Steven L. Finkelstein

CONTACT
INFORMATION

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ACADEMIC
POSITIONS

The University of Texas at Austin, Austin, TX

Professor	Fall 2022 – Present
Associate Department Chair	Fall 2019 – Present
Associate Professor	Fall 2017 – Summer 2022
Assistant Professor	Fall 2012 – Summer 2017

The University of Texas at Austin, Austin, TX   Sept. 2011 – Aug. 2012
   Hubble Fellow
- Faculty Contact: Professor Karl Gebhardt

Texas A&M University, College Station, Texas   Sept. 2008 – Aug. 2011
   Postdoctoral Research Associate
- Faculty Advisor: Professor Casey Papovich

EDUCATION

Arizona State University, Tempe, Arizona
   Ph.D. Physics, Emphasis in Astronomy   August 2008
- Advisor: Professor James E. Rhoads
- Dissertation: Physical Properties and Dust Effects in High-Redshift Lyman Alpha Galaxies

University of Washington, Seattle, Washington
   B.S. Astronomy and Physics   June 2003

HONORS AND
AWARDS

- 2020 UT Austin Provost's Teaching Fellowship
- 2017-2018 Dads' Association Centennial Teaching Fellowship
- 2017 Asa Briggs Visiting Fellow, University of Sussex
- 2016 UT Austin College of Natural Sciences Teaching Excellence Award
- 2015-2016 McDonald Observatory Board of Visitors Teaching Excellence Award
- Hubble Prize Postdoctoral Fellowship (awarded in 2011)

PUBLICATIONS

Summary: 220 papers published in or submitted to peer-reviewed journals, with an h-index of 58. Of these, I am the lead author on 23 papers, which have >2500 citations combined. Recent important papers are:

1. Finkelstein, S. L. et al. **2022**, *CEERS Key Paper I: An Early Look into the First 500 Myr of Galaxy Formation with JWST*, Submitted to the Astrophysical Journal Letters

2. Bagley, M., Finkelstein, S. L. et al. **2022**, *CEERS Epoch 1 NIRCam Imaging: Reduction Methods and Simulations Enabling Early JWST Science Results*, Submitted to the Astrophysical Journal Letters

3. Finkelstein, S. L. et al. **2022**, *A Long Time Ago in a Galaxy Far, Far Away: A Candidate $z \sim 12$ Galaxy in Early JWST CEERS Imaging*, Astrophysical Journal Letters, in press

4. <u>Finkelstein, S. L.</u> and Bagley, M. **2022**, *On the Co-Evolution of the AGN and Star-Forming Galaxy Ultraviolet Luminosity Functions at 3 < z < 9*, Astrophysical Journal, in press

5. Larson, R., <u>Finkelstein, S.</u>, Hutchison ,T. et al. **2022**, *Searching for Islands of Reionization: A Potential Ionized Bubble Powered by a Spectroscopic Overdensity at z = 8.7*, Astrophysical Journal, 930, 104

6. <u>Finkelstein, S. L.</u> et al. **2022**, *A Census of the Bright z = 8.5–11 Universe with the Hubble and Spitzer Space Telescopes*, Astrophysical Journal, 928, 52

7. <u>Finkelstein, S. L.</u> et al. **2019**, *Conditions for Reionizing the Universe with A Low Ionizing Photon Escape Fraction*, Astrophysical Journal, 879, 36

8. Livermore, R., <u>Finkelstein, S.</u>, & Lotz, J. **2017**, *Directly Observing the Galaxies Likely Responsible for Reionization*, Astrophysical Journal, 835 113

MENTORSHIP
EXPERIENCE

• 2021–Present: Advisor of graduate student Alexa Morales, who is working on chemical enrichment in the early universe.

• 2020–Present: Advisor of graduate student Oscar Chavez Ortiz, who is studying Lyman alpha emission and reionization.

• 2020–Present: Advisor of graduate student Katie Chworowsky, who is working on quiescent galaxies at high redshift.

• 2020–Present: Advisor of postdoc Gene Leung, who is leading my groups work on HETDEX and SHELA.

• 2019–2022: Advisor of graduate student Adam McCarron, who is studying the physical properties of high-redshift galaxies identified by HETDEX.

• 2016–Present: Advisor of graduate student Rebecca Larson, who is working on two *HST* grism spectroscopic surveys I am involved in, searching for Lyα emission lines in the epoch of reionization.

