Contact

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Programming languages and software knowledge

Python
Fortran
VASP
Phonopy
hiPhive
M3GNet

Skills

Density Functional Theory
Phonon calculations
Ab Initio Molecular Dynamics
Crystal Structure Prediction
Data Analysis
Machine Learning Methods
Numerical Simulation

Languages

English (Full Professional Proficiency)
Spanish (Native)
Catalan (Native)
Japanese (Elementary)

Pol Benítez Colominas

PhD student at UPC
Barcelona, Catalonia, Spain

Profile

I am currently doing research in computational materials science, trying to understand structural and optoelectronic properties of novel semiconductor materials. My interests range from condensed matter physics to machine learning applications and computer science. In addition, I am an assistant professor at UPC where I teach physics to first year engineering students.

Experience

Predoctoral Researcher, Universitat Politècnica de Catalunya; Barcelona, Spain — September 2023 - Present

Assistant Professor, Universitat Politècnica de Catalunya; Barcelona, Spain — February 2023 - Present

Postgraduate Researcher, Universitat Politècnica de Catalunya; Barcelona, Spain — January 2023 - September 2023

Undergraduate Researcher, Universitat de Barcelona; Barcelona, Spain — November 2021 - May 2022

Undergraduate Researcher, Universitat de Barcelona; Barcelona, Spain — February 2021 - May 2022

Education

Universitat Politècnica de Catalunya – PhD in Computational and Applied Physics (2023 - Present)

Universitat Politècnica de Catalunya - Master's degree in Engineering Physics (2022 - 2023)

Universitat de Barcelona - Degree in Physics, Mention in Fundamental Physics (2016 - 2022)

Projects

First principles study of highly anharmonic anti-perovskite materials for energy applications (PhD Thesis, 2023 - Present)

PyMCSP: Python and Machine learning methods for Crystal Structure Prediction (Side Project, 2023 - Present)

Machine learning and statistical analysis for the diagnosis of hematological diseases (Bachelor Thesis, 2022)