

RONGPU ZHOU

Lawrence Berkeley National Laboratory
1 Cyclotron Rd, Berkeley, CA 94720
rongpuzhou@lbl.gov; Last updated: March 22, 2024

EMPLOYMENT

Project Scientist, Lawrence Berkeley National Laboratory (LBNL) Mar, 2024 — present
Postdoctoral Fellow, LBNL Aug, 2019 — Feb, 2024

EDUCATION

Ph.D. Program in Physics Aug, 2013 — July, 2019
University of Pittsburgh
Thesis Title: Preparing for next-generation galaxy surveys
Thesis Advisor: Jeffrey Newman

Bachelor of Science in Applied Physics Sept, 2009 — Jul, 2013
University of Electronic Science and Technology of China

RESEARCH INTERESTS

Cosmology using galaxies as tracers of the large-scale structure and cross-correlations between galaxies and other observables such as the CMB and weak lensing.

Understanding the observational systematics in the cosmological analyses of galaxy surveys and developing methods to properly correct for these systematics via simulations.

Designing the next generation of spectroscopic galaxy surveys (DESI-2 and Stage-5 Spectroscopic Experiments).

AWARDS AND SCHOLARSHIPS

2022 LBNL Recognition of Excellence Award
2020 Dark Energy Spectroscopic Instrument Builder Award
2018 Andrew Mellon Predoctoral Fellowship
2018 Zaccheus Daniel Predoctoral Fellowship

LEADERSHIP POSITIONS

Co-convener of DESI Key Project 3 (Large-Scale Structure Catalog and 2-Point Measurements) Oct 2022 –

SELECTED PUBLICATIONS

Zhou, R. et al., “DESI luminous red galaxy samples for cross-correlations”, [JCAP 11, 097 \(2023\)](#)

Zhou, R. et al., “Comparing the Photometric Calibration of DESI Imaging and Gaia Synthetic Photometry”, [Res. Notes AAS, 7, 105 \(2023\)](#)

Zhou, R. et al., “Target Selection and Validation of DESI Luminous Red Galaxies”, [AJ 165 58 \(2023\)](#)

White, M., **Zhou, R.** et al., “Cosmological constraints from the tomographic cross-correlation of DESI Luminous Red Galaxies and Planck CMB lensing”, [JCAP 02 007 \(2022\)](#). *I provided and characterized the LRG sample for this analysis.*

Zhou, R. et al., “The Clustering of DESI-like Luminous Red Galaxies Using Photometric Redshifts”, [MNRAS 501, 3309 \(2021\)](#)

Zhou, R. et al., “Preliminary Target Selection for the DESI Luminous Red Galaxy (LRG) Sample”, [Res. Notes AAS, 4, 181 \(2020\)](#)

Zhou, R. et al., “Deep *ugrizy* imaging and DEEP2/3 spectroscopy: a photometric redshift testbed for LSST”, [MNRAS 488, 4565-4584 \(2019\)](#)

Dey, A. et al. (including **Zhou, R.**), “Overview of the DESI Legacy Imaging Surveys”, *AJ*, 157, 168 (2019) *I contributed to various aspects of the imaging data reduction.*

Full list of publications on Google Scholar: <https://scholar.google.com/citations?user=uGs5dzEAAAAJ>

SELECTED RECENT TALKS

LSST DESC Collaboration Meeting, SLAC National Accelerator Laboratory	July 24-28, 2023
DESI-II / Stage 5 Workshop, Napa CA	March 27-29, 2023
DESI Collaboration Meeting, Berkeley (Local Organizer)	June 21-24, 2022
American Physical Society (APS) April Meeting, Virtual	April 17-20, 2021
Rubin Community Workshop, Virtual	Aug 10-14, 2020

OBSERVING EXPERIENCE & PROGRAMS

Medium-band Pilot Imaging Survey for DESI-II, Wyoming Infrared Observatory (WIRO) (Sep-Oct, 2022)
DESI Survey, Mayall 4-meter at Kitt Peak National Observatory (2020–present)
Mayall z-band Legacy Survey, Mayall 4-meter at Kitt Peak National Observatory (May 2017)
DECam Legacy Survey, Blanco 4-meter at Cerro Tololo Inter-American Observatory (March 2017; Feb 2018)
CoI, DECam Survey Program 2023B-184194, “Efficiently Mapping the $z > 2$ Universe with Medium-Band Filters”
CoI, DECam Survey Program 2023B-851374, “GW-MMADS: Gravitational Wave Multi-Messenger Astronomy DECam Survey”
CoI, DECam Survey Program 2023A-140687, 2023B-307896, “Extending DESI to 17,500 Square Degrees”

TEACHING AND OUTREACH

Volunteer, ACCelerate Festival at the Smithsonian (showing exhibits and explaining DESI to visitors at the National Museum of American History)	April 8-10, 2022
Instructor, DESI High (online lectures on cosmology and DESI for high school students)	Feb, 2021
Interviewee, QuarkNet Workshop (high school students interviewed me on DESI science and my career)	July 2020, July 2023
Volunteer, White House Frontiers Conference Astronomy Night at Allegheny Observatory	Oct, 2016
Volunteer, Investing Now (weekend programs in which I performed physics demos for under-represented high school students)	April 2014, April 2016
Teaching Assistant, Intro to Laboratory Physics & Intro to Physics	2013-2015

PROFESSIONAL ACTIVITIES

Proposal reviewer, NSF Astronomy & Astrophysics Program	Spring 2022
BCCP Cosmology Journal Club organizer	2020-2022