

# 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.



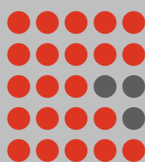
## CONTACT

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☎ +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



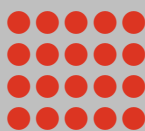
### Architecture

ARM architecture



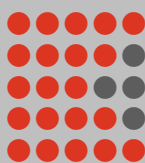
### Software & Tools

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

01/2015 - 02/2016

📍 TDK corporation, Singapore

📅 Circuit designer

- 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

## 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

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[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

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- 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

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- Please send an appointment letter to request a call. 😊
- Dr. Tzihong Chiueh  
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 Taipei 10617, Taiwan  
 [chiuehth@phys.ntu.edu.tw](mailto:chiuehth@phys.ntu.edu.tw)  
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- Dr. Hsi-Yu Schive  
Assistant Professor, Institute of Astrophysics, National Taiwan University  
 Taipei 10617, Taiwan  
 [hyschive@phys.ntu.edu.tw](mailto:hyschive@phys.ntu.edu.tw)  
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- Dr. Hsiang-Yi Karen Yang  
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