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PUBLICATIONS

[Fitting a Collider in a Quantum Computer: Tackling the Challenges of Quantum Machine Learning for Big Datasets](#)

[2022]

HONOURS AND AWARDS

Uminho Award for Initiation in Scientific Research 2021

University of Minho [11 Nov 2021]

I am a winner of the Uminho Award for initiation in Scientific Research 2021, with the project "Open and closed Quantum systems in quantum optics and condensed matter" developed in Centro de Física (CF) of Uminho. I wrote a monograph entitled "Decoherence in quantum systems" oriented by professor Nuno Peres. I studied decoherence in two level systems in four different ways. I made an analogy with coupled classical oscillators, I studied electric dipoles and their relation with the Bloch sphere and I made an introduction to applications of coherence and quantum computing.

Link: <https://youtu.be/Xzc5FG8e1zE>

Qiskit Global Summer School 2022 - Quantum Excellence

IBM [16 Aug 2022]

I attended the two-week Qiskit Global Summer School 2022 and successfully completed the hands-on labs.

Link: <https://www.credly.com/badges/55e76da9-b0e0-4dfa-997a-b526a52ce934>

Novos Talentos 2022

Fundação Calouste Gulbenkian [2022]

I was selected for the Novos Talentos program of Fundação Calouste Gulbenkian. Through this program, I was incentivized to develop scientific research besides my higher education studies.

Qiskit Global Summer School 2023 - Quantum Excellence

IBM [1 Sep 2023]

I attended the Qiskit Global Summer School 2023 - Theory to Implementation - and successfully completed the hands-on labs.

Link: https://www.credly.com/badges/b580f672-c0b6-440f-ba4d-9f50818ed667/public_url

WORK EXPERIENCE

Volunteer

EB 2/3 João de Meira

City: Guimarães

Country: Portugal

Volunteer work with disabled children.

Quantum computing at Particle Physics Student Researcher

LIP - Laboratório de Instrumentação e Física de Partículas [Jun 2023 – Current]

City: Braga

Country: Portugal

Funding: CERN/FIS-PAR/0032/2021

Quantum computing and quantum machine learning at High Energy Physics Student Researcher

LIP - Laboratório de Instrumentação e Física de Partículas [Feb 2022 – Nov 2022]

City: Braga

Country: Portugal

- Exploring the use of the K-Means clustering algorithm to reduce datasets' size.
- Developing an algorithm to discover the ground state of a Hamiltonian based on the Quantum Phase Estimation algorithm and the Variational Quantum Eigensolver algorithms.

Funding: CERN/FIS-COM/0004/2021

Intern - Quantum computing and quantum machine learning at High Energy Physics

LIP - Laboratório de Instrumentação e Física de Partículas [Jun 2022 – Sep 2022]

City: Braga

Country: Portugal

COMMUNICATION AND INTERPERSONAL SKILLS

European night of researchers 2023

I presented to the general public the activities developed at LIP Minho (Laboratory of Instrumentation and Particle Physics) and the science behind some apparatus, namely a cloud chamber and a spark chamber.

EDUCATION AND TRAINING

Master in Engineering Physics

University of Minho [Sep 2022 – Current]

Address: R. da Universidade, Campus de Gualtar, 4710-057 Braga (Portugal)

Website: <https://www.uminho.pt/PT>

Bachelor in Engineering Physics

University of Minho [Sep 2019 – Jul 2022]

Address: R. da Universidade, Campus de Gualtar, 4710-057 Braga (Portugal)

Website: <https://www.uminho.pt/PT>

Final grade: A

NQF Level: 18/20 – Type of credits: ECTS – Number of credits: 180

Quantum Matter | Materials & Concepts - Summer School

Summer school Quantum matter | Materials & Concepts [Sep 2021 – Sep 2021]

High school

Escola Secundária Martins Sarmiento [Aug 2016 – Jun 2019]

Address: Alameda Prof. Abel Salazar 7, 4810-247 Guimarães (Portugal)

Website: <http://www.esmsarmiento.pt/>

Field(s) of study: Science and technology

Final grade: 19,3 internal average

LANGUAGE SKILLS

Mother tongue(s): **Portuguese**

Other language(s): **English**

DIGITAL SKILLS

Microsoft Office / Organizational and planning skills / c programming language / Python programming language / matlab / Tanner EDA / Haskell programming language / Photoshop / GitHub / LaTeX / Qiskit / Machine Learning • / Quantum computing / Uppaal