

# THIAGO LOPES DE HOLLEBEN

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## EDUCATION

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**Universidade Federal do Rio de Janeiro, Brazil**

*march 2016 - july 2017 (interrupted)*

Major in Mathematics

**Universidade Federal do Rio de Janeiro, Brazil**

*july 2017 - 2020*

Bachelor in Applied Mathematics

**Universidade Federal do Rio de Janeiro, Brazil**

*august 2019 - december 2021*

Master's degree in Mathematics

Dissertation title: [The log-concavity of chromatic polynomials](#).

Advisor: Seyed Hamid Hassanzadeh

**Dalhousie University, Canada**

*september 2022 - current*

PhD in Mathematics

Advisor: Sara Faridi

## SKILLS

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**Programming:** Macaulay2, Sage, Python, Javascript, Julia

## COMPUTATIONAL ALGEBRA PERSONAL PROJECTS

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**Some simulations on statistical properties of Betti tables over a given class of ideals**

Macaulay2 and Python script to study some statistical properties of Betti tables over a given class of ideals.

Technologies used: Macaulay2, Python3, github repository: [Quantitative-Betti-Tables](#)

**Algorithms related to Elliptic Curves, prime factorization and cryptography.**

Webpage that includes some statistical properties of rational points of elliptic curves over finite fields related to Serre's bound, a simple cryptography scheme and Lenstra's algorithm on factorization.

Technologies used: Javascript, link: [Webpage](#)

## ACADEMIC ACHIEVEMENTS

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**Honours undergraduate research project**

Received an award for an undergraduate research project on the algebraic and combinatorial properties of Edge Ideals. During SIAC 2018.

Advisor: Seyed Hamid Hassanzadeh

## LEADERSHIP POSITIONS

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**Teaching assistant at Dalhousie**

Fall of 2022 and Winter of 2023

**Teaching assistant at UFRJ**

First semester of 2019

**Teaching assistant at UFRJ**

First and second semester of 2018

**Organizer of Week of Applied Mathematics and Mathematical Engineering (SEM<sup>2</sup>Ap)**

Organized virtual Week of Applied Mathematics and Mathematical Engineering (SEM<sup>2</sup>Ap) in 2020

More info on: [Webpage](#), [Youtube](#), [Instagram](#)

**Organizer of weekly student seminar at UFRJ**

Organized weekly seminars at UFRJ during the second semester of 2019.

## EVENTS ATTENDED

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Workshop on Commutative Algebra and Algebraic Geometry in Prime Characteristics. (ICTP) 2023 (poster)

School on Commutative Algebra and Algebraic Geometry in Prime Characteristics. (ICTP) 2023 (talk)

Interactions Between Topological Combinatorics and Combinatorial Commutative Algebra. (BIRS) 2023 (talk)

Combinatorial Algebra meets Algebraic Combinatorics 2023. (Waterloo University) 2023 (poster)

Combinatorial Algebra meets Algebraic Combinatorics 2020. (Dalhousie University) 2020

1st Joint Meeting Brazil-France in Mathematics. (IMPA) 2019.

32o Colóquio Brasileiro de Matemática. (IMPA) 2019.

SIMCARA. (USP São Carlos) 2019.

Syzygies, from Theory to Applications. (UFPB) 2019.

XXV Escola de Álgebra. (UNICAMP) 2018.