

EDUCATION

University of California, Davis Ph.D. in Physics, Advisor: Andrew Wetzel	2015 –2021
Florida International University B.S. in Physics	2011–2015

SCHOLARSHIPS AND AWARDS

• NSF Astronomy and Astrophysics Postdoctoral Fellow	2021–
• McNair Graduate Fellow	2015–2016
• McNair Scholar	2014–2015

PUBLICATIONS

- [1] **J. Samuel**, A. Wetzel, I. Santistevan, E. Tollerud, J. Moreno, M. Boylan-Kolchin, J. Bailin, and B. Padasani, “Extinguishing the FIRE: environmental quenching of satellite galaxies around Milky Way-mass hosts in simulations”, MNRAS, Jun. 2022. arXiv: 2203.07385 [[astro-ph.GA](#)].
- [2] **J. Samuel**, A. Wetzel, S. Chapman, E. Tollerud, P. F. Hopkins, M. Boylan-Kolchin, J. Bailin, and C.-A. Faucher-Giguère, “Planes of satellites around Milky Way/M31-mass galaxies in the FIRE simulations and comparisons with the Local Group”, MNRAS, vol. 504, no. 1, pp. 1379–1397, Jun. 2021.
- [3] **J. Samuel**, A. Wetzel, E. Tollerud, S. Garrison-Kimmel, S. Loebman, K. El-Badry, P. F. Hopkins, M. Boylan-Kolchin, C.-A. Faucher-Giguère, J. S. Bullock, S. Benincasa, and J. Bailin, “A profile in FIRE: resolving the radial distributions of satellite galaxies in the Local Group with simulations”, MNRAS, vol. 491, no. 1, pp. 1471–1490, Jan. 2020.
- [4] E. D. Jahn, L. V. Sales, A. Wetzel, **J. Samuel**, K. El-Badry, M. Boylan-Kolchin, and J. S. Bullock, “The effects of LMC-mass environments on their dwarf satellite galaxies in the FIRE simulations”, MNRAS, vol. 513, no. 2, pp. 2673–2688, Jun. 2022. arXiv: 2106.03861 [[astro-ph.GA](#)].
- [5] A. Smercina, E. F. Bell, **J. Samuel**, and R. D’Souza, “Relating the Diverse Merger Histories and Satellite Populations of Nearby Galaxies”, vol. 930, no. 1, p. 69, May 2022. arXiv: 2107.04591 [[astro-ph.GA](#)].

- [6] A. Wetzel, C. C. Hayward, R. E. Sanderson, X. Ma, D. Angles-Alcazar, R. Feldmann, T. K. Chan, K. El-Badry, C. Wheeler, S. Garrison-Kimmel, F. Nikakhtar, N. Panithanpaisal, A. Arora, A. B. Gurvich, **J. Samuel**, O. Sameie, V. Pandya, Z. Hafen, C. Hummels, S. Loebman, M. Boylan-Kolchin, J. S. Bullock, C.-A. Faucher-Giguere, D. Keres, E. Quataert, and P. F. Hopkins, “Public data release of the FIRE-2 cosmological zoom-in simulations of galaxy formation”, *arXiv e-prints*, arXiv:2202.06969, arXiv:2202.06969, Feb. 2022. arXiv: 2202.06969 [astro-ph.GA].
- [7] I. B. Santistevan, A. Wetzel, R. E. Sanderson, K. El-Badry, **J. Samuel**, and C.-A. Faucher-Giguere, “The origin of metal-poor stars on prograde disc orbits in FIRE simulations of Milky Way-mass galaxies”, *MNRAS*, vol. 505, no. 1, pp. 921–938, Jul. 2021.
- [8] S. Garrison-Kimmel, A. Wetzel, P. F. Hopkins, R. Sanderson, K. El-Badry, A. Graus, T. K. Chan, R. Feldmann, M. Boylan-Kolchin, C. C. Hayward, J. S. Bullock, A. Fitts, **J. Samuel**, C. Wheeler, D. Kereš, and C.-A. Faucher-Giguere, “Star formation histories of dwarf galaxies in the FIRE simulations: dependence on mass and Local Group environment”, *MNRAS*, vol. 489, no. 4, pp. 4574–4588, Nov. 2019.

INVITED TALKS

<i>Simulations of the Local Group</i>	2022
SDSS MWAG working group meeting	
<i>Simulating our Galactic Neighborhood</i>	2022
Florida International University Colloquium	
<i>Satellite dwarf galaxies around Milky Way-mass hosts in the FIRE simulations</i>	2021
University of Washington Seminar	

TALKS

<i>Unveiling the Invisible Universe: Dark Matter and the First Galaxies</i>	2022
Teacher training at McDonald Observatory	
<i>Environmental quenching of Local Group satellite galaxies</i>	2022
NSF AAPF Symposium	
<i>Satellite planes in the FIRE simulations</i>	2021
Space Telescope Science Institute	
<i>Predictions for satellite galaxy distributions around MW/M31-mass host galaxies</i>	2021
AAS Dissertation Talk	
<i>Predictions for satellite galaxy distributions around Milky Way analogs with NGRST</i>	2020
Galaxy Formation and Evolution in the Era of the Nancy Grace Roman Space Telescope, STScI	

POSTERS

The Distribution of Satellite Galaxies around MW/M31-mass Hosts in the FIRE Simulations 2020
STSci Symposium - The Local Group: Assembly & Evolution

The distribution of satellite galaxies around MW/M31-mass hosts in the FIRE simulations 2019
Santa Cruz Galaxy Workshop

JOURNAL AND GRANT REVIEWING

Nature, Monthly Notices of the Royal Astronomical Society (MNRAS), Swiss National Science Foundation

MENTORED STUDENTS

Bhavya Pardasani 2021-Present
UC Davis REU student and Undergraduate Researcher

Courtney Reed 2022
UT TAURUS Scholar

TEACHING

- **Instructor** at University of California, Davis Spring 2020
Intro Physics (PHY1B) Remote learning online curriculum and lectures for large lecture course.
- **Teaching Assistant** at University of California, Davis 2016–2019
Astronomy, physics, and math methods courses and labs.
- **Learning Assistant** at Florida International University 2012–2015
Modern physics labs with data analysis, and intro physics labs.

SERVICE

- **Organizer** at NSF AAPF Symposium 2023 2022
Plan and implement an engaging research workshop for NSF Astronomy and Astrophysics Postdoctoral Fellows.
- **Organizer** at FIRE Collaboration Seminar 2021–Current
Solicit, schedule, and facilitate monthly collaboration-wide seminars.
- **Graduate Student Representative** at Committee for Improving Graduate Education 2020–2021
Plan and deliver seminars and guides on mental health, financial support, and mentorship.
- **Leader** at Diversity and Inclusion in Physics 2017–2020
Facilitate weekly meetings on department climate, create peer-mentoring workshop series for students, and publicize resources for equity in teaching and research.
- **Team Member** at APS-IDEA 2020–2021
APS Inclusion, Diversity, and Equity Alliance
- **Mentor** at UC Davis Physics and Astronomy and Calbridge North 2018–2020

Mentor to first year graduate students at UC Davis, and to a senior undergraduate through Calbridge.

- **Local Organizing Committee Member** at CUWiP 2019 2018–2019
Planned lodging, laboratory tours, transportation, and recruitment for 150 attendees.

OUTREACH

- **Speaker** at Davis Senior High School 2020
Galaxy Simulations and Life in Grad School
- **Organizer and Speaker** at Astronomy on Tap, Davis 2018–2019
Put on free public talks, trivia, and Q&A once a month. Talk: ‘Spacecraft of Apollo 11’