

Wei-Chih Huang

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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

Short Baseline Neutrino Anomalies at Stopped Pion Experiments

Oct. 2023 Iain A. Bisset, Bhaskar Dutta, *Wei-Chih Huang*, Louis E. Strigari

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 waiver, 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 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

2022 Project Manager at Aggie Coding Club

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