



Santiago Rodriguez

Physics Student

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Social Network

- LinkedIn Link
- Github Project Page Link

Programming

- Python ●●●●●
- C++ ●●●●●
- Mathematica ●●●●●
- LaTeX ●●●●●
- CSS ●●●●●

Languages

- German ●●●●●
- Spanish ●●●●●
- English ●●●●●

Memberships

- DPG
- DMUN DMUN.e.V.
- Grüne Berlin

Education

Studies

- 2010 – 2018 **High School and Abitur** Deutsche Schule Madrid
Focus: Physics, Mathematics and German for the written exams during the Abitur, also coursed in Informatics during the years it was available
- 2018 – 2024 **Bachelor Science Physics** Humboldt University Berlin
Focus: In addition to the standard coursework, completed and participated in laboratory internships with focus on optical medical physics.
- 2024 – Present **Master Science Physics** Humboldt University Berlin
Focus: Medical physics with an interest and focus in projects using quantum magnetic effects for diagnostic purposes such as magneto-myography or magnetic resonance imaging (MRI).

Working Experience

Jobs

- 2023-Present **Assistant Scientist** Physikalisch Technische Bundesanstalt
Worked as an assistant in the development of quantum sensors for applied magnetometry in the field of nuclear medicine. My job consisted in measuring sensor sensitivity and effectiveness of optically pumped magnetometers, as well as developing software to control and run test environments.
- 2021-2023 **Assistant Scientist and Programmer** Charite University Hospital
Worked at the radiology department as an assistant scientist on a research software for handling, viewing and manipulating 3D CT scans in the format of stacked DICOM files. The goal of the project was to accurately reproduce and insert different kinds of artificial lesions into these datasets for later use in training of ML models and printing of 3D phantoms used to test radiology equipment.
- 2019-2021 **Laboratory Internship** Humboldt University Berlin
Laboratory internship at the Humboldt University of Berlin as part of the B.Sc. Physics program. Learned to use different measuring devices like a scanning electron microscope (SEM) during the advanced internship and process the data alongside different kinds of uncertainties into a full LaTeX protocol in a publication format.
- 2019-2021 **Tutor for Mathematics and Physics** Studienkreis GmbH.
Taught students up to 13th grade in the subjects mathematics and physics individually or in groups of up to 5 students at a time.
- 2016 **Intern at the Department for Material Physics** Universidad Autonoma de Madrid
Researched the composition of colored fluoroapatite crystals using an spectroscope to measure the characteristic absorption and emission wavelengths of the contaminating rare-earth elements responsible for the coloring of the crystals.

Publications and Projects

- 2023 **Phantom X Lesion Tool**
Marco Ziegert, Santiago Rodriguez, Ulrich Genske, Angelo Laudani
GitHub Repository Link [Ask for access]
- 2020 **Hubble Pi**
Santiago Rodriguez
GitHub Repository Link
- 2022 **Solar System Simulation Tool**
Santiago Rodriguez
GitHub Repository Link

Voluntary

- 2023-Present **Board Member** B90/Die Grünen Treptow-Köpenick
Engaged myself as a board member for my local branch of the German Green party in Berlin, where I organized political events and coordinated both actions and networks to bolster green policies at a local and regional level.
- 2022-Present **Freelance Photographer** Fridays For Future, Klimaneustart, GJ Berlin
Accompanied local activists from various climate movements during their actions and demonstrations as a photographer, with my pictures being used for social media posts and press articles.
- 2017-2021 **Voluntary assistant** DMUN e.V.
Assisted in various capacities such as chairing conferences with up to 100 participants at this non-governmental organization in order to help in its mission to spread political education among young people.

Extra-Curricular Activities

- Sports Cycling, Swimming
Hobbys Reading, Astrophotography