YANHUI YANG

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EDUCATION

PhD Program in Physics University of California, Riverside — Sep 2022–current
Concentration in Astronomy
Overall GPA: 4.00/4.00

BS in Astronomy University of Science and Technology of China — July 2021
Wang Shouguan Talent Program in Astronomy
Thesis: *Hydrodynamic simulations of turbulent mixing layers of galactic winds*
Overall GPA: 3.74/4.30, Major GPA: 3.93/4.30 (Physics & Astronomy courses)

APPOINTMENTS

Graduate Student Researcher, PI: Simeon Bird (UCR) — Fall 2023–current
Teaching assistant in *General Physics laboratory 2LC*, Coordinator: Jonathan Eldridge (UCR) — Winter–Spring 2023
Research assistant, PI: Suoqing Ji (SHAO) — Summer 2022

RESEARCH EXPERIENCE

Goku: A 10-Parameter Simulation Suite for Cosmological Emulation (1 first-author paper submitted to Physical Review D)
University of California, Riverside
Advisor(s): Simeon Bird — Summer 2023–current

Radiative turbulent mixing layers at high Mach numbers (1 first-author paper published in MNRAS)
California Institute of Technology (remote); Shanghai Astronomical Observatory, Chinese Academy of Sciences
Advisor(s): Suoqing Ji and Philip F. Hopkins — Summer 2020–Summer 2022

Hydrodynamic simulations of turbulent mixing layers of galactic winds (Bachelor's Thesis)
California Institute of Technology (remote), University of Science and Technology of China
Advisor(s): Suoqing Ji and Xu Kong — Winter 2020–Spring 2021

Numerical simulations for estimating the number density of direct-collapse seed black holes (exploration of methods)
Yunnan Observatories, Chinese Academy of Sciences
Advisor(s): Xiaobo Dong — Summer 2019

SKILLS

Programming languages	C (gsl), C++ (boost, CUDA), Python (torch, mpi4py, pymc, pandas, numpy, matplotlib, yt, bigfile, gpy, etc.), Bash, Fortran, HTML, CSS, Markdown, LaTeX
Simulation codes	MP-Gadget, CLASS, FLASH, GADGET-3, RAMSES, AREPO
Tools	Git, Mathematica, Origin, Gnuplot, IDL, ds9, VS Code

VISITS & ADDITIONAL TRAINING

TACC Open Hackathon, Texas Advanced Computing Center, UT Austin — Oct 2024

The 2023 Machine Learning Institute, TACC, UT Austin — June 2023

Shanghai Astronomical Observatory, Chinese Academy of Sciences — Jan. 2020

Five-hundred-meter Aperture Spherical Telescope (FAST) — July 2019

AWARDS & HONORS

Dean's Distinguished Fellowship (University of California, Riverside) 2022

NAOC Scholarship (National Astronomical Observatories, Chinese Academy of Sciences) 2020

National Encouragement Scholarship 2020

Outstanding Student Scholarship (Grade 3) 2019

Zhang Zongzhi Sci-Tech Scholarship 2018

PRESENTATIONS

Goku: A 10-parameter simulation suite for cosmic emulation
Physics and Astronomy Student Seminar, University of California, Riverside March 2025
Frontera User Meeting 2024, TACC, University of Texas, Austin Aug 2024

Radiative turbulent mixing layers at high Mach numbers
Shanghai Astronomical Observatory, Chinese Academy of Sciences May 2022

OUTREACHES

Physics Fun Expedition: A Science Outreach Program for Township Middle Schools July 2019

PUBLICATIONS

[1] **Yanhui Yang** and Suoqing Ji. Radiative turbulent mixing layers at high Mach numbers. *MNRAS*, 520(2):2148–2162, April 2023.

[2] **Yanhui Yang**, Simeon Bird, and Ming-Feng Ho. Goku: A 10-Parameter Simulation Suite for Cosmological Emulation. *arXiv e-prints*, page arXiv:2501.06296, January 2025.

Please refer to NASA/ADS (orcid:0000-0001-6221-6024) for a complete list of my publications.