

# Marcel de Sena Dall'Agnol

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## Education

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### University of Warwick

PH.D. IN COMPUTER SCIENCE

Coventry, UK

Oct. 2019 - Sep. 2023 (expected)

### Instituto Nacional de Matemática Pura e Aplicada (IMPA)

MASTER'S IN MATHEMATICS

Rio de Janeiro, Brazil

Mar. 2017 - Feb. 2019

### University of California, San Diego (UCSD)

UNDERGRADUATE EXCHANGE PROGRAM IN COMPUTER SCIENCE

San Diego, USA

Jan. 2012 - Dec. 2012

### Universidade de São Paulo (USP)

B.S. IN MECHATRONICS ENGINEERING (WITH CERTIFICATE OF EMPHASIS IN COMPUTER SCIENCE)

São Carlos, Brazil

Jan. 2009 - Dec. 2014

## Research Interests

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Algorithms and complexity, quantum computation and coding theory.

## Publications

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### TQC 2021

Quantum proofs of proximity 

(with T. Gur, S. R. Moulik and J. Thaler)

Virtual

Jul. 2021

### SODA 2021

A Structural Theorem for Local Algorithms with Applications to Coding, Testing, and Privacy 

(with T. Gur and O. Lachish)

Virtual

Jan. 2021

### CHI 2013

MotionDraw: A Tool for Enhancing Art and Performance Using Kinect

(with D. G. Rodrigues, E. Grenader, F. Nos, T. Hansen and N. Weibel)

Paris, France

Apr. 2013

### SIICUSP 19

Temperature Monitoring System for an Atomic Clock

(with D. V. Magalhães)

São Carlos, Brazil

Nov. 2011

## Talks

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### WOLA 2020

A structural theorem for local algorithms with applications to coding, testing, and delegation 

Virtual

Jul. 2020

### IMPA Colloquium

A crash course on the theory of computation

Rio de Janeiro, Brazil

May 2019

### CryptoRave 2018

The mathematical beauty of cryptography

São Paulo, Brazil

May 2018

## Paper reviews

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IEEE Transactions on Information Theory (2020), CCC (2021), FOCS (2021), STOC (2021), ITCS (2020, 2021), RANDOM (2021).

## Internships

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### Robotics Institute - Carnegie Mellon University

SUMMER INTERNSHIP

Developed and deployed a web service for precision enhancement of GPS data collected by an autonomous vehicle.

Pittsburgh, USA

Jun. 2012 - Sep. 2012

### Physics Institute - Universidade de São Paulo

SCIENTIFIC INITIATION

Designed, built and installed a temperature monitor for a Cesium atomic clock. Supported by a scholarship from CNPq.

São Carlos, Brazil

Aug. 2010 - Jul. 2011

## Teaching

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### MSRI

TEACHING ASSISTANT

Collaborated with the organisation and led problem sessions at the *Summer Graduate School on Foundations and Frontiers of Probabilistic Proofs*.

Jul. 2021 - Aug. 2021

### University of Warwick

SENIOR GRADUATE TEACHING ASSISTANT

Assisted with teaching and marking in the following undergraduate modules: *Algorithms* (2020, 2021), *Complexity of Algorithms* (2019, 2020, 2021), *Logic and Verification* (2020) and *Quantum Computing* (2020, 2021).

Coventry, UK

Oct. 2019 - present

### IMPA

TEACHING ASSISTANT

Assisted with teaching and marking in the first-year master's course *Algebra I*.

Rio de Janeiro, Brazil

Mar. 2019 - Jun. 2019

### Projeto Âncora

EDUCATOR

- Tutored groups of students in primary education with personalized learning;
- Oriented student projects and work groups on a variety of topics, including computer maintenance and informatics, bullying and harassment prevention and culinary studies;
- Assisted in the development of a web platform used to share and catalog students' and educators' work;
- Oriented study groups in mathematics;
- Gave talks and courses on the school's pedagogical approach.

Cotia, Brazil

Aug. 2014 - Dec. 2016

### Emancipa

TEACHER

Taught math and physics in a volunteer-run, free of cost preparation program for the Brazilian undergraduate admission exams.

São Carlos, Brazil

Apr. 2013 - Jul. 2014

### USP

TEACHING ASSISTANT

Assisted first-year undergraduate students in two courses: *Analytic Geometry* and *Linear Algebra*.

São Carlos, Brazil

Feb. 2013 - Nov. 2013

## Honours and Awards

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- 2021 **Department of Computer Science undergraduate teaching award**, University of Warwick
- 2021 **SIAM student travel award**, SODA21
- 2019 **Centre for Doctoral Training postgraduate studentship**, University of Warwick
- 2019 **CIMPA research school travel award**, IMPA and CIMPA
- 2017 **Master's scholarship**, CNPq
- 2012 **Science Without Borders undergraduate exchange scholarship**, CAPES

## Skills

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- Languages** Portuguese and English (fluent), Spanish (intermediate), German (basic)
- Programming** Python, C/C++, Ruby/Rails, Matlab/Octave, LaTeX

## Conferences/Events Attended

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**FOCS 2020**

*Virtual*

*Nov. 2020*

**CCC 2020**

*Virtual*

*Jul. 2020*

**STOC 2020**

*Virtual*

*Jul. 2020*

**AlgoUK 2019**

*Coventry, UK*

*Sep. 2019*

**CIMPA Research School on *Elliptic Curves: Arithmetic and Computation***

*Montevideo, Uruguay*

*Feb. 2019*

**2018 International Congress of Mathematicians**

*Rio de Janeiro, Brazil*

*Aug. 2018*

**Latin American Week on Coding and Information**

*Campinas, Brazil*

*Jul. 2018*

**30<sup>th</sup> and 31<sup>st</sup> Brazilian Colloquia of Mathematics**

*Rio de Janeiro, Brazil*

*Jul. 2015 and Jul. 2017*

## Additional Certificates/Qualifications

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2016    **Licentiate in Mathematics**, Certification to teach at primary and secondary levels (by Claretiano)

2013    **OnDaF** , German CEFR Level B1

2007    **CPE**, English CEFR Level C2