

Po-Wen Chang

◇ Address: XXX

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EDUCATION

National Taiwan University (NTU), Taipei, Taiwan Sept. 2013 – Aug. 2016

M.S. in Physics

* Rank: 2nd / 200+ applicants of the graduate program (2013)

- Thesis Advisors: Dr. Je-An Gu and Prof. W-Y. Pauchy Hwang
- Overall GPA: XXX / 4.00
- Outstanding *Graduate-Level* Physics majors:
 - Cosmology || String Theory || Special Topics in Field Theory (A+)
 - Statistical Mechanics (I) || Classical Mechanics (A)

National Chiao Tung University (NCTU), Hsinchu, Taiwan Sept. 2009 – Jun. 2013

B.S. in Electronics Engineering

- Overall GPA: XXX / 4.00; Last 70 credits GPA: XXX / 4.00
- Outstanding Physics majors:
 - Intro. to Quantum Mechanics || Electromagnetic || Statistical Mechanics || Solid State Physics (I) (A+)

PUBLICATIONS

[1] **Po-Wen Chang**, Je-An Gu, “*Rapid Oscillation of Gravitational Constant in the Scalar-Tensor Theory of Gravity: the early-time constraints on its induced energy density from cosmology.*” Soon to be submitted. [[Article sample](#)]

[2] Team of Paper Plane Project (NCTU)*, *Chinese Translation of “Computing Without Computers by Paul Curzon,”* Software Liberty Association of Taiwan (SLAT), (2017). [[Electronic edition](#)]

* We translated Prof. Paul Curzon’s programming text and published it as an open educational resource for teachers in Taiwan.

AWARDS & HONORS

Government Fellowship for Studying Abroad, Ministry of Education, Taiwan 2018 – 2021

- I am the only person who is awarded the funding for pursuing a Ph.D. in fundamental science in the U.S.

Grant for Research Assistant, Ministry of Science and Technology, Taiwan Jan. – Jul. 2018

- Accompanied with an offer to collaborate with Prof. Cheng-Wei Chiang in the NTU High Energy Pheno Group.

Director’s Scholarship, Department of Physics, NTU, Taiwan Oct. 2013 – Jul. 2014

- For the extraordinary performance on graduate school entrance exam.

Year Award for Summer Student Program, Institute of Physics, Academia Sinica, Taiwan Jul. – Sept. 2013

- Awarded the unique year academic support for the short-term research with Dr. Henry Tsz-King Wong in 2013.

COMPUTER SKILLS

C/ C++, Python, *Mathematica*, *MATLAB*, *ROOT*, Field Programmable Gate Array (FPGA)

RESEARCH EXPERIENCE

Leung Center for Cosmology and Particle Astrophysics (LeCosPA), NTU, Taipei, Taiwan

Graduate Researcher

Sept. 2015 – Aug. 2016

- Graduate Research Project, on *the Scalar-Tensor Theory of Gravity in Cosmology*.
- Collaborated with Dr. Je-An Gu and advised by Prof. W-Y. Pauchy Hwang.
- We have explored several dynamical impacts of the non-minimal coupling by studying its field equations and phenomenology in the late-time universe.

Independent Astronomical Project, International Astronomical Youth Camp (IAYC), Austria

Member of the working group on Telescopes, Remote Astronomy and Photometry Jul. – Aug. 2014

- Developed a method to estimate the expansion rate of M27 with the Leopold Figl Observatory. [[Scientific report](#)]

Taiwan EXperiment On Neutrino (TEXONO), Institute of Physics, Academia Sinica, Taiwan

Summer Student Jul. – Sept. 2013

- Advisor: Dr. Henry Tsz-King Wong.
- Calibrated the sensitivity of Ge and NaI detectors by photon-emitting sources and *ROOT* algorithms.

Semiconductor Nanostructures and Quantum Devices Laboratory, NCTU, Taiwan

Undergraduate Student Jun. – Dec. 2012

- Advisor: Prof. Chien-Ping Lee.
- Simulated the optical resonance modes in semiconductor by the *Finite-Difference Time-Domain Method*.

ACADEMIC PRESENTATIONS

Talks

- With title “*Rapid Oscillation of Gravitational Constant in the Scalar-Tensor Theory of Gravity: the early-time constraints on its induced energy density from cosmology*”
 - Chalk talk, Prof. XXX’s Research Meeting, XXX University, Canada (11/06/2017)
 - *Post-Inflationary String Cosmology*, University of Bologna, Italy (09/20/2017)
 - *IV Cosmology and the Quantum Vacuum*, Segovia, Spain (09/02/2017)
 - *2017 Astronomical Society of ROC Annual Meeting*, National United University, Taiwan (05/21/2017)
 - **Invited talk**, Prof. XXX’s Group Meeting, XXX University, USA (07/21/2016)
 - *Astro-Talk*, National Taiwan University, Taiwan (07/05/2016)
- On “*Quantum Field Theory on Curved Spacetime*”
 - *LeCosPA Theoretical Journal Club*, National Taiwan University, Taiwan (12/25/2014)

Posters

- With title “*Rapid Oscillation of Gravitational Constant in the Scalar-Tensor Theory of Gravity: the early-time constraints on its induced energy density from cosmology*”
 - *21st International Conference on General Relativity and Gravitation*, Columbia University, USA Jul. 2016

TEACHING EXPERIENCE

Teaching Assistant of graduate course “General Relativity” Spring 2016

- Taught by Prof. Yih-Yuh Chen (Department of Physics, NTU).

Teaching Assistant of extracurricular course “From Quarks to Black Holes” Spring 2015

- Taught by Prof. W-Y. Pauchy Hwang (Department of Physics, NTU).

WORKING EXPERIENCE

High-Energy Physics Phenomenology Group, Department of Physics, NTU, Taiwan Jan. – Jul. 2018

- Full-time Research Assistant (Prof. Cheng-Wei Chiang’s group). Doing an *ongoing project* on the Higgs inflation.

Education Department, New Taipei City Government, Taiwan Aug. 2016 – Aug. 2017

- Mandatory service of Taiwan. I held a whole-semester astronomy activity for a remote elementary school.

LEADERSHIP & ACTIVITIES

Astro-Talk, Graduate Institute of Astrophysics, NTU, Taiwan Mar. 2015 – Aug. 2016

- Organized a weekly study group about the modern cosmology, galaxy formation and Astrostatistics.

Waker Group - International Summer Volunteer, Tattapani, India Feb. 2015

- Coordinated a series of scientific courses on non-Newtonian fluid for the suburban kids.