

John H. Wise, Ph.D.
 CRA Director and Professor
 Center for Relativistic Astrophysics
 School of Physics
 Georgia Institute of Technology

I. Earned Degrees

B.S.	Physics with Highest Honor	1998-2001	Georgia Institute of Technology
*	Astronomy & Astrophysics	2001-2004	Pennsylvania State University (advisors: M. Eracelous, T. Abel)
Ph.D.	Physics	2004-2007	Stanford University (advisor: T. Abel)

[* transferred after advisor moved to Stanford University]

II. Employment History

2007-2009	NASA Postdoctoral Fellow, NASA Goddard Space Flight Center (advisors: J. Centrella, J. Mather)
2009-2011	Hubble Postdoctoral Fellow, Princeton University (advisor: R. Cen)
2011-2016	Assistant Professor, School of Physics, Georgia Institute of Technology
2016-2021	Associate Professor, School of Physics, Georgia Institute of Technology
2021-present	Professor, School of Physics, Georgia Institute of Technology
2023-present	Director, Center for Relativistic Astrophysics, Georgia Institute of Technology

III. Selected Honors and Awards (last 6 years)

2024	Georgia Tech Emerging Leaders Program
2019	Faculty Development Grant
2017	Supercomputing 2017 Best Scientific Visualization
2017	Hesburgh Award Teaching Fellow
2015-2019	Dunn Family Professorship

IV. Selected Refereed Publications

- Google Scholar profile at <https://scholar.google.com/citations?user=72RK2WIAAAAJ>
 - 105 refereed journal articles, 14 lead-author journal articles, 10,033 citations, *h*-index of 47
1. Horvath, V. A., Sethuram, S. S., & **Wise, J. H.**, 2024, "Predicting Stellar Masses of the First Galaxies Using Graph Neural Networks", *Research Notes of the American Astronomical Society*, 8, 108
 2. Skinner, D., **Wise, J. H.** 2024, "Neutron star mergers and their impact on second generation star formation in the early universe," *Monthly Notices of the Royal Astronomical Society*, 528, 5825
 3. Brummel-Smith, C., Skinner, D., Sethuram, S., **Wise, J. H.**, Xia, B., Taori, K. 2023, "Inferred galaxy properties during Cosmic Dawn from early JWST results," *Monthly Notices of the Royal Astronomical Society*, 525, 4405
 4. McCaffrey, J., Hardin, S., **Wise, J. H.**, Regan, J. A. 2023, "No Tension: JWST galaxies at $z > 10$ consistent with cosmological simulations," *Open Journal for Astrophysics*, 6, 47
 5. Sethuram, S. S., Cochrane, R. K., Hayward, C. C., Acquaviva, V., Villaescusa-Navarro, F., Popping, G., & **Wise, J. H.**, 2023, "Emulating radiative transfer with artificial neural networks," *MNRAS*, 526, 4520
 6. Skinner, D., **Wise, J. H.** 2020, "Cradles of the first stars: self-shielding, halo masses, and multiplicity" *Monthly Notices of the Royal Astronomical Society*, 492, 4386
 7. **Wise, J. H.**, Regan, J. A., O'Shea, B. W., Norman, M. L., Downes, T. P., Xu, H. 2019, "Formation of massive black holes in rapidly growing pre-galactic gas clouds," *Nature*, 566, 85

8. Barrow, K. S. S., Aykutaalp, A., **Wise, J. H.** 2018, “Observational signatures of massive black hole formation in the early universe,” *Nature Astronomy*, 2, 987
9. Regan, J. A., Visbal, E., **Wise, J. H.**, Haiman, Z., Johnsson, P. H., Bryan, G. L. 2017, “Rapid Formation of Massive Black Holes in close proximity to Embryonic Proto-Galaxies”, *Nature Astronomy*, 1, 75
10. **Wise, J. H.**, Demchenko, V., Halicek, M., Abel, T., Turk, M. J., Norman, M. L., & Smith, B. D. 2014, “The Birth of a Galaxy – III. Luminosity functions and ultraviolet radiation escape fractions,” *Monthly Notices of the Royal Astronomical Society*, 442, 2560-2579

V. Presentations and Symposia

- 54 Invited conference presentations
- 54 Departmental colloquia at universities and institutes, including
 - (08/2023) Tsinghua University
 - (06/2020) University of Edinburgh (Virtual)
 - (05/2019) Flatiron Institute
 - (04/2017) University of California – Berkeley
 - (02/2016, 10/2013) University of Tokyo
- 27 Contributed conference presentations

VI. Grants and Contracts

- **Currently funded**
 - **As Principal Investigator:** 4 NSF/NASA awards, totaling \$884k
 - As Co-I or collaborator: 3 NSF/NASA awards, totaling \$3.3M and 201M core-hours
- **Total funded**
 - **As Principal Investigator:** 16 NSF/NASA awards, totaling \$3.7M and 34.2M core-hours
 - As Co-I or collaborator: 13 NSF/NASA awards, totaling \$11.9M and 896M core-hours

VII. Teaching

- (9) Thank a Teacher Awards (2011-2023)
- Developed 2 new astro courses: *Fundamentals of Astrophysics* and *Cosmology and Galaxies*
- Revamped the Honors Physics II laboratory to be remote and distinct from Intro Physics II
- **Courses Taught:** Intro Physics II (PHYS 2212), Honors Physics II (PHYS 2232), Undergraduate and Graduate Computational Physics (PHYS 3120 / 3266 / 6260), Theoretical Astrophysics (PHYS 4347), Cosmology and Galaxies (PHYS 7127)
- Primary advisor for 4 current PhD students and 7 PhD awardees
 - **Positions after graduation:** Stanford University, Kavli Institute for Particle Astrophysics and Cosmology, Google, JingChi (self-driving cars), Oregon State University, Argonne National Lab
- Primary research advisor for 3 MS awardees
- Primary research advisor for 36 undergraduates
- Committee member on 41 PhD theses
- Mentored 6 postdoctoral researchers

VIII. Service

- Member of the Scientific Organizing Committee for 12 conferences
- Lead organizer and host for Enzo/Enzo-E user and developer workshops
- (May 2016) Scientific Advisor for US Senate Committee Hearing on Space Weather Research
- (6) Public Science Talks in North Georgia and Japan
- **Current Georgia Tech Committees:** School of Physics Space Planning (Chair 2022-25); School of Physics Student Affairs; Georgia Tech Space Research Institute Steering Committees