662](https://arxiv.org/abs/2105.12662).
2. *On the genus and area of constant mean curvature surfaces with bounded index* (2020), to appear in *J. Geom. Anal.*, available at [arXiv:2010.06043](https://arxiv.org/abs/2010.06043).
3. *Focal radii of orbits*, with C. Gorodski, *Linear and Multilinear Algebra* (2019), available at [arXiv:1708.09078](https://arxiv.org/abs/1708.09078).

Invited Talks

- *On the genus and area of constant mean curvature surfaces with bounded index*
 - Séminaire de Géométrie, U. de Paris IMJ-PRG March 2021
 - 1st Geometric Analysis Festival, available at youtu.be/rcoW83N7yf0 February 2021
 - Geometry-Topology Seminar, University of Pennsylvania November 2020
- *Focal radii of orbits*
 - Geometry Seminar at IME-USP, University of São Paulo June 2017

Teaching

Courses where I participated as a teaching assistant or grader

- Introduction to Calculus (MATH 103), TA Spring 2020
- Advanced Calculus II (MATH 361), TA Fall 2019
- Linear Algebra (MATH 312), grader Spring 2019
- Honors Calculus (MATH 116), TA Fall 2018

Mentoring

I participated in the Directed Reading Program at Upenn as a mentor for the following projects:

- *Knots and virtual knots*, by Pedro Sacramento de Oliveira Fall 2020
- *Degree and intersection theory*, by Airika Yee Spring 2020
- *Topology from the differentiable viewpoint*, by Airika Yee Fall 2019

Service

- Created and organized together with Aline Zanardini of a series of short talks by graduate students and faculty at Upenn’s math department. Fall 2020 – ongoing

Complementary Academic Experience

- IMPA Summer School 2015 and 2016

- Scientific initiation projects (Federal University of Minas Gerais)
 - *Long reach unordered systems*, with Prof. Rémy Sanchis 2015
 - *Can all entangled states be utilized?* with Prof. Marcelo Terra Cunha 2012
- Academic exchange at the University of Göttingen (Germany) 2013–2014

Scholarships and Awards

- Departmental Good Teaching Award for my work in Advanced Calculus II 2020
- CNPq institutional scholarship 2015–2017
- IMPA summer scholarship 2015 and 2016
- Scientific initiation scholarships (CNPq and FAPEMIG) 2012 and 2015
- Science Without Borders scholarship 2013–2015

Languages

Portuguese: Native

English: Fluent

German: Intermediary