



Bruno ORTEGA GOES

Nationality: Brazilian

15/02/1996

CONTACTS

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HIGHER EDUCATION

2020 - 2023
Université de Grenoble Alpes, France
PhD in Nanophysics
Thesis: The theory of spin-photon interfaces

2018 - 2020
University of São Paulo, Brazil
Master of Physics

2020
University of Basque country, Spain
Invited scientific visitor (Master of Physics)

2014 - 2018
University of São Paulo, Brazil
Bachelor's degree in Physics

LANGUAGES

- 🇧🇷 Portuguese (Native)
- 🇺🇸 English (Full Professional)
- 🇫🇷 French (Full Professional)
- 🇪🇸 Spanish (Basic)

Quantum Engineer

Let's not try to guess the future, let's make it!

EXPERTISE

I am a trained theoretical physicist with advanced problem-solving, computational, and mathematical skills.

I have used these skills in collaboration with experimental and theoretical teams to provide mathematical models and computational simulations of quantum technology.

I also performed data analysis and predictions using cutting-edge machine learning models.

WORK EXPERIENCE

09/2020 to 11/2023 – CNRS – Institut Néel, France

Early stage researcher (Ph.D. Marie Curie Actions)

- **Theoretical description of quantum systems:** Particularly focused on measurements in quantum optical systems and the energetic advantage of quantum resources over classical resources.
- **Provided modeling for experimental data:** Via collaboration with an experimental team using quantum dots-based devices realizing proof-of-concept experiments with enormous potential for quantum technological applications, notably quantum communication and computation.

03/2023 to 10/2023 – Experian DataLab Mentorship program

Data science intern

- **Development of data science projects:** Learnt the basis and state-of-the art algorithms of machine learning guided by a mentor working on the field. Worked on hands-on projects and presented reports weekly.

02/2018 to 04/2020 – CNPq – Institute of physics of USP, Brazil

Master student researcher

- **Provided theory to address irreversibility of general out-of-equilibrium open quantum systems.**

SKILLS

- Python and Mathematica®
- Numpy, Scipy
- Pandas, Scikit-learn, SQL, PyTorch
- Matplotlib, Seaborn
- Qutip, Melt!

TOP 3 PUBLICATIONS

M. Maffei, **B. O. Goes**, S. C. Wein, A. N. Jordan, L. Lanco, and A. Auffèves, “Energy-efficient quantum non-demolition measurement with a spinphoton interface,” *Quantum* 7 (2023).

B. O. Goes, C. E. Fiore, and G. T. Landi, “Quantum features of entropy production in driven-dissipative transitions,” *Phys. Rev. Research* (2020).

B. O. Goes, G. T. Landi, E. Solano, M. Sanz, and L. C. Céleri, “Wehrl entropy production rate across a dynamical quantum phase transition,” *Phys. Rev. Research* (2020).