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wei-chih-huang
noctildon

Wei-Chih Huang

Education

Aug. 2015 – Jun. 2019 *Bachelor of Science in Physics Department*
National Tsing Hua University, Taiwan

Aug. 2019 – Aug. 2025 *Phd in Physics & Astronomy Department*
Texas A&M University, US

Fields of Interest

Nuetrino Physics, Dark Matter, Cosmology, High Energy Physics, Nuclear Physics

Research Experience

Aug. 2019 – Sep. 2022 **Probing the dark sector with nuclear transition photons** arxiv
Physics & Astronomy department, Texas A&M University, US

Aug. 2019 – Sep. 2022 **Inelastic nuclear scattering from neutrinos and dark matter** arxiv
Physics & Astronomy department, Texas A&M University, US

Nov. 2021 – Aug. 2022 **Axion-Like Particle Production at Beam Dump Experiments with Distinct Nuclear Excitation Lines** arxiv
Physics & Astronomy department, Texas A&M University, US

Jan. 2021 – Dec. 2021 **Coherent Elastic neutrino-nucleus Scattering (CEvNS): Sterile Neutrino Search**
Physics & Astronomy department, Texas A&M University, US

Nov. 2017 – Aug. 2019 **Inflation and Late-time Acceleration in $f(R)$ Gravity Theory**
Physics department, National Tsing Hua University, Taiwan

Jul. 2018 – Aug. 2018 **Dark Matter in Merging Galaxies**
The University Consortium of ALMA–Taiwan

Publication

Probing the dark sector with nuclear transition photons
Feb. 2023 Bhaskar Dutta, ***Wei-Chih Huang***, Jayden L. Newstead

Inelastic nuclear scattering from neutrinos and dark matter
Dec. 2022 Bhaskar Dutta, ***Wei-Chih Huang***, Jayden L. Newstead, Vishvas Pandey

Axion-Like Particle Production at Beam Dump Experiments with Distinct Nuclear Excitation Lines

Aug. 2022 Loyd Waites, Adrian Thompson, Adriana Bungau, Janet M. Conrad, Bhaskar Dutta, ***Wei-Chih Huang***, Doojin Kim, Michael Shaevitz, Joshua Spitz

Honors and Awards

Three Years Tsing Hua University Scholarship (2% acceptance rate)

2015 - 2018 Tuition wavier, including housing and textbooks

Undergraduate Research Scholarship

Fall 2018 Scholarship for the $f(R)$ gravity project

Data Science Ambassador Scholarship

Fall 2022 Data Science Ambassador Scholarship Program at Texas A&M Institute of Data Science

Scientific Activities

Oct. 2022 **Particle Physics on the Plains**

Inelastic Dark Matter-Nucleus Scattering in Stopped-pion Experiments using Transition Photons

May. 2022 **2022 Phenomenology Symposium**

Inelastic neutrino-nucleus and dark matter-nucleus scattering

Jul. 2021 **2021 Meeting of the Division of Particles and Fields of the American Physical Society (DPF21)**

The calculation of inelastic neutrino-nucleus scattering

Oct. 2021 **2021 Magnificent CEvNS Workshop**

Inelastic neutrino-nucleus and dark matter-nucleus scattering

Summer 2018 **Atacama Large Millimeter/Submillimeter Array (AMLA)**

Summer Student Program

Work/Teaching Experience

Spring 2016 **Shu Guang Girls' Senior High school**

Teaching Assistant, physics and other science subjects

Fall 2019 **TAMU Physics 408, Thermodynamics and Statistical Mechanics**

Teaching Assistant (grader)

Spring 2020 **TAMU Physics 206, Newtonian Mechanics for Engineering and Science**

Teaching Assistant

Summer 2022 **TAMU Physics 207, Electricity and Magnetism for Engineering and Science**

Teaching Assistant (Lab)

Fall 2020 **TAMU Physics 207, Electricity and Magnetism for Engineering and Science**

Teaching Assistant

Spring 2021 **TAMU Physics 207, Electricity and Magnetism for Engineering and Science**
Teaching Assistant

Fall 2021 **TAMU Physics 206, Newtonian Mechanics for Engineering and Science**
Teaching Assistant

Spring 2022 **TAMU Physics 207, Electricity and Magnetism for Engineering and Science**
Teaching Assistant

Fall 2022 **TAMU Physics 207, Electricity and Magnetism for Engineering and Science**
Teaching Assistant

2022 – **TAMU physics department**
2023 Workshop Lecturer: Data Science in Physics (webpage)

Programming Skills

Python, NumPy, Pandas, Matplotlib, SciPy, PyTorch, TensorFlow
Bash, Git, GitHub, Docker, Mathematica, C/C++, Javascript, LaTeX

Extra-Curricular Activities

Spring 2022 - present: Project Manager at Aggie Coding Club

Fall 2022 - Spring 2023: Data Science Ambassador representing Physics Department at Texas A&M