Zack Andalman

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https://www.zandalman.com/ ArXiv

EDUCATION

Princeton University	Princeton, NJ	Ph.D., Astrophysics	4.00 GPA	2023 - 2028
Yale University	New Haven, CT	B.S., Physics	3.95 GPA	2019 - 2023
Evanston Township HS	Evanston, IL	Diploma	4.00 GPA	2015 - 2019

PUBLICATIONS

First-Author: 1

[1] **Andalman, Z. L.**; Liska, M. T. P.; Tchekhovskoy, A.; Coughlin, E. R.; & Stone, N. (2022). *Tidal Disruption Discs Formed and Fed by Stream-stream and Stream-disc Interactions in Global GRHD Simulations.* MNRAS. (`https://ui.adsabs.harvard.edu/abs/2022MNRAS.510.1627A/abstract`)

Co-Author: 1

[1] Kaaz, N.; et. al. incl. **Andalman, Z. L.** (2023). *Nozzle Shocks, Disk Tearing and Streamers Drive Rapid Accretion in 3D GRMHD Simulations of Warped Thin Disks.* MNRAS. (`https://ui.adsabs.harvard.edu/abs/2023ApJ...955...72K/abstract`)

In prep: 2

[1] **Andalman, Z. L.** & Fryer, C. (2024). *Relativistic Electron Transport in Kilonova Ejecta with Better Atomic Physics.* Currently in prep with plans for submissions to the Astrophysical Journal.

[2] **Andalman, Z. L.**, Teyssier, R., & Avishai, D. (2024). *Efficient Star Formation in Massive Galaxies at Cosmic Dawn Driven by Turbulence.* Currently in prep with plans for submissions to MNRAS.

PRESENTATIONS

Selected Talks

LANL Center for Nonlinear Studies Student Talk Series (1st place student talk)	2024
KITP Program - Towards a Physical Understanding of Tidal Disruption Events	2024
RAMSES User Meeting	2024
HEAD Frontiers Seminar Series	2023
HEAD-19 Conference (invited talk)	2022

Selected Posters

AAS-241 Conference	2023
HEAD-20 Conference (1st place undergraduate poster)	2023
Connecticut Space Grant Consortium Expo	2021, 2022
Blue Waters Symposium for Petascale Science and Beyond	2018, 2019

SKILLS

Computer languages: Python, C, C++, HTML/CSS/Javascript, Unix shell

Software: HPC, OpenMPI, git, `ParaView`, `H-AMR`, `RAMSES`, `CLOUDY`

Languages: Spanish (conversational), Modern Greek (basic)

GRANTS, FELLOWSHIPS, AND AWARDS

DOE Computational Science Graduate Fellowship, Krell Institute — 2023 - 2027

Martin Schwarzschild Fellowship, Princeton University (departmental award) — 2023 - 2025

Michael Manzella Award, Yale University (leadership award) — 2023

Lamat Fellowship (REU), University of California Santa Cruz — 2022

Hahn Scholarship, Yale University — 2019 - 2021
Using Ultracold Strontium to Investigate the Quantum Many-Body Problem

Student Project Grant, Connecticut Space Grant Consortium — 2020
Active-Adjustment Ornithopter, Federal FTE Award P-1643

First-Year Summer Fellowship, Yale University — 2020
Using Ultracold Strontium to Investigate the Quantum Many-Body Problem

LEADERSHIP EXPERIENCE

Thunch (thursday lunch) seminar series organizer — 2024

Yale Undergraduate Aerospace Association, President — 2022 - 2023

Yale Undergraduate Aerospace Association, Director of Projects — 2021 - 2022

Yale Club Triathlon, Captain — 2021 - 2022

Yale Undergraduate Aerospace Association, Project Leader — 2020 - 2021

PROFESSIONAL SERVICE

Lead developer of the open-source Monte Carlo electron transport code `Thunderstorm` — 2024 - present

Contributor to the open-source cosmological hydrodynamics code `RAMSES` — 2024 - present

YouTube channel with cutting-edge visualizations — 2021 - present

Contributor to the open-source GRMHD code `H-AMR` — 2021 - 2023

Referee for MNRAS — 2021
Number of papers refereed: 2

OUTREACH

Tutor for the New Jersey Prison Teaching Initiative — 2024 - present

Teacher at Yale Splash — 2022

Peer Mentor for the Yale Society for Physics Students — 2022

Organizer of aerospace-themed educational events with New Haven public schools — 2021

HOBBIES

Jazz piano, triathlon