Carlos Rafael Salazar Letona

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https://carlossalazar.me/

Languages
English - Bilingual
Spanish - Native
German - B1
French - B1

Skills
Flexibility
Accuracy
Teamwork
Detail oriented
Self-motivated
Problem solving
Work independently
Communication skills

Hobbies
Developing video
games
Knitting
Table Tennis
Chess
Reading

Profile

I am a Guatemalan PhD student at Linköping university researching the mechanical properties of ceramics at high temperatures through ab initio simulation methods.

Education

2024 - 2028 **Linköping University (Sweden)**
PhD in Theoretical Physics

2021 - 2023 **Aix-Marseille Université (France)**
MSc in Fundamental Physics

2018 - 2021 **Jacobs University of Bremen (Germany)**
BSc in Physics (major), Computer Science (minor)

Experience

2023 **Internship - Structural Analysis by Statistical Learning Method for Atomic Scale Nanoparticles - Dr. Julien LAM** UMET - CNRS (France)
Development of a Structural Analysis code using Python and the Gaussian Mixture Model. With the model we could then study the crystallization of Zinc Oxide nanoparticles and assess the competing crystalline phases.

2022 **Internship - Machine Learning Approaches to Model Interatomic Interactions in Materials - Dr. Julien LAM** CEMES - CNRS (France)
Train a machine learning algorithm based on a DFT database for the modeling of interatomic interactions of gold and iron atoms.

2021 **Teaching Assistant - Numerical Software Lab (Spring) - Prof. Kleinekathöfer** Jacobs University (Germany)
Grade homework and solve students' questions during the programming (python) lab sessions.

2020 **Student Laboratory Assistant - Ocean Lab** Jacobs University (Germany)
Student assistant in the Ocean Laboratory of Jacobs University, under the supervision of Prof. Dr. Laurenz Thomsen. Tasks consisted in preparing experiments, technical services, and overall maintenance of the lab.

2020 **Teaching Assistant - Physics for the Natural Sciences (Spring) and Classical Physics (Fall) - Prof. Fritz** Jacobs University (Germany)
Grade homework and solve students' questions in tutorials.

2019 - 2020 **Student Advisor and Peer Counselor - Orientation Week** Jacobs University (Germany)
Welcome incoming students; intercultural training.

2019 - 2020 **Founder of the Club - GameDev Club** Jacobs University (Germany)
Organize weekly meetings. Give talks explaining the basics of programming video games in Unity with C#. Coordinate development of games for club projects.

Professional Skills

C/C++	Microsoft Office
Python	GROMACS
C#	LAMMPS
Windows Knowledge	Machine Learning
Linux Knowledge	PyTorch
Unity	Latex
Blender	Scientific Writing