

## Marlon de Oliveira Gomes

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- CONTACT INFORMATION Mathematics Department  
Stony Brook University  
Math Tower, 3-101  
100 Nicolls Road, Stony Brook, NY 11794  
E-mail: mgomes@math.stonybrook.edu
- RESEARCH INTERESTS Differential Geometry, 4-dimensional manifolds, Complex Geometry.
- EDUCATION **Stony Brook University**, Stony Brook, NY, U.S.A.
- Ph.D., Mathematics, Aug 2014 - Present
- Advisor: Claude LeBrun
- 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
  - Keywords: Minimal Submanifolds, Stability, Sets of Finite Perimeter.
  - Area of Knowledge: Differential Geometry.
- B.S., Mathematics Mar 2009 – Jun 2011
- 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
- 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
- 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

## PRESENTATIONS

- Localization formulas and equivariant cohomology.* Sep 2018  
Reading Seminar in Symplectic Geometry, Stony Brook University.
- Scalar curvature as a moment map.* Feb 2018  
Geometric Analysis Reading Seminar, Stony Brook University.
- Uniqueness of Kähler-Einstein metrics up to automorphisms.* Oct 2017  
Geometric Analysis Reading Seminar, Stony Brook University.
- Obstructions to existence of Kähler metrics of constant scalar curvature.* Mar 2017  
Geometric Analysis Reading Seminar, Stony Brook University.
- Curvature Estimates for Minimal Hypersurfaces and Bernstein-type theorems.* Nov 2016  
Geometric Analysis Reading Seminar, Stony Brook University.
- Obstructions to Representing Homology Classes by Embedded Spheres.* Nov 2016  
Graduate Students Seminar, Stony Brook University.
- Perelman's Pseudolocality Theorem.* Apr 2016  
Geometric Analysis Reading Seminar, Stony Brook University.
- Differential Equations, Symmetries, and Galois Theory.* Apr 2016  
Graduate Students Seminar, Stony Brook University.
- The Positive Mass Theorem of Schoen and Yau.* Nov 2015  
Geometric Analysis Reading Seminar, Stony Brook University.
- Ultrafilters in Additive Combinatorics.* Nov 2014  
Graduate Students Seminar, Stony Brook University.
- The Plateau Problem.* Oct 2011  
XXX Scientific Initiation Meeting, Universidade Federal do Ceará.
- On the Length of Closed Geodesics on Convex Surfaces.* Oct 2010  
XXIX Scientific Initiation Meeting, Universidade Federal do Ceará.
- Hopf's Fibration.* Oct 2009  
XXVIII Scientific Initiation Meeting, Universidade Federal do Ceará.

CONFERENCES  
ATTENDED

- *Geometry of Manifolds.* Oct 2017  
Simons Center for Geometry and Physics, Stony Brook, USA.
- *Thematic Program on Kähler Geometry.* Jun 2017  
University of Notre Dame, Notre Dame, USA.
- *Conference in Differential Geometry:  
in Honour of Claude LeBrun's 60th birthday.* Jul 2016  
Université du Québec à Montréal, Montreal, Canada.
- *3rd Biannual Stony Brook Mini-school in Geometry:  
An invitation to Gromov-Witten Theory.* Jan 2015  
Stony Brook University, Stony Brook, USA.
- *VII Workshop on Geometric Analysis.* Feb 2014  
Universidade Federal do Ceará, Fortaleza, Brazil.
- *IMPA 60 years.* Oct 2012  
IMPA, Rio de Janeiro, Brazil.
- *International Meeting on Differential Geometry and Partial  
Differential Equations: in Honour of the 80th birthday of Professor  
Antonio Gervasio Colares.* Aug 2011  
Universidade Federal do Ceará, Fortaleza, Brazil.

- *16th School of Differential Geometry.*  
Universidade de São Paulo, São Paulo, Brazil.

July 2010

TEACHING  
EXPERIENCE

**Stony Brook University, United States**

Teaching Assistant, Department of Mathematics. Aug 2014 - present

Courses taught as instructor:

- MAT 118 - Mathematical Thinking (Summer 2015)
- MAT 127 - Calculus C (Summer 2015)
- MAT 132 - Calculus II (Summer 2016, Summer 2017)
- MAT 203 - Calculus III with Applications (Summer 2018)
- MAT 303 - Calculus IV with Applications (Summer 2018)

Recitations:

- MAT 123 - Introduction to Calculus (Spring 2016)
- MAT 125 - Calculus A (Fall 2017)
- MAT 126 - Calculus B (Spring 2015)
- MAT 131 - Calculus I (Fall 2015)
- MAT 303 - Calculus IV with Applications (Spring 2016, Spring 2018)
- MAT 319 - Foundations of Analysis (Fall 2016)

Courses graded:

- MAT 200 - Logic, Language and Proof (Fall 2015)
- MAT 324 - Real Analysis (Fall 2014)

**Universidade Federal do Ceará, Brazil**

Substitute Professor, Department of Mathematics. Aug 2013 – Jun 2014

Courses taught as instructor:

- CB0587 - Calculus with Analytic Geometry I
- CB0588 - Calculus with Analytic Geometry II
- CB0536 - Integral and Differential Calculus III
- CB0683 - Applied Mathematics
- CB0696 - Introduction to Algebra
- CB0669 - Applied Vector Calculus
- CB0534 - Integral and Differential Calculus I
- CB0674 - Supervised Training in Mathematics Teaching III

Teaching Assistant, Department of Mathematics. Aug - Dec, 2011 and 2012

Recitations:

- CPB724 - Functions of Complex Variables

**Sete de Setembro High School, Brazil**

Mar 2013 – Jul 2014

Lecturer

Courses taught:

- Math Olympiad Training

**Master High School, Brazil**

Apr 2013 – Dec 2013

Lecturer

Courses taught:  
Math Olympiad Training

OUTREACH  
ACTIVITIES

**Institute for STEM Education, Stony Brook University.**

Instructor for the Stony Brook Mathematics Summer Program.

- Mini-course: *An introduction to Graph Theory.* Jul 2016
- Mini-course: *Coloring problems in Graph Theory.* Jul 2017

Instructor for the Math in Jeans program. Mar - Apr 2017

SERVICE

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

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

- *Einstein metrics and special holonomy.* Fall 2018

**Graduate Student Representative.** Aug 2017 - Aug 2018

Met with the Graduate Committee to discuss final exams  
and written qualifying exams.

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

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

- *Introduction to Mirror Symmetry.* Fall 2017
- *Stability conditions and wall-crossing phenomena.* Spring 2018

REFERENCES

Claude LeBrun

Professor

Department of Mathematics

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Luciano Mari

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Faculty of Mathematics and Natural Sciences,

Scuola Normale Superiore, Pisa, Italy.

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