WEI-CHIH HUANG

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EDUCATION

PhD in Physics, Texas A&M University, US   Aug. 2019 - Aug. 2025 (expected)
BS in Physics, National Tsing Hua University, Taiwan   Aug. 2015 - Jun. 2019

PUBLICATIONS

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

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

- Short Baseline Neutrino Anomalies at Stopped Pion Experiments   arxiv
  *Iain A. Bisset, Bhaskar Dutta, **Wei-Chih Huang**, Louis E. Strigari*

- Axion-Like Particle Production at Beam Dump Experiments with Distinct Nuclear Excitation Lines   arxiv
  *Loyd Waites, Adrian Thompson, Adriana Bungau, Janet M. Conrad, Bhaskar Dutta, **Wei-Chih Huang**, Doojin Kim, Michael Shaevitz*

EXPERIENCE

Research Assistant - Physics Department, Texas A&M University   Aug. 2019 - present

- Built physical model and conducted the statistical analysis on the large multi-dimensional data by Python
- Accelerated the analysis by 1000 times with multiprocessing, caching, and C/C++
- Published 4 papers in high impact journals and presented several successful talks at international conferences

Independent Data Science Researcher - Pro Cyclists Race Analysis (github repo)   Apr. 2022 - present

- Achieved 20% better performance than a trivial model with machine learning models using Pytorch
- Boosted web scraping BeautifulSoup by 500% with multi-threading
- Preprocessed the data (clean, format, normalize) with NumPy, Pandas, SciPy, and scikit-learn
- Saved 80% costs compared to AWS, GCP, Azure by deploying data and model to Runpod (GPU cloud)

Data Science Ambassador - Physics Department, Texas A&M University   Aug. 2022 - Aug. 2023

- Provided training and consulting to the department and the students (webpage)
- Designed interactive workshops on topics including Python, Linux, statistics, data analysis, and machine learning

Project Manager - Aggie Coding Club   Jan. 2022 - Jan. 2023

- Led a 10-people team and developed a dynamic and responsive website using Django (Python)
- Deployed the website at zero cost on Heroku cloud platform
- Built a referral website to reduce the time of networking by 40%
- Designed PostgreSQL database schema to save the disk space by 20%

Teaching Assistant - Physics Department, Texas A&M University   Aug. 2019 - Dec. 2022

- Taught and graded college Newtonian Mechanics, Electromagnetism, Thermodynamics, and Statistical Mechanics
- Demonstrated hands-on experiments and post-lab data analysis

HONORS AND AWARDS

- **Data Science Ambassador Scholarship**   2022 - 2023
  Data Science Ambassador Scholarship Program at Texas A&M Institute of Data Science

- **Three Years Tsing Hua University Scholarship (2% acceptance rate)**   2015 - 2018
  Tuition wavier, housing accommodation and textbooks subsidy

- **Undergraduate Research Scholarship**   Fall 2018
  The scholarship for the New Gravity Theory