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Emilio Moreno Ledesma

PHYSICS MAJOR

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: sahagun@fisica.unam.mx

Pedro A. Quinto Su, PhD PI
Applied Optics Laboratory, Institute of Nuclear Sciences, UNAM
Mail: pedro.quinto@nucleares.unam.mx

SUMMARY

Junior 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 Physcs, 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 resisitivity 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

IELTS Academic - Band Score 8 — **February, 2025**

JLPT N2 Certification — **November, 2024**

REFERENCES

Edna M. Hernández González, PhD PI

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Faculty of Science, UNAM

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Phone : +521-(55)-6676-0454

Ricardo Méndez Fragoso, PhD

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

Mail: rich@ciencias.unam.mx
Phone : +52-56-22-4964

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