

Ekta Patel, PhD

Postdoctoral Fellow | University of California, Berkeley

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Research Interests: Near-field cosmology, satellite galaxies, dwarf galaxies, computational astrophysics

Education

University of Arizona

M.S., Ph.D. in Astronomy & Astrophysics

Thesis: "Dynamics of Local Group Satellite Galaxies in the Era of Precision Astrometry"

Advisor: Dr. Gurtina Besla

Tucson, AZ

2017, 2019

New York University

B.A. in Physics (with Honors)

Senior Honors Thesis: "The Sloan Digital Sky Survey Large Galaxy Atlas"

Advisor: Dr. David Hogg

New York, NY

2014

Appointments

Hubble Fellow | August 2023–

Department of Physics & Astronomy, University of Utah

Postdoctoral Fellow | August 2022–2023

Department of Astronomy, University of California, Berkeley

Miller Research Fellow | August 2019–2022

Miller Institute for Basic Research in Science, University of California, Berkeley

Select Honors, Awards, and Professional Affiliations

2023-2026 NASA Hubble Fellowship

2019-2022 Miller Research Fellowship, Miller Institute for Basic Research in Science

2019 Division of Dynamical Astronomy Raynor L. Duncombe Student Research Prize

2016-2019 National Science Foundation Graduate Research Fellowship Recipient

2016 University of Arizona College of Science Service Award Recipient

Publications

18 refereed journal articles

6 as 1st/corresponding author, 6 as 2nd/3rd author

[see full list on ADS here]

Select Press & Media Features

2022 Discover Magazine, [Our Galaxy is on a Collision Course. And It's Not the First Time](#)

2022 Scientific American, [Women Are Creating a New Culture for Astronomy](#)

2021 Sky & Telescope, [How Our Largest Dwarf Galaxy Keeps the Others in Line](#)

2021 Miller Institute Newsletter, [Spring 2021 Miller Fellow Focus: Ekta Patel](#)

2020 STEAM Squad Curriculum Book - Blasts Off!, [Meet Ekta Patel, Ph.D.](#)

2019 European Space Agency, [Gaia clocks new speeds for Milky Way-Andromeda collision](#)

- 2019 The New York Times, [Andromeda Is Coming for Our Milky Way Galaxy, Eventually](#)
- 2019 Astronomy Magazine Ask Astro Column Response, [Will the Pinwheel Galaxy \(M33\) merge with the Andromeda Galaxy \(M31\) prior to Andromeda merging with the Milky Way?](#)
- 2019 National Geographic, [Our galaxy is due to crash into its neighbor—but when?](#)
- 2019 Space.com, [We Finally Know When Our Milky Way Will Crash Into the Andromeda Galaxy](#)
- 2019 Active Galactic Women of Discovery Series, [Galaxy Evolution with Ekta Patel](#)
- 2019 LiveScience.com, [How Massive is the Milky Way?](#)
- 2018 University of Arizona Press Release, [How do you Weigh a Galaxy? Especially the One You're In?](#)
- 2018 Air & Space Magazine, [How to Weigh a Galaxy](#)
- 2018 International Business Times, [Milky Way's Mass Estimated More Reliably Using Satellite Galaxies Angular Momentum](#)
- 2018 Nature Research Highlights, [Measuring the Milky Way's mind-boggling mass](#)
- 2018 American Astronomical Society Nova, [Using Satellite Galaxies to Weigh the Milky Way](#)
- 2018 Space.com, [Milky Weigh: New Method Pins Down Our Galaxy's Mass](#)
- 2018 Astronomy Magazine, [A whole new way to weigh the Milky Way](#)

Select Talks & Presentations

Invited Talks: 22 total between 2018–present.....

- Nov 2022 University of Virginia/NRAO Colloquium
- Feb 2022 University of Florida Astronomy Colloquium
- Feb 2022 University of Maryland Astronomy Colloquium
- Nov 2021 Miller Institute Lunch Seminar
- Apr 2021 New York University Center for Cosmology and Particle Physics Astro Seminar
- Apr 2021 University of Michigan Astronomy Colloquium
- Feb 2021 University of California, Santa Cruz Astronomy Colloquium
- Nov 2020 Yale University Astronomy Colloquium
- Oct 2020 Princeton University Institute for Advanced Study Seminar
- Sep 2020 Rutgers University Astrophysics Seminar
- Sep 2020 University of California, Berkeley Astronomy Colloquium
- Jun 2018 [232nd American Astronomical Society Meeting Press Conference](#), Denver, CO

Select Contributed Conference Presentations: 11 total between 2014–present.....

