Leo Seen

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Education

University of Wisconsin - Madison   Expected graduation date: May, 2024
Physics B.S., Math Certificate   *GPA: 3.947/4*
Relevant Courses: Mechanics, Electromagnetic Fields, Thermal Physics, Optics,
                 Electric Circuits and Electronics, Quantum Mechanics I&II,
                 Neutrino Physics & Astrophysics, Differential Equations and Linear Algebra,
                 Applied Math I and II, Applied Dynamical Systems: Chaos and Modeling

Research Experience

IceCube Collaboration   May, 2023 - Present
Gamma-ray Correlation Analysis of LHAASO and HAWC sources with IceCube
- Search for PeVatrons using public data from LHAASO and HAWC
- Study diffuse neutrino flux contributions from the inner and outer galactic plane regions
- Train a BDT to obtain multiple parameter outputs to better characterize source uncertainties
- Participate in discussions at weekly research meetings
- Utilize IceCube software to run point-source analysis of 29 UHE LHAASO gamma-ray sources

IceCube Summer School   June 2023
- Engaged with IceCube software and analysis tools
- Study and listen to talks about neutrino astrophysics

Teaching Experience

Teaching Assistant   Jan. 2022 - Present
- Lead discussion and lab sections for introductory physics courses
- Hold office hours and exam review sessions
- Create TA guides, Lab solutions/rubrics, Exam review packets, New lab
- Convert discussion worksheets into LaTeX
- Work with professors to restructure course
- Respond to student's questions on Piazza
- Grade Quizzes, Labs, Exams, and Discussions

Tutor   Nov. 2021- Apr. 2022
- Assist high school students in various topics in math and physics

Extracurriculars

Swimming   2010 - 2021
Club Swimming
- Swim competitively for Rockville-Montgomery Swim Club (RMSC) and Potomac Valley Swimming (PVS)
- Attend both local and regional meets

High School Swimming
- Swim for Thomas S. Wootton High School.
- Participated in divisionals, regionals, and states

Awards

- Dean's List   Fall 2021, Spring 2022, Fall 2022
- NSF Graduate Research Fellowship Program   Pending
- Certificate of Meritorious Service   2021

  Exemplary service to the community and dedication to applying academic skills through
  service learning projects to solve real community problems in the State of Maryland

- PVS Scholar Athlete Award   2018-2019

  Scholastic excellence of Potomac Valley swimmers

- MVP for High School Club Swimming   2017

Skills

Coding Languages:
    Python, C++, Java, MATLAB

Technologies & Tools:
    Linux, Github, LaTeX, Machine Learning

Languages (other than English):
    Fluent communication in Chinese

Other:
    Strong communicator/teacher, Organized, Effective leader

Presentations

- Gamma-ray Correlation Analysis of LHAASO and HAWC sources with IceCube using the Combined Dataset, IceCube Collaboration Meeting Fall 2023, October 2023