

Ryan Hazlett

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🌐 rshazlett.github.io/ryanhazlett/

🌐 rshazlett

EDUCATION

University of Toledo

Ph.D. Candidate, Physics

Thesis Advisor: Prof. Eli Visbal

August 2020 - present

University of Oklahoma

Bachelor of Science, Astrophysics

Research Advisor: Prof. Karen Leighly

August 2016 - May 2020

RESEARCH INTERESTS

I am a theoretical astrophysicist and cosmologist primarily studying the formation of the first stars and galaxies and formation of supermassive black holes. I use both semi-analytic methods and hydrodynamical cosmological simulations to make predictions for the next generation of observatories like the James Webb Space Telescope.

EXPERIENCE

Research Assistant

University of Toledo, Advisor: Prof. Eli Visbal

December 2020 - present

Undergraduate Research Assistant

University of Oklahoma, Advisor: Prof. Karen Leighly

April 2018 - May 2020

NSF REU student

University of Oklahoma, Advisor: Prof. Karen Leighly

May 2018 - July 2018

FYRE program student

University of Oklahoma, Advisor: Prof. Mukremin Kilic

October 2016 - May 2017

High-School Physics Research Experience

Oklahoma State University, Advisor: Prof. Mario F. Borunda

June 2014 - September 2015

GRANTS AND AWARDS

Physics & Astronomy Outstanding Department Service Award (University of Toledo)

2023 - 2024

Astronomy Seminar Best Graduate Student Presentation (University of Toledo)

Spring 2021

Department of Physics & Astronomy Outstanding Senior Award (University of Oklahoma)

2020

Oklahoma State Regents Institutional Nominee Award, \$38,000

2016 - 2020

SERVICE

Physics & Astronomy Python Workshop Organizer (University of Toledo)

Summer 2024 - present

Department of Physics & Astronomy Photographer (University of Toledo)

Fall 2024 - present

Prospective Student Host (University of Toledo)

Fall 2024 - Spring 2025

Astronomy Journal Club Host (University of Toledo)

Fall 2023 - present

Physics & Astronomy Grad Task Organizer (University of Toledo)

Fall 2022 - Spring 2024

MENTORING

Merrill Edleman, University of Toledo Undergraduate

March 2025 - present

Anneysha Bahar, Ottawa Hills High School Student

October 2023 - May 2024

Thomas Behling, University of Toledo Undergraduate

May 2023 - May 2024

TEACHING AND OUTREACH

Lab TA, *General Physics I* (University of Toledo)

Summer 2025 - present

Lab TA, *Physics-Sci & Eng Majors I-BI* (University of Toledo)

Fall 2020 - Spring 2021

Lunar Sooners Member (University of Oklahoma)

2016 - 2018

NATIONAL AND INTERNATIONAL MEETING PARTICIPATION

- *Cosmic Frontier Center Conference*, UT Austin, Austin, TX. May 2025. **Poster:** “High-Redshift Atomic Cooling Halos generally lead to Intermediate-Massive Black Hole Seeds”
- *First Light Conference*, MIT, Cambridge, MA. June 2023. **Poster:** “Calibrating Semi-analytic Models of the First Galaxies with Hydrodynamical Simulations to Enable Computationally Efficient Observational Predictions”
- *AAS 233rd Meeting*, Seattle, WA. January 2019. **Poster:** “Massive Outflows in CII Low-Ionization Broad Absorption Line Quasars”

PUBLICATIONS

2. **Hazlett, R.**, Kulkarni, M., Visbal, E. & Wise, J. H. A Framework to Calibrate a Semianalytic Model of the First Stars and Galaxies to the Renaissance Simulations. **978**, 13. arXiv: 2403.05624 [astro-ph.GA] (Jan. 2025).
1. Feathers, C. R., Kulkarni, M., Visbal, E. & **Hazlett, R.** A Global Semianalytic Model of the First Stars and Galaxies Including Dark Matter Halo Merger Histories. **962**, 62. arXiv: 2306.07371 [astro-ph.GA] (Feb. 2024).