

# Marcel Dall'Agnol

✉ msagnol@pm.me | 🏠 github.io/~marceldallagnol/

## Education

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### Ph.D. in Computer Science

UNIVERSITY OF WARWICK

*Coventry, UK*

*Oct. 2019 - Sep. 2023 (expected)*

### Master's in Mathematics

INSTITUTO NACIONAL DE MATEMÁTICA PURA E APLICADA (IMPA)

*Rio de Janeiro, Brazil*

*Mar. 2017 - Feb. 2019*

### Undergraduate exchange program in Computer Science

UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD)

*San Diego, USA*

*Jan. 2012 - Dec. 2012*

### B.S. in Mechatronics Engineering (with certificate of Emphasis in Computer Science)

UNIVERSIDADE DE SÃO PAULO (USP)

*São Carlos, Brazil*

*Jan. 2009 - Dec. 2014*

## Research Interests

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Sublinear algorithms, complexity theory, interactive proofs and quantum computation.

## Publications

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### Quantum Proofs of Proximity

QUANTUM, 2022 (with T. Gur, S. R. Moulík and J. Thaler)

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

SODA 2021 (with T. Gur and O. Lachish)

### MotionDraw: A Tool for Enhancing Art and Performance Using Kinect

CHI 2013 (with D. G. Rodrigues, E. Grenader, F. Nos, T. Hansen and N. Weibel)

## Manuscripts

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### Streaming Zero-Knowledge Proofs

(with G. Cormode, T. Gur and C. Hickey)

### On the Necessity of Collapsing for Post-Quantum and Quantum Commitments

(with N. Spooner)

## Internships

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### COMPSEC Lab - EPFL

VISITING DOCTORAL STUDENT

Hosted by Alessandro Chiesa, took part in a research project on cryptographic applications of quantum computing.

*Lausanne, Switzerland*

*Jul. 2022 - Sep. 2022*

### Robotics Institute - Carnegie Mellon University

SUMMER INTERN

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*

## Talks

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### On the Necessity of Collapsing for Post-Quantum and Quantum Commitments

QCW 2022

Virtual  
Dec. 2022 (upcoming)

### Quantum Proofs of Proximity

TQC 2021

Virtual  
Jul. 2021

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

HALG 2022

London, UK  
Jul. 2022

## Teaching

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### 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, 2022), *Logic and Verification* (2020) and *Quantum Computing* (2020, 2021).

Coventry, UK  
Oct. 2019 - present

### MSRI

TEACHING ASSISTANT

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

Virtual  
Jul. 2021 - Aug. 2021

### 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 - Jan. 2017

### 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

## Paper reviews

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IEEE Transactions on Information Theory (2020), CCC (2021), FOCS (2021, 2022), STOC (2021), ITCS (2020, 2021), RANDOM (2021).

## Honours and Awards

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- 2021 **Department of Computer Science undergraduate teaching award**, University of Warwick
- 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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<b>Workshop on <i>Efficient Probabilistic Proofs</i></b>	<i>Bertinoro, Italy</i> <i>Jul. 2022</i>
<b>BCTCS 2022</b>	<i>Swansea, UK</i> <i>Apr. 2022</i>
<b>FOCS 2020</b>	<i>Virtual</i> <i>Nov. 2020</i>
<b>CCC 2020</b>	<i>Virtual</i> <i>Jul. 2020</i>
<b>STOC 2020</b>	<i>Virtual</i> <i>Jul. 2020</i>
<b>AlgoUK 2019</b>	<i>Coventry, UK</i> <i>Sep. 2019</i>
<b>CIMPA Research School on <i>Elliptic Curves: Arithmetic and Computation</i></b>	<i>Montevideo, Uruguay</i> <i>Feb. 2019</i>
<b>2018 International Congress of Mathematicians</b>	<i>Rio de Janeiro, Brazil</i> <i>Aug. 2018</i>
<b>Latin American Week on Coding and Information</b>	<i>Campinas, Brazil</i> <i>Jul. 2018</i>
<b>30<sup>th</sup> and 31<sup>st</sup> Brazilian Colloquia of Mathematics</b>	<i>Rio de Janeiro, Brazil</i> <i>Jul. 2015 and Jul. 2017</i>

## Additional Certificates/Qualifications

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2016	<b>Licentiate in Mathematics</b> , Certification to teach at primary and secondary levels (by Claretiano)
2013	<b>OnDaF</b> , German CEFR Level B1
2007	<b>CPE</b> , English CEFR Level C2