

Po-Hsun Tseng (曾柏勳)

<https://github.com/zengbs>

E-mail: zengbs@gmail.com

Phone: +886 966 587 832

EDUCATION

Ph.D. in Computational Physics National Taiwan University, Taiwan

08/2016 - 06/2022

- Developed a new algorithm for special relativistic hydrodynamics in C/CUDA to reduce numerical error in the finite-volume method. Published in Monthly Notices of the Royal Astronomical Society 2021 Vol. 504, pp. 3298-3315
- A contributor of the GAMER, a hybrid GPU/OpenMPI/OpenMP finite-volume program for relativistic hydrodynamic simulations
- Designed a new approach to further promote the robustness of finite-volume program (GAMER) for research. The new approach was adopted in the research project led by Dr. Kuo-Chuan Pan from Tsing Hua University.
- Built NIS, NFS, and Linux clusters from scratch with colleagues.

SKILLS

Finite-volume methods, Numerically solving partial differential equations (hyperbolic, elliptic), Fast-Fourier transform, Bash, Linux operations, Git, Vim, Gdb, Valgrind

PROGRAMMING LANGUAGES & Libraries

C, OpenMP, Python, CUDA, MPI (in descending order of familiarity)

WORK HISTORY

- **Circuit designer**
TDK Corporation, Singapore
01/2015 - 02/2016
- **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

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
DOI: (<https://doi.org/10.1093/mnras/stab1006>) Full-text: (<https://tinyurl.com/3w35v8pu>)
- [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, Tzihong Chiueh
preprint 2022

REFERENCES

Dr. Tzihong Chiueh (advisor)

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