Pratik J. Gandhi

pjgandhi@ucdavis.edu | https://pratikgandhi95.github.io/ Department of Physics & Astronomy, University of California - Davis

EDUCATION

Ph.D. in Physics (Astrophysics) – University of California, Davis	Sep '18 – Present
M.S. in Physics (Astrophysics) – University of California, Davis	Sep '18 – June '20
B.S. in Astrophysics – Yale University	Aug '14 - May '18

RESEARCH

Graduate Student Researcher | UC Davis

Advisor: Prof. Andrew Wetzel

Sep '18 - Present

• Characterising the near-far probe of reionization using the FIRE simulations

Advisor: Prof. Maruša Bradač

Sep '18 - Present

• Strong and weak lensing analysis of Frontier Fields galaxy cluster Abell S1063

Summer Undergraduate Researcher | U. of Copenhagen

Advisor: Dr. Claudio Grillo

Summer '16

• Gravitational lens modelling Frontier Fields galaxy cluster MACS J1149.5+2223

Undergraduate Researcher | Yale University

Advisor: Prof. C. Megan Urry

Aug '17 - May '18

• Modelling the X-ray AGN luminosity function: a multi-survey approach

Advisor: Prof. Marla Geha

Summer '17

• Finding ultra-faint dwarf galaxies: predictions for the WFIRST mission

Advisor: Prof. Frank van den Bosch

Aug '16 - May '17

• Modelling the dynamics of dark matter subhalos in a host galaxy potential

PUBLICATIONS

- [1] Gandhi, P. J., Wetzel, A., Hopkins, P. F., Shappee, B. J., Wheeler, C., 2022, "Exploring metallicity-dependent rates of Type Ia supernovae and their impact on galaxy formation", MNRAS, submitted.
- [2] Lemaux, B. C., Fuller, S., Bradač, M., Pentericci, L., Hoag, A., et al. (including **Gandhi, P. J.,**), "The size and pervasiveness of ly-UV spatial offsets in star-forming galaxies at z 6", arXiv:2007.01310, MNRAS, 504, 3.
- [3] Pelliccia, D., Strait, V., Lemaux, B. C., Bradač, M., Coe, D., et al. (including **Gandhi, P. J.,**), "RELICS-DP7: Spectroscopic confirmation of a dichromatic primeval galaxy at z 7", arXiv:2011.08857, ApJ, 908, 2.

