

Marlon de Oliveira Gomes

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EDUCATION **Stony Brook University**, Stony Brook, NY, U.S.A.

Ph.D., Mathematics, Aug 2014 - Present

- *Expected:* December 2020
- Thesis Topic: *Anti-self-dual metrics from the geometry of plane conics.*
- Advisor: [Claude LeBrun](#)
- Area of Knowledge: Differential Geometry.

Universidade Federal do Ceara, Fortaleza, CE, Brazil.

M.S., Mathematics, Aug 2011 – Aug 2013

- *Graduated with Honors*
- Thesis title: *The Bernstein Problem.*
- Advisors: [Luquésio Petrola de Melo Jorge](#), Ph.D and [Luciano Mari](#), Ph.D
- Area of Knowledge: Differential Geometry.

B.S., Mathematics Mar 2009 – Jun 2011

SKILLS

- Computing: Python, Pandas, Data Cleaning, Data Visualization, Machine Learning, MATLAB, LaTeX, HTML.
- Languages: Portuguese (native), English (fluent), Spanish (intermediate).

PROFESSIONAL EXPERIENCE

Stony Brook University, Stony Broook, United States

Teaching Assistant, Department of Mathematics. Aug 2014 - present
Worked as a Grader, Recitation Instructor, and Instructor (for summer courses).
Courses taught include:

- Logical reasoning: “Mathematical Thinking”, “Logic, Language and Proof”, “Fundamental Concepts of Mathematics” (graduate level).
- Quantitative reasoning: Pre-Calculus, Single-variable Calculus sequences (both in their regular and accelerated versions), Multivariable Calculus with Applications, Ordinary Differential Equations with Applications.
- Qualitative reasoning: taught real analysis and measure theory (“Real Analysis”, “Foundations of Analysis”), as well as complex analysis “Analysis for Teachers II” (graduate level).

Universidade Federal do Ceará, Fortaleza, Brazil

Substitute Professor, Department of Mathematics. Aug 2013 – Jun 2014
Worked as main Instructor for courses. Courses taught include

- Quantitative reasoning: Single-variable Calculus, Multivariable Calculus, Linear Algebra, Differential Equations.

- “Supervised Training in Mathematics Teaching III”, one of the courses in the Mathematics Education program. Supervised students as they developed projects for Math circles and competition Math teams in the schools they were interns.

Sete de Setembro School, Fortaleza, Brazil

Mar 2013 – Jul 2014

Worked with Middle and High school students as a coach for Mathematics olympiads at State, National and International levels.

Master School, Fortaleza, Brazil

Apr 2013 – Dec 2013

Worked with Middle and High school students as a coach for Mathematics and Informatics olympiads at State and National levels.

**Universidade da Integração Internacional
da Lusofonia Afro-Brasileira, Redenção, Brazil**

Mar 2012– Jul 2012

Worked as Instructor for courses in the Bachelor’s degree in Mathematics and Natural Sciences.

PUBLICATIONS

1. Birbrair, L., **Gomes, M.**, and Pereira, W. “Resonance sequences and recoverability”. *Inter. J. Number Theory*, 11 (2) pp.495-506, 2015. doi:10.1142/S1793042115500256

PAPERS IN
PREPARATION

1. **Gomes, M.** “Anti-self-dual metrics from the geometry of plane conics.”

FELLOWSHIPS

- CAPES/LASPAU Science Without Borders Ph.D. Fellowship, Aug 2014 - Jul 2018
- CAPES Masters Degree Fellowship Aug 2011 - Jul 2013
- IMPA Summer Fellowship Jan 2010 - Feb 2010
- CNPq Undergraduate Research Fellowship Mar 2009 - Jul 2011

AWARDS AND
HONORS

- *Chairman’s Award for Excellence in Teaching by a Graduate Student Receiving a Ph.D.* 2020
Department of Mathematics,
Stony Brook University, Stony Brook, USA.
- *Teaching Award: “Outstanding educator.”* 2016
The Governor’s School for Mathematics, Science and Technology,
Lynchburg College, Lynchburg, VA, USA.
- *Master’s Dissertation Approved with Honors* 2013
Department of Mathematics,
Universidade Federal do Ceará, Fortaleza, Brazil.
- *Teaching Award, “in recognition for the outstanding work in the preparation of Mathematics Olympiad teams”* 2013
Coordination of the Ceará State Mathematics Olympiad,
Universidade Federal do Ceará, Fortaleza, Brazil.
- *Silver Medal - Brazilian National Physics Olympiad* 2008
- *Honorable Mention - Ceará State Mathematics Olympiad* 2008
- *Gold Medal - Ceará State Mathematics Olympiad for Public Schools* 2006
- *Bronze Medal - Brazilian National Mathematics Olympiad for Public Schools* 2006

INVITED TALKS

- Anti-self-dual metrics, Twistors, and Plane Conics* Nov 2019
CUNY Almost Complex Geometry Seminar, New York, NY.
- Conics, Twistors, and Anti-self-dual metrics.* Sep 2019
Union College Mathematics Conference, Schenectady, NY.

OUTREACH ACTIVITIES

Institute for STEM Education, Stony Brook University.

- Instructor for the Stony Brook Mathematics Summer Program.
- Mini-course: *Two-person Games and the Minimax Theorem.* Jul 2019
 - Mini-course: *Planar Graphs, Euler's Formula, and Platonic Solids.* Jul 2018
 - Mini-course: *Coloring Problems in Graph Theory.* Jul 2017
 - Mini-course: *An Introduction to Graph Theory.* Jul 2016
- Instructor for the Math in Jeans program.
- Mini-course: *An Introduction to Algorithms.* Mar - Apr 2017

PROFESSIONAL SERVICE

Graduate Student Representative. Aug 2017 - Jul 2018

Met with the Graduate Committee to discuss final exams and written qualifying exams. Represented students interests in Graduate Committee meetings.

Co-organizer, Student Differential Geometry Seminar. Aug 2018 - Present

A seminar on topics related to Complex Differential Geometry, Riemannian Geometry and Geometric Analysis.

- *Spectral Theory of the Laplacian.* Fall 2019
- *Topics in Scalar Curvature.* Spring 2019
- *Einstein Metrics and Special Holonomy.* Fall 2018

Co-organizer, RTG in Geometry Seminar. Aug 2017 - May 2018

A student seminar on topics on the interface of Algebraic, Differential and Symplectic Geometry.

- *Stability Conditions and Wall-crossing Phenomena.* Spring 2018
- *Introduction to Mirror Symmetry.* Fall 2017

REFERENCES

- Claude LeBrun
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Stony Brook University, Stony Brook, NY, U.S.A.
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Stony Brook University, Stony Brook, NY, U.S.A.
- Xiuxiong Chen
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