KARTHIK MIRYALA

Quantum Researcher and Physics Educator

@ miryalakarthik@gmail.com   ● Milan, Italy

EDUCATION

M.S. in Theoretical Physics
University of Massachusetts Amherst

📅 Sept 2018 – May 2020   ● Amherst, MA

B.Tech in Chemical Engineering
Motilal Nehru National Institute of Technology

📅 July 2013 – May 2017   ● Allahabad, India

EMPLOYMENT HISTORY

Physics and Mathematics Tutor

📅 Aug 2020 – Present   ● Remote

Physics Instructor
Catawba Valley Community College

📅 July 2021 – May 2023   ● Hickory, NC

Adjunct Physics Instructor
Springfield College

📅 Aug 2020 – May 2021   ● Springfield, MA

Laboratory Instructor
Amherst College

📅 Feb 2021 – May 2021   ● Amherst, MA

COURSES

University
Conceptual Physics with labs
Classical Mechanics with labs
Electromagnetism with labs
Ray and Wave Optics with labs

High School
AP Physics I and II
AP Physics C Mechanics and Electromagnetism
AP Precalculus
AP Calculus AB and BC

PUBLICATIONS

Control of Flow Separation around a Cylinder using DBD Plasma Jet Actuator
6th International and 43rd National Conference on "Fluid Mechanics and Fluid Power" (FMFP-2016), 15-17 December 2016.

RESEARCH PROJECTS

Applied Physics

Subsonic Flow control using Dielectric Barrier Discharge (DBD) Plasma Actuators

Theoretical Physics

1. One loop Contributions: $H \to \gamma\gamma$ using dimensional regularization
2. $e^+e^- \to f\bar{f}$ using Narrow Width Approximation

TECH PROJECTS

Physics

1. Time Evolution of a Quantum Reservoir for Quantum Computing Applications

2. Ground State Finder via Gradient-Based Optimization

Tech Projects

My Portfolio Website
https://www.karthikmiryala.com/

TECHNICAL SKILLS

Primary   ● ● ● ● ●
Simulation of Quantum Systems, Machine Learning and Full-Stack Web-Development using Python.

Libraries   ● ● ● ● ○
NumPy, Matplotlib,Pandas,SciPy,Seaborn,Pytorch,TensorFlow

Frameworks   ● ● ● ○ ○
Django, Flask

Document Presentation   ● ● ● ● ○
LaTeX, Microsoft Office Tools

Others   ● ● ● ○ ○
MATLAB, LabVIEW, HTML5 & CSS3

LANGUAGES

English   ● ● ● ● ●
Italian   ● ○ ○ ○ ○
Telugu   ● ● ● ● ●
Hindi   ● ● ● ● ○