Awards & Fellowships

APS WiP Grant for UCD Diversity & Inclusion in Phys/Astro Graduate Program Research Fellowship UC Davis Paul Brady & Charles Soderquist Graduate Fellowship UC Davis Pierson College Mellon Forum Award Yale U. Tetelman Fellowship for Summer International Research Yale U. Pierson College Richter Fellowship Yale U. Pierson College Richter Fellowship Yale U. Preshman Summer Research Fellowship Yale U. PRESENTATIONS Invited science talk, FIRE collaboration seminar Conference talk, SAZERAC SIP: Galaxy formation near and far Conference talk, ISM 2021: Structures, Scales, and Star formation Invited public talk, Mt. Diablo Astronomical Society Senior thesis talk, Yale Mellon Forum Poster presentation, 231st AAS (Winter) Meeting Poster presentation, Ivy League Undergraduate Research Symposium Research talk, Yale Summer Astronomy Symposium Research talk, Yale Summer Astronomy Symposium TEACHING Lead Teaching Assistant UC Davis • Galactic & Extragalactic Astrophysics • Undergraduate Astronomy Introduction to Astronomy Teaching Assistant UC Davis • Physics for Life Sciences II • Physics for Life Sciences II • Physics for Life Sciences II Volunteer Sacramento School District Astronomy Olympiad OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS Outreaduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '19 - Aug' 20 Summer 201		
Invited science talk, FIRE collaboration seminar Conference talk, SAZERAC SIP: Galaxy formation near and far Conference talk, ISM 2021: Structures, Scales, and Star formation Invited public talk, Mt. Diablo Astronomical Society Invited public talk, Mt. Diablo Astronomical Society Invited public talk, Yale Mellon Forum Poster presentation, 231st AAS (Winter) Meeting Poster presentation, Ivy League Undergraduate Research Symposium Research talk, Yale Summer Astronomy Symposium Research talk, Yale Summer Astronomy Symposium TEACHING Lead Teaching Assistant UC Davis Galactic & Extragalactic Astrophysics Undergraduate Astronomy Introduction to Astronomy Fall '19 Teaching Assistant UC Davis Physics for Life Sciences II Physics for Life Sciences II Physics for Life Sciences II Volunteer Sacramento School District Astronomy Olympiad OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS OUTREACH Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '21 - Presentation, Value of the Sep '21 - Presentation of the Sep '21 - Presentation of the Sep '21 - Presentation of the Sep '22 - Presentation of the Sep '23 - Presentation of the Sep '24 - Presentation of the Sep '25 - Presentation of the Sep '26 - Presentation of the Sep '27 - Presentation of the Sep '28 - Presentation of the Sep '29 - Presentation of the Se	Frontera Computational Science Fellowship TACC¹ APS WiP Grant for UCD Diversity & Inclusion in Phys/Astro Graduate Program Research Fellowship UC Davis Paul Brady & Charles Soderquist Graduate Fellowship UC Davis Pierson College Mellon Forum Award Yale U. Tetelman Fellowship for Summer International Research Yale U. Pierson College Richter Fellowship Yale U. Freshman Summer Research Fellowship Yale U.	Jun '22 - May '23 Jan '21 - Jan '23 Jan '21 - Apr '21 Sep '18 - Aug '19 Aug '17 - May '18 Summer 2016 Summer 2016 Summer 2015
Conference talk, SAZERAC SIP: Galaxy formation near and far Conference talk, ISM 2021: Structures, Scales, and Star formation Invited public talk, Mt. Diablo Astronomical Society Senior thesis talk, Yale Mellon Forum Poster presentation, 231st AAS (Winter) Meeting Poster presentation, Ivy League Undergraduate Research Symposium Research talk, Yale Summer Astronomy Symposium Sep '1 TEACHING Lead Teaching Assistant UC Davis Galactic & Extragalactic Astrophysics Undergraduate Astronomy Introduction to Astronomy Fall '1: Teaching Assistant UC Davis Introduction to Astronomy Fall '1: Physics for Life Sciences II Physics for Life Sciences I Volunteer Sacramento School District Astronomy Olympiad OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS OUTREACH Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '19 - Aug' 2 Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '19 - Aug' 2 Sep '19 - Aug' 2 Sep '19 - Aug' 2	Presentations	
Lead Teaching Assistant UC Davis • Galactic & Extragalactic Astrophysics Winter '2: • Undergraduate Astronomy Lab Spring '1: • Introduction to Astronomy Fall '1: Teaching Assistant UC Davis • Physics for Life Sciences II Winter '19, Summer '19, Winter '20, Spring '1: • Physics for Life Sciences I Fall '1: Volunteer Sacramento School District Astronomy Olympiad Jan '19, Jan '2: OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS Organizer, Astronomy on Tap, Davis (science cafe) May '20 - Present May '20 - Present Service Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '21 - Present Aug '20 - Apr '2 Sep '19 - Aug' 2 Sep '19 - Aug' 2	Invited science talk, FIRE collaboration seminar Conference talk, SAZERAC SIP: Galaxy formation near and far Conference talk, ISM 2021: Structures, Scales, and Star formation Invited public talk, Mt. Diablo Astronomical Society Senior thesis talk, Yale Mellon Forum Poster presentation, 231st AAS (Winter) Meeting Poster presentation, Ivy League Undergraduate Research Symposium Research talk, Yale Summer Astronomy Symposium	Dec '21 Dec '21 May '21 July '20 Feb '18 Jan '18 Nov '17 Sep '16
 Galactic & Extragalactic Astrophysics Undergraduate Astronomy Lab Introduction to Astronomy Physics for Life Sciences II Physics for Life Sciences I Winter '19, Summer '19, Winter '20, Spring '19 Physics for Life Sciences I Volunteer Sacramento School District Astronomy Olympiad OUTREACH Writer & DEI Committee co-chair, Astrobites blog funded by AAS Organizer, Astronomy on Tap, Davis (science cafe) SERVICE Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '21 - Presentation of Presentation of Physics Astronomy Sep '21 - Presentation of Physics Astronomy Sep '19 - Aug' 20 - Apr' 20 - Apr' 21 - Aug' 20 - Aug' 20 - Apr' 21 - Aug' 20 -	Teaching	
Writer & DEI Committee co-chair, Astrobites blog funded by AAS Organizer, Astronomy on Tap, Davis (science cafe) SERVICE Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '21 - Present Sep '22 - Present Sep '22 - Present Sep '22 - Present Sep '22 - Pres	 Undergraduate Astronomy Lab Introduction to Astronomy Teaching Assistant UC Davis Physics for Life Sciences II Winter '19, Summer '19, 	Winter '22 Spring '19 Fall '19 Winter '20, Spring Fall '18 Jan '19, Jan '20
Organizer, Astronomy on Tap, Davis (science cafe) SERVICE Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '21 - Present Sep '22 - Present Sep '21 - Present Sep '22 - Present Sep '21 - Present Sep '22 - Present Se	Outreach	
Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '21 - Present Aug '20 - Apr '20 - Apr '20 - Apr '20 - Apr '20 - Aug '20 - Apr '20 - Aug '20	Writer & DEI Committee co-chair, Astrobites blog funded by AAS Organizer, Astronomy on Tap, Davis (science cafe)	Dec '20 - Present May '20 - Present
Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy Sep '21 - Preser Aug '20 - Apr '2 Sep '19 - Aug' 2	SERVICE	
Programming	Chair, UCD Diversity & Inclusion in Physics & Astronomy Graduate student rep, UCD Physics/Astronomy Graduate Admissions Graduate student rep, UCD Physics/Astronomy Climate Survey Member, UCD Diversity & Inclusion in Physics & Astronomy	Sep '21 - Present Sep '21 - Present Aug '20 - Apr '21 Sep '19 - Aug' 21
	Programming	

Languages: python, C, Java, Unix/Linux/MacOS/Windows, slurm

Software/packages: astropy, MPI, OpenMP, Gizmo, Lenstool, SWUnited, DS9

¹Texas Advanced Computing Center