Theodore F. Mollano

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Professional Summary

Physics and Mathematics researcher in experimental physics, and fluid dynamics. Background in PDEs, finite element methods, low-statistics experimental particle physics. Skilled in Python, calculations, and mathematical modeling.

Education

2021 – Present **B.A., Physics & Mathematics with Honors**, Williams College, Williamstown, MA
Major GPA: 3.96; Dean's List every term
Double Major, Dual honors thesis in both Mathematics and Physics.

Grad coursework at UC Berkeley (Spring 2024), Research Program at Budapest Semesters (Summer 2023)

Research Experience

Physics Research Assistant, Giovanetti Lab, Williams College 2022 – 2025

– Assembed dewar and PID-controlled outgassing system for our mockup DARKSIDE 20K experiment.
– For thesis, calculated $\tau_{1/2}$ for ^{180m}Ta in collaboration with SANFORD Underground Laboratory.

Mathematics Research Assistant, Williams College 2025

– For thesis, classified moment μ_c images for the Lie-group action of SO(3), supervised by Prof. Ivo Terek.
– Research in plane tiling dynamics in Ergodic Theory with Professor Cesar E. Silva. Ongoing.

Chemistry Intern, Mathematica (Remote/In-Person) 2022 – 2023

– Created algorithms for molecular structure recognition for isomer enumeration. Results published.
– Developed software for chemical synthesis prediction in Mathematica in Chemistry team.

Teaching Experience

Physics/Mathematics Teaching Assistant, Williams College 2023 – 2025

– Taught Electromagnetism, Abstract Algebra, Measure Theory, Linear Algebra and Dynamics.

Mathematics Teaching Assistant, AwesomeMath 2022

– Delivered intermediate combinatorics instruction to a cohort of summer students.

Awards & Honors

2021–Present Physics Major with Honors, Mathematics Major with Honors, Dean's List every term.

Technical Skills

Programming Python, C++, Machining, Metalworking, Finite Element Simulation of 2D/3D PDEs
Languages English (Native), German (Professional), Italian (Intermediate), Chinese (Beginner)