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EDUCATION

MAJOR IN PHYSICS

Faculty of Science, UNAM : 2022–Present
Mexico City, Mexico

HIGH SCHOOL

Toluca Campus, UNITEC: 2019–2021
Toluca, State of Mexico, Mexico

ABILITIES

Programming Languages

- PYTHON
- MATLAB
- MATHEMATICA
- ARDUINOIDE, LABVIEW, NEXTION

Languages

- English (IELTS Academic 8)
- Japanese (JLPT N2)
- Spanish (native)

Soft skills

- Collaborative problem solving in research teams at undergraduate and graduate levels
- Conversational skills, task organization, public speaking
- Scientific thinking, creativity and visualization
- Diligence, initiative, adaptability, attention to detail

REFERENCES

Daniel Sahagún Sánchez, PhD PI

Cold Atoms and Quantum Optics Laboratory
(LAFriOC), Institute of Physics, UNAM
Mail: sahaun@fisica.unam.mx

Pedro A. Quinto Su, PhD PI

Applied Optics Laboratory, Institute of Nuclear
Sciences, UNAM
Mail: pedro.quinto@nucleares.unam.mx

Emilio Moreno Ledesma

PHYSICS MAJOR

SUMMARY

Fourth year Physics student at UNAM's Faculty of Science. Strong problem solving and communication abilities tested as an intern in the Cold Atoms and Quantum Optics Laboratory and the Applied Optics Laboratory, and as a volunteer in the Laser Optics Workshop and the Electricity Workshop at UNAM. Self-taught in Simulations and Data Analysis, mainly using Python. Actively raising the standard in student-lead scientific research.

EXPERIENCE

Cold Atoms and Quantum Optics Laboratory (LAFriOC), Institute of Physics, UNAM

January, 2024 – Present
Intern

Design of a Rb oven and a cateye ECDL, characterization of a CCD camera. Training in laser optics arrangements, spectroscopy, polarimetry and atomic physics.

Applied Optics Laboratory, Institute of Nuclear Sciences, UNAM

November, 2024 – May, 2025
Intern

Design and construction of optical tweezers arrangements and characterization of their potential stiffness and shape through video analysis and QPD interferometry

Laser Optics Workshop

March, 2024 – December, 2024
Volunteer

Design and construction of a DIY spin coater, analysis of thin films with reflectometry, measurement of resistivity for silver paint and graphene under different stresses and temperatures

LXVII National Physics Congress

October, 2024
Participant
Presentation of a DIY spin coater and PDMS thin films project

Electricity Workshop

February, 2024 – August, 2024
Volunteer
Magnetic field intensity measurements through electromotive force curves. Construction and characterization of DIY capacitors

Founding Member of the Student Physics Committee

May, 2025 – Present

IELTS Academic – Band Score 8
February, 2025

REFERENCES

Edna M. Hernández González, PhD PI

Laser Optics Workshop, Physics Department,
Faculty of Science, UNAM

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Ricardo Méndez Fragoso, PhD

Electricity Workshop, Physics Department
Coordinator, Faculty of Science, UNAM

Mail: rich@ciencias.unam.mx

Phone : +52-56-22-4964

JLPT N2 Certification

November, 2024

Quantum Antarctic Startup Weekend

December, 2024

First place winner

ENALLT – Japanese

August, 2023 – November, 2023

Conclusion of the final level course (equivalent to N3)

WaniKani

2019

Level 60 conclusion