- Nov 2022 Linking the Galactic and Extragalactic, Australia
- Aug 2022 IAU General Assembly Division H Meeting, South Korea
- Dec 2020 [Linking the Galactic and Extragalactic \(virtual\) *](#), Australia (*runner-up for best contributed talk)
- Sep 2020 The Local Group: Assembly and Evolution, Space Telescope Science Institute
- Jul 2019 Small Galaxies, Cosmic Questions, Durham University, United Kingdom
- Jun 2018 [232nd American Astronomical Society Meeting](#), Milky Way Session 402, Denver, CO
- Jul 2017 Large Surveys of the Great Andromeda Galaxy, Lorentz Center, Netherlands

Telescope Time Awarded

As Principal Investigator: 1 proposal

HST Cycle 29, *Establishing a New Framework for Quantifying Quenching in Low-Mass Satellite Galaxies using Gaia and HST*, AR 16628 (\$205,049)

As Co-Investigator: 10 proposals

8.3hr awarded for **Gemini S22B** (GN-2022B-Q-231)

620 orbits awarded for **HST Cycles 26-30** (GO 17174, 16737, 16778, 16293, 16274, 16273, 15902, 15911, 15658)

Select Leadership & Service Experience

Leadership Experience.....

o **UC Berkeley Astronomy Department**

Cal-URSA (Undergraduate Research Scholarships in Astronomy)

Lead Developer & Coordinator | 2021

- Develop a paid, semester-long undergraduate research opportunity for Bay Area students majoring in physics and astronomy, especially those individuals who identify with groups that have been historically excluded from STEM, to work on scientific research at UC Berkeley Astronomy
- Request and secure funds from UC Berkeley Department of Astronomy
- Solicit project submissions from UC Berkeley postdocs and research staff
- Advertise and evaluate candidate applications using an equitable and inclusive process
- Coordinate hiring logistics and organize professional development events for inaugural cohort of students

o **Miller Institute for Basic Research in Science**

Diversity, Equity, and Inclusion Working Group Member | 2020–2022

- Work with Miller Research Fellows and faculty to provide recommendations for improving the overall climate and hiring practices at the Miller Institute
- Contribute to the development of the Meet a Miller Fellow × El Cerrito High School community outreach program

Select Mentoring & Academic Support

o **I have served as a scientific mentor for the following students:**

- Lipika Chatur, Undergraduate Student (UT Austin)
- Katie Chamberlain, PhD Student (University of Arizona)
Project: Occurrence rate of galaxy pairs across cosmic time (to be submitted in 2023)
- Hannah Richstein, PhD Student (University of Virginia)
Project: Structural parameters and possible association of the UFDs Pegasus III and Pisces II (ApJ, 2022)
- Sal Wanying Fu, PhD Student (University of California, Berkeley)
Project: Metallicity Distribution Function of the Eridanus II Ultra-Faint Dwarf Galaxy from Hubble Space Telescope Narrow-band Imaging, (ApJ, 2022)
- Amanda Quirk, PhD student (University of California, Santa Cruz)
Project: Asymmetric drift of Andromeda analogues in the IllustrisTNG simulation (ApJ, 2020)
- Nicolas Garavito-Camargo, PhD (University of Arizona), now at the Center for Computational Astrophysics

o **Physical science Opportunities for Womxn in Education and Research (POWER) Bay Area**

Mentor | 2020–2021

- Provide in-depth mentoring in academic and life skills to a Bay Area community college student majoring in STEM

Academic Service.....

- o Volunteer, Black in Physics Week 2022, Community Engagement Team
- o Journal Referee: *ApJ*, *MNRAS*, *A&A*
- o Member, Roman-Rubin Synergy Working Group
- o Former Member, Hot Universe Baryon Surveyor Milky Way and Local Group Science Working Group
- o Panelist, Space Telescope Science Institute Hubble Space Telescope Time Allocation Committee
- o Panelist, NASA Astrophysics Data Analysis Grants Program

- Reviewer, NASA FINESST Graduate Fellowship Program
- Executive Secretary, NASA Astrophysics Theory Grants Program

Revised on May 9, 2023