

Marcel de Sena Dall'Agnol

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Education

University of Warwick

PHD IN COMPUTER SCIENCE (ADVISER: TOM GUR)

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

Algorithms and complexity, quantum computation and coding theory.

Publications

TQC 2021

Quantum proofs of proximity 

(with Tom Gur, Subhayan Roy Moulik and Justin Thaler)

Virtual

Jul. 2021

SODA 2021

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

(with Tom Gur and Oded 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 Daniel V. Magalhães)

São Carlos, Brazil

Nov. 2011

Talks

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

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

Internships

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

University of Warwick

ASSISTANT TUTOR

Assisted with teaching and marking in the following undergraduate modules: *Algorithms* (2020), *Complexity of Algorithms* (2019, 2020), *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 on *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

Conferences/Events Attended

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

Rio de Janeiro, Brazil

Jul. 2018

30th and 31st Brazilian Colloquia of Mathematics

Rio de Janeiro, Brazil

Jul. 2015 and Jul. 2017

Honours and Awards

- 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

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

Qualifications

- 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