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.
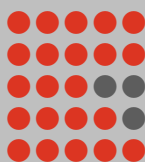
CONTACT

✉ 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 ●●●●●
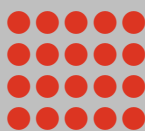
Languages
- Chinese (native) ●●●●●
- English – writing ●●●●○
- English – speaking ●●●○○
- English – listening ●●●●○
- English – reading ●●●●●
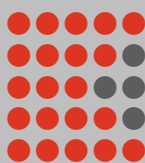
🎓 EDUCATION

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