JULIO CÁCERES GONZALES

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TECHNICAL SKILLS

Languages: Python, Mathematica, SQL ◉ **Additional Software:** Git, PyTorch, scikit-learn, NumPy, pandas, Anaconda, RStudio, Matlab, LaTeX, Snowflake

EDUCATION

PhD in Mathematics, *Vanderbilt University* (4.00 GPA) 2019 – May 2024
Dissertation topics: Graph plana algebra embeddings and new A_∞-subfactors.

Master's in Mathematics, *Universidad Federal de Santa Catarina (Brasil)* 2017 – 2019

Bachelor of Science, Mathematics, *Universidad Nacional de Ingeniería (Perú)* 2011 – 2016

DATA SCIENCE EXPERIENCE

Participant, Data Science Bootcamp January – April 2025
Erdős Institute

- Developed a forecasting model to predict outages caused by severe weather events in a group of 3 using neural networks.
- Won "top project" honors in project competition.
- Completed comprehensive semester-long course on Data Science techniques.

RESEARCH EXPERIENCE

Doctoral Mathematics Researcher 2019 – Present
Vanderbilt University, Department of Mathematics

- Built package integrating Python, Sage, Regina, and Mathematica to work with small dilatation pseudo-Anosov homeomorphisms using Veering triangulations to detect provable results.
- Solved open problems related to dynamics and symmetries of surfaces.
- Attended 7 conferences and delivered 11 invited academic talks developing both technical and non-technical communication skills.

LEADERSHIP EXPERIENCE

Instructor of Record 2020 – Present
Vanderbilt University, Department of Mathematics

- Taught as Instructor of Record for 5 courses including Multivariable calculus and Ordinary Differential equations. Also served as TA for 5 calculus courses.
- Won the B.F. Bryant Prize for Excellence in Teaching based on exemplary student reviews.

Leadership program
Vanderbilt University, Career Center March 2024

- Participated in the first cohort of the ELEVATE leadership program.

PUBLICATIONS **Authors listed in alphabetical order*

- Graph planar algebra embeddings and infinite depth subfactors, *Dietmar Bisch, Julio Cáceres*, **Operator Algebras (2024)**