

Rodrigo E. L. Córdoba Rosado

Department of Astrophysical Sciences, Princeton University, 4 Ivy Lane, Princeton, NJ, 08540
rodrigoc@princeton.edu  rodelcr.github.io
Osage Nation Tribal Enrollment No. 025118

KEYWORDS	Active Galactic Nuclei (16), Large-scale structure of the universe (902), Observational cosmology (1146)
EDUCATION	<p>Princeton University, Princeton, New Jersey, USA</p> <p>Ph.D. in Astrophysical Sciences (Expected May 2025) Aug 2020 – <i>Present</i> Dissertation: “Understanding the quasar-dark matter halo connection in wide-field surveys”</p> <p>M.A. in Astrophysical Sciences 2022</p> <p>University of Cambridge, Cambridge, Cambridgeshire, UK</p> <p>MPhil in Archaeology of the Americas 2019 – 2020 Dissertation: “New Approaches to the Archaeoastronomy of Chaco Canyon”</p> <p>Harvard University, Cambridge, Massachusetts, USA</p> <p><i>Cum Laude</i> Joint A.B. in Astrophysics-Physics 2015 – 2019 Secondary in Archaeology</p>
PROFESSIONAL APPOINTMENTS	<p>Graduate Fellow</p> <p>Liechtenstein Institute on Self Determination (LISD), Princeton University 2023 – <i>Present</i> Working with Prof. Danspeckgruber</p> <p>Non Resident Tutor</p> <p>Currier House, Harvard University 2022 – <i>Present</i></p> <p>Graduate Assistant in Instruction</p> <p>Department of Astrophysical Sciences, Princeton University AST 203 - The Universe (Spring 2022) AST 205 - Planets of the Universe (Fall 2021)</p> <p>Resident Graduate Student</p> <p>Forbes College, Princeton University 2021 – <i>Present</i></p> <p>Graduate Researcher</p> <p>Department of Astrophysical Sciences, Princeton University 2020 – <i>Present</i></p> <p>Graduate Teaching Fellow</p> <p>Princeton University Preparatory Program (PUPP) 2020 – 2023</p> <p>Gates Cambridge Scholar</p> <p>University of Cambridge 2019 – 2020</p> <p>NASA/JPL Intern</p> <p>Caltech SURF Program, Jet Propulsion Laboratory, California Institute of Technology 2018</p> <p>SAO Intern</p> <p>Event Horizon Telescope, Smithsonian Astrophysical Observatory, Harvard University 2017 – 2018</p> <p>Clay Telescope Observer - Group Leader</p> <p>Center for Astrophysics Harvard & Smithsonian 2016 – 2019</p> <p>Affiliated Student - Banneker Institute</p> <p>Center for Astrophysics Harvard & Smithsonian 2016 – 2017</p> <p>Tutor - Bureau of Study Counsel</p> <p>Harvard University 2016 – 2019</p>
HONORS & AWARDS	<p>Mentorship Award, Best of Access, Diversity and Inclusion Awards - Princeton University 2023</p> <p>Group Programming Award, Best of Access, Diversity and Inclusion Awards - Princeton University 2023</p> <p>Equity Award, Department of Astrophysical Sciences, Princeton University 2023</p> <p>Ford Foundation Pre-Doctoral Fellowship, National Academies of Sciences, Engineering & Medicine 2022</p> <p>Princeton Graduate Scholars Program (GSP) 2020</p>

President's Fellowship - Princeton University Graduate School	2020
2020 Breakthrough Prize in Fundamental Physics Co-Recipient (EHT)	2019
Gates Cambridge Scholarship	2019
Caltech Summer Undergraduate Research Fellowship	2018
Harvard College Research