

Wei-Chih Huang

Education

Aug. 2015 – *Bachelor of Science in Physics Department*
Jun. 2019 **National Tsing Hua University, Taiwan**
Aug. 2019 – *Phd in Physics & Astronomy Department*
Aug. 2025 **Texas A&M University, US**

Fields of Interest

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

Research Experience

Aug. 2019 – **Probing the dark sector with nuclear transition photons** arxiv
Jun. 2023 *Physics & Astronomy department, Texas A&M University, US*

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

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

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

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

Jul. 2018 – **Dark Matter in Merging Galaxies**
Aug. 2018 *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

Apr. 2023 **Interplay of Nuclear, Neutrino and BSM Physics at Low-Energies**

Probing BSM particles using inelastic nuclear scattering

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

2018 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 **TAMU Physics 207, Electricity and Magnetism for Engineering and Science**

2022 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

2022 Project Manager at Aggie Coding Club

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