

# Zack Andalman

PhD Candidate, Princeton University

751 Hibben Magie Rd, Unit 215, Princeton, NJ

[zack.andalman@princeton.edu](mailto:zack.andalman@princeton.edu)  
[zandalman.com](http://zandalman.com)

+1 847 208 5238  
ADS; ArXiv

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## 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

Published: 2

- [1] **Andalman, Z. L.**, Teyssier, R., & Avishai, D. (2025).  
*On the Origin of the High Star-Formation Efficiency in Massive Galaxies at Cosmic Dawn*. MNRAS.  
<https://ui.adsabs.harvard.edu/abs/2024arXiv241020530A/abstract>
  - [2] **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>
- In prep: 2
- [3] **Andalman, Z. L.**; Quataert, E.; Coughlin, E.; Nixon, C. (2025)  
*Resolving the (Debate About) Nozzle Shocks in Tidal Disruption Events*.  
Planned submission to the Astrophysical Journal.
  - [4] **Andalman, Z. L.**; Fryer, C.; Fontes, C.; Mumpower, M.; Wolleger, R. (2025).  
*Thermalization in Kilonova Ejecta with Transport and Detailed Microphysics*.  
Planned submission to the Astrophysical Journal.

### Co-Author

Published: 1

- [5] 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>

Submitted: 1

- [6] Sunseri, J.; **Andalman, Z. L.**; Teyssier, R. (2025).  
*Supermassive Black Hole Growth in Massive Galaxies at Cosmic Dawn*. MNRAS.  
<https://arxiv.org/pdf/2510.19822.pdf>

## PRESENTATIONS

### Selected Talks

Inaugural Tinsley workshop	2024
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)	2022

## **Selected Posters**

AAS-245 Conference (Chambliss honorable mention)	2025
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++, FORTRAN, HTML/CSS/JAVASCRIPT, Unix shell

Software: H-AMR, RAMSES, ATHENA++, CLOUDY, MESA

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

Hobbies: Triathlon, jazz piano

## **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, University of California Santa Cruz (REU)	2022
Hahn Scholarship, Yale University (competative undergrad research program)	2019 - 2021
Student Project Grant, NASA Connecticut Space Grant Consortium	2020
First-Year Summer Research Fellowship, Yale University	2020

## **LEADERSHIP EXPERIENCE**

Thunch (thursday lunch) seminar series organizer	2024
Yale Undergraduate Aerospace Association; Project Leader, Director of Projects, President	2020 - 2023
Yale Club Triathlon, Captain	2021 - 2022

## **PROFESSIONAL SERVICE**

Number of papers refereed

MNRAS: 2

YouTube channel with scientific visualizations

<https://www.youtube.com>

## **OUTREACH AND TEACHING**

Teaching fellow, Princeton University Preparatory Program	2025 - 2026
Teaching assistant, AST 206: Black Holes	2025 - 2026
Peer mentor, Princeton Astrophysics Department	2024 - 2026
Speaker, Astronomy on Tap (Trenton, NJ)	2024
Speaker, solar eclipse at Littlebrook Elementary	2024
Tutor, New Jersey Prison Teaching Initiative	2024
Peer Mentor, Yale Society for Physics Students	2022 - 2023
Teacher, Yale Splash (annual event with local schools)	2022
Organizer, aerospace-themed educational events with local schools	2021