

Dr. Po-Hsun Tseng (曾柏勳)

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

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📍 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 ██████████

EDUCATION

Ph.D. in Computational Physics

📍 National Taiwan University, Taiwan

📅 08/2016 - 06/2022

- Developed a new algorithm in C to reduce numerical error by 10^6 compared to conventional algorithm. Published in *Monthly Notices of the Royal Astronomical Society* 2021 Vol. 504, pp. 3298-3315
- Designed a new approach to further promote the robustness of our program (GAMER) for research. 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>)
- Improved 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 circuit 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

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://doi.org/10.1093/mnras/stab1006>

[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
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- Dr. Hsi-Yu Schive
Assistant Professor, Institute of Astrophysics, National Taiwan University
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- Dr. Hsiang-Yi Karen Yang
Assistant Professor, Institute of Astronomy, National Tsing Hua University
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