Diego Juarez

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PROFESSIONAL SUMMARY

I am looking for a summer internship in computational science related to materials sciences, open to other opportunities for internship, seeking to introduce myself into real-world sciences. Passionate problem solver with a strong foundation in physics, mathematics, and computational methods. I earned a Bachelor's degree in Physics (with honors) from the University of Zacatecas, where I developed a strong interest in computational techniques, applying them to projects like ab initio modeling of 2D perovskites and genetic algorithms for atomic cluster stability. Currently, I am a Master's student in Physics at the University of Texas at El Paso and a research assistant focused on advanced computational methods in materials science.

EDUCATION

Autonomous University of Zacatecas   **May 2018- May 2022:** *B.S Physics (With honors)*

University of Texas at El Paso   **In progress:** *M.S Physics*

CORE COMPETENCIES

- Microsoft Skill Expert
- Bilingual
- Bachelors Degree
- Physics
- Communication
- Technology
- Enginering
- Software Development
- Creative Analytics
- Research Assistant
- Teamwork & Collaboration
- Leadership

PROFESSIONAL EXPERIENCES

- Teaching assistant at The University of Texas at El Paso for the mechanics and astronomy laboratory conducting two weekly sessions per lab. In the mechanics laboratory I taught the principles of statics and dynamics including concepts as Newton's equations, energy, momentum conservation and oscillations, the course included 11 practical experiments, where i guided the students in applying the theoretical knowledge gained from their lectures and a small explanation given for me at the beginning of the class. In the astronomy laboratory I introduced to the students to Kepler's Laws, orbital mechanics, exoplanets, celestial motion and understanding of astronomical events though observation-based experiments and calculations **(2023-2024)**.

- Applied Mathematics & Computational Research Intern at Lawrence Berkeley National Laboratory, working on the project "Ballistic Phonon Trajectories in Heat Distribution." Developed a robust pipeline to automate and execute thousands of simulations on Perlmutter, enabling efficient analysis of phonon behavior and its impact on heat distribution as well that an implementation of a code to generate, run and analyze classical molecular dynamics to extract thermodynamics properties, applied to Nickel-titanium alloy with points defects. **(Summer 2024)**

- Research Assistant at The University of Texas at El Paso under the mentorship of Professor Jorge Muñoz, contributing to advanced projects in computational physics and materials science. Developed and implemented computational frameworks to manage and analyze large datasets, extracting mechanical and thermodynamic properties from molecular dynamics and density functional theory (DFT) calculations **Current work**.