

Maria Fernanda **Torres Cabrera**

5131 Perry St., Houston, Texas, 77021

☎ (+1) 573 482 22 48 | ✉ mftorrescabrera@uh.edu | Mexican-12/15/1999

Summary

Ph.D. Physics Candidate at University of Houston.

Work Experience

Constitutional Service

Colima, Mexico

ASSISTANCE FOR SOLVING PROBLEMS AND QUESTIONS ABOUT PHYSICS AND MATHEMATICS TO HIGH SCHOOL STUDENTS

Apr. 2021 - Jul. 2021

- During this service, interested students requested consultancies for several topics in physics and mathematics. I gave physics and mathematics sessions for high school and undergraduate through a platform, during which conceptual doubts were resolved, reviewed exercises, and topics proposed by the attendees.

Social Service

Colima, Mexico

GRADING ASSIGNMENTS FROM COLLEGE STUDENTS

Aug. 2019 - Jul. 2021

- Volunteer for grading homework from Introduction to Physics, Thermodynamics, and Mathematical Methods.

Teaching Assistant

Houston, Texas

TEACHING ASSISTANT AT UNIVERSITY OF HOUSTON

Aug. 2022 - Jul. 2023

- Teaching Assistant for College Students at the University of Houston, where the course was focused on Classical Mechanics.
- Teaching Assistant at the Online Dual Program with University of Houston and Dalian Maritime University International Institute (UH-DMU).

Education

University of Colima

Colima, Mexico

LICENTIATE DEGREE IN PHYSICS

Aug. 2018 - June. 2022

- GPA: 9.2/10
- Graduated on June 2022

Research Interest

Nuclear Physics

Particle Physics

Statistical Physics

Skills

Computer Language Python, HTML, C++

Software and Tools Mathematica, \LaTeX , Ubuntu and ROOT

Languages English (Level: B2), Spanish (native)

Certifications

2021 **Test of English as a Foreign Language (TOEFL)**, Score: 83. Educational Testing Service TOEFL iBT®

Colima, Mexico

2022 **Duolingo English Test**, Total Score: 130

Colima, Mexico

Relevant Courses

Undergraduate Physics Courses

Colima, Mexico

Aug. 2018 - Jun. 2021

- Classical Mechanics
- Thermodynamics
- Electricity and Magnetism
- Modern Physics
- Analytical Mechanics
- Electrodynamics
- Quantum Mechanics I
- Quantum Mechanics II
- Statistical Mechanics
- Particle Physics
- Introduction to Solid State

Undergraduate Math Courses

Colima, Mexico

Aug. 2018 - Jan. 2020

- Linear Algebra
- Differential Equations
- Differential, Integral and Vector Calculus
- Complex Analysis
- Mathematical Methods

Books Used

Physics Books

Colima, Mexico

Aug. 2018 - Jun. 2021

- Fundamentals of Physics, Halliday and Resnick
- Introduction to Modern Physics, McGevey J.
- Classical Dynamics of Particles and Systems, Marion and Thornton
- Introduction to Electrodynamics, Griffiths D.
- Introduction to Quantum Mechanics, Griffiths D.
- A Modern Course in Statistical Physics, Reichl L.
- Introduction to Solid State, Kittel C.

Math Books

Colima, Mexico

Aug. 2018 - Jan. 2020

- Calculus: One and Several Variables Vol I and II, Salas, Hille and Etgen
- Linear Algebra Done Right, Axler S.
- Differential Equations, Zill and Cullen
- Complex Analysis, Gamelin T.
- Mathematical Methods for Physicists, Arfken, Weber, and Harris

Honors & Awards

INTERNATIONAL

2020 **Bronze Medal**, University Physics Competition

Online

LOCAL

2021 **Excellence Grant**, Semester Enrollment Excellence Scholarship

Online

2021-2022 **Undergraduate Research Scholarship**, Thesis Project

Colima, Mexico

2022 **Excellence Grant**, Semester Enrollment Excellence Scholarship

Online

Projects & Publications

Projects

Colima, Mexico

AUTHOR OF: "WAVE PACKETS DYNAMICS IN COLLAPSE MODEL INTERPRETATION OF QUANTUM MECHANICS"

2022

- Licentiate degree in Physics.

Publications

Colima, Mexico

FIRST AUTHOR OF A LETTER

2022

Torres F., Aranda A., Modak S. **New insights on the quantum-classical division in light of Collapse Models**. <https://arxiv.org/abs/2210.10603>

Extracurricular Activity

DUAL CP Institute of High Energy Physics	<i>Colima, Mexico</i>
VOLUNTEER	<i>Jan. 2020</i>
Physics and Mathematics Week Workshop	<i>Colima, Mexico</i>
VOLUNTEER	<i>Feb. 2020</i>
Heisenberg Institute	<i>Colima, Mexico</i>
VOLUNTEER	<i>Feb. 2020</i>
4th Science Workshop for Women	<i>Colima, Mexico</i>
VOLUNTEER	<i>Mar. 2020</i>
Fermilab Course by Jonathan Paley	<i>Online</i>
PARTICIPANT	<i>Mar. 2020</i>
Conferences and Colloquiums at University of Colima	<i>Colima, Mexico</i>
ATTENDED	<i>2018-2020</i>
5th Science Workshop for Women	<i>Online</i>
VOLUNTEER	<i>Mar. 2021</i>
CUWiP, Conferences for Undergraduate Women in Physics	<i>Online</i>
PARTICIPANT	<i>Apr. 2021</i>
Summer School in Astrophysics by IRyA, UNAM	<i>Online</i>
PARTICIPANT	<i>Jul. - Aug. 2021</i>
6th Science Workshop for Women	<i>Colima, Mexico</i>
VOLUNTEER	<i>Mar. 2022</i>
DUAL CP Institute of High Energy Physics	<i>Colima, Mexico</i>
VOLUNTEER	<i>June 2022</i>
Webmaster for WiPS at University of Houston	<i>Houston, Texas</i>
WEBMASTER	<i>Present</i>
7th Science Workshop for Women	<i>Online</i>
GUEST	<i>Feb. 2023</i>
Research Day at University of Houston	<i>Houston, Texas</i>
PARTICIPANT FROM WiPS ORGANIZATION	<i>Feb. 2023</i>
TcSUH/teach Houston workshop for summer camps.	<i>Houston, Texas</i>
VOLUNTEER	<i>Jul. 2023</i>

Additional Information

Travelling Passport, U.S. Visa and Driver's license