• 2018–Present: Advisor of postdoc Micaela Bagley, who is leading my groups preparation for the CEERS *JWST* program.

• 2013 – 2019: Advisor of graduate student Matthew Stevans, who studied the growth of galaxy stellar masses using a 24 deg^2 K-band imaging survey in the SHELA field. He went on to the data science sector

• 2013 – 2019: Advisor of graduate student Intae Jung, who used using high-resolution *Hubble* imaging to study resolved stellar populations at high redshift, and performed spectroscopic studies of Lyα as a probe of reionization. He went on to a prize NASA Postdoctoral Program fellow at Goddard Space Flight Center.

• 2013 – 2018 : Co-advisor of graduate student Jason Jaacks, who used simulations to study the tracking of galaxy progenitors and descendants, as well as to make predictions for a JWST Deep Field. He went on to a job in the data science sector.

• 2012–2016: Advisor of graduate student Mimi Song, who led a project on near-infrared spectroscopic observations of LAEs discovered in the HETDEX pilot survey, and stellar mass functions of very high-redshift galaxies. She went on to a prize NASA Postdoctoral Program fellow at Goddard Space Flight Center.

• 2014 – 2018: Advisor of postdoc Isak Wold, who will work on the HETDEX project. He is currently building our photometric catalog in the SHELA field, and will ultimately

study the evolution of the Lyα luminosity function. He went on to a prize NASA Postdoctoral Program fellow at Goddard Space Flight Center.

- 2013 – 2017: Advisor of postdoc Rachael Livermore, who led my group's work on the Hubble Frontier Fields. Rachael went on to an ARC prize postdoctoral fellow at Melbourne University.
- I have worked with 15 undergraduate students while at UT Austin.

AWARDED GRANTS AND FELLOWSHIPS

Summary: Total of $6.2M awarded as PI since starting as faculty in 2012. Recent highlights are:

2022 UT Austin Spark Grant, $200,000 (Finkelstein PI)
- *Solving Reionization with ERMOS on the Giant Magellan Telescope*

JWST Cycle 1 General Observer Grant, $309,297 (Finkelstein Co-PI),
- *NGDEEP: Next Generation Deep Extragalactic Exploratory Public Survey*

2021 NASA ADAP Grant, $495,418 (Finkelstein PI; C. Casey Co-PI)
- *Leveraging Spitzer and VIRUS to Investigate Reionization and the Growth of Massive Cosmic Structures*

JWST Cycle 1 Early Release Science Grant, $1.3M (Finkelstein PI, Individual grant $430,470)
- *Cosmic Evolution Early Release Science Survey*

2020 NSF AAG Grant, $229,660 (Finkelstein PI)
- *The Onset of Star-Formation Quenching in Massive Galaxies in the Early Universe*

2019 NSF AAG Grant, $459,079 (Finkelstein PI)
- *Leveraging the Hobby Eberly Telescope Dark Energy Experiment to Understand Lyα Emission, Galaxy Evolution, and Reionization*

RECENT INVITED TALKS

Hebrew University of Jerusalem, Seminar (remote), November 2022
Santa Cruz Galaxy Formation Workshop, Santa Cruz, CA, August 2022
EAS Annual Meeting, June 2022
Flatiron Institute CCA, Seminar, May 2022
UC Riverside, Colloquium, April 2022
Colby College, Colloquium, Sept 2021
UC Santa Barbara, Colloquium, Dec 2020
NASA Goddard Space Flight Center, Colloquium, Oct 2020

SELECTED PROFESSIONAL EXPERIENCE

Member, Executive Committee, NASA Cosmic Origins Analysis Group (2019–2022)
James Webb Space Telescope Review Panel Member, Cycle 1
Chair, HETDEX Galaxies and AGN Science Working Group (2019–2021)
Member, Hubble Space Telescope Users Committee (2019–2022)
Member, NASA IRTF Keck Users Committee (2018–2021)
PI, JWST ERS Program (2017–Present)

SELECTED TEACHING EXPERIENCE

INSTRUCTOR, The University of Texas at Austin   2013 – Present
- Instructor of AST301, a 200-student astronomy survey course.
- Instructor of AST358, an upper-level undergraduate course on galaxies.
- Instructor of AST376, an under/graduate experiential telescope observing course.
- Instructor of AST386, a graduate course on galaxy evolution at high redshift.