

WEI-CHIH HUANG

EDUCATION

[Email](#) ◇ [Linkedin](#) ◇ [Github](#) ◇ [Personal Website](#)

PhD in Physics, Texas A&M University, US

June 2025 (expected)

BS in Physics, National Tsing Hua University, Taiwan

June 2019

- ◇ Specialize in theoretical high energy physics for 5 years

PROJECTS

Aggie Job Referral Django, SQLite, PostgreSQL, Heroku, Bootstrap

[website link](#)

- Create referrals/openings matching website to reduce the time of networking by 40%.
- Connect Django to database
- Deploy to Heroku

PyBigstick Numpy, Pandas, Matplotlib, Streamlit

[github link](#)

- Auto-generate input scripts for [BIGSTICK](#)
- Save 95% of time writing input scripts
- Automize the analysis processes
- Use Streamlit to visualize the result data

Pro Cyclists Race Analysis Numpy, Pandas, BeautifulSoup

[github link](#)

- Web scraping the data from an organization website by BeautifulSoup
- Increase the web scraping speed by 5 times with multi-threading

Curve Fitting GUI Scipy, Numpy, Matplotlib, PyQt

[github link](#)

- User friendly graphical user interface tool for curve fitting

RESEARCH EXPERIENCE

Inelastic Neutrino-Nucleus scattering using BIGSTICK (Large Scale Nuclear Shell Model Code)

- Deploy BIGSTICK to MPI/OpenMP in computer cluster
- Virtualize BIGSTICK with Docker to resolve the incompatibility with the cluster
- Analyze the multi-dimensional outputs by python and mathematica.
- Present several successful talks at workshops [slides](#)

Inflation and Late-time Acceleration in a New Gravity Theory

- Create time-dependent partial differential equations to describe the features of the universe
- Program mathematica and python to stimulate and visualize the evolution of the universe

Searching for Axions in IsoDAR (a Particle Physics Experiment)

- Construct statistics models for nuclear decay in the experiment and run statistical tests

Dark Matter in Merging Galaxies

- Automate the analysis process of dark matter near a galaxy with CASA (data processing software for radio telescopes arrays, written in IPython)
- Present a talk at workshop [slides](#)

Application of Deep Learning in AdS/CFT

[text](#)

- Integrate deep learning with AdS/CFT (a well-known theory in high energy physics)

Coherent Elastic neutrino-nucleus Scattering ($\text{CE}\nu\text{NS}$): Sterile Neutrino Search

- Construct a statistics model for sterile neutrino.

EXTRA-CURRICULAR ACTIVITIES

- Project Manager at [Aggie Coding Club](#)
- Data Science Ambassador

HONORS AND AWARDS

- **FlyUP Project Scholarship** 2015-2018
Tuition wavier, including housing and textbooks. ~10% acceptance rate each year.
- **Undergraduate Research Scholarship** Fall 2018
The scholarship for the New Gravity Theory.

WORK/TEACHING EXPERIENCE

Teaching Assistant Math and physics *Shu Guang Girls' Senior High school* Spring 2016

Teaching Assistant Thermodynamics and Statistical Mechanics *Texas A&M University* Fall 2019

* Serving as TA for courses below at Texas A&M for several semesters

Lab Teaching Assistant Electricity and Magnetism for Engineering and Science *Texas A&M University*

Teaching Assistant Newtonian Mechanics for Engineering and Science *Texas A&M University*

Teaching Assistant Electricity and Magnetism for Engineering and Science *Texas A&M University*