

# 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 (IN PERSON)

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Combinatorial Algebra meets Algebraic Combinatorics 2023. 2023 (poster presented)

Combinatorial Algebra meets Algebraic Combinatorics 2020. 2020

1st Joint Meeting Brazil-France in Mathematics. 2019.

32o Colóquio Brasileiro de Matemática. 2019.

SIMCARA. 2019.

Syzygies, from Theory to Applications. 2019.

XXV Escola de Álgebra. 2018.