# Dr. Po-Hsun Tseng

**6+ years experience of large-scale software development with C programming on the Linux system throughout my Ph.D. journey. Seeking a challenging and rewarding opportunity with low-level system programming (eg. device driver, Linux kernel, CPU architecture) to apply my skills at a fabless company.**

## CONTACT


zengbs@gmail.com
+886 966 587 832
Hsinchu, Taiwan
https://github.com/zengbs


## SKILLS

*Programming*
- **C**
- **Bash scripting**
- **System programming**
- **CUDA**
- **Python**

*Operating System*
- **Linux – user**
- **Linux – kernel**

*Architecture*
- **ARM architecture**

*Software & Tools*
- **Git**
- **Vim**
- **Gdb**
- **Valgrind**

*Languages*
- **Chinese (native)**
- **English – writing**
- **English – speaking**
- **English – listening**
- **English – reading**

## EDUCATION

Ph.D. in Computational Physics
National Taiwan University, Taiwan
08/2016 - 06/2022

- Developed and implemented a new algorithm to reduce numerical error by $10^6$ compared to conventional one.
  See Fig. 16 in (https://arxiv.org/abs/2012.11130).
- Designed a new approach to further promote the robustness of GAMER. The new approach was adopted in the research project led by Dr. Kuo-Chuan Pan from Tsing Hua University. (https://github.com/gamer-project/gamer/pull/60)
- Worked on improving the GAMER collaborated with Dr. Tzihong Chiueh and Dr. Hsi-Yu Schive. See the Section *References*.
- A main contributor of the GAMER.
  (https://github.com/gamer-project/gamer/graphs/contributors)
- Built NIS, NFS, and Linux cluster from scratch with colleagues and worked with Dr. Hsi-Yu Schive to bootstrap simulations for research.

## WORK HISTORY

Circuit designer
TDK corporation, Singapore
01/2015 - 02/2016

- Designed the circiut of surface acoustic wave(SAW) filters

Military service
08/2013 - 08/2014

## EDUCATION

M.Sc. in Physics
National Taiwan University, Taiwan
09/2011 - 07/2013

B.Sc. in Mathematics
National Central University, Taiwan
09/2006 - 07/2011

## SOFT SKILLS

Nonverbal communication | Active listening | Open mindedness | Patience | Mutual respect | Teamwork | Brainstorming | Collaboration

## GENERAL SKILLS

Numerical algorithm | Large-scale project | cscope | makefile | GNU autotools

## PUBLICATIONS

[1] An adaptive mesh, GPU-accelerated, and error minimized special relativistic hydrodynamics code

**Po-Hsun Tseng**, Hsi-Yu Schive, Tzihong Chiueh

Monthly Notices of the Royal Astronomical Society 2021 Vol. 504, pp. 3298-3315

https://arxiv.org/abs/2012.11130

[2] The symmetry problem of the Fermi and eROSITA bubbles: A proof-of-concept study

**Po-Hsun Tseng**, Hsiang-Yi Karen Yang, Hsi-Yu Schive, Chun-Yen Chen, Tzihong Chiueh

preprint 2022

## TALKS

- An adaptive-mesh, GPU-accelerated, and optimally error-controlled special relativistic hydrodynamics code
  Oral (remote), American Center for Physics College Park, U.S.A — Mar. 2021
- A new and accurate code for simulating special relativistic hydrodynamics
  Oral, Annual Meeting of the Physical Society of Taiwan, NPTU. — Feb. 2020

## REFERENCES

- Please send an appointment letter to request a call. 😃
- Dr. Tzihong Chiueh
  Distinguished Professor, Institute of Astrophysics, National Taiwan University
  Taipei 10617, Taiwan
  chiuehth@phys.ntu.edu.tw
  +886 2 3366 8628

- Dr. Hsi-Yu Schive
  Assistant Professor, Institute of Astrophysics, National Taiwan University
  Taipei 10617, Taiwan
  hyschive@phys.ntu.edu.tw
  +886 2 3366 8644

- Dr. Hsiang-Yi Karen Yang
  Assistant Professor, Institute of Astronomy, National Tsing Hua University
  Hsinchu 30013, Taiwan
  hyang@phys.nthu.edu.tw
  +886 3 574 2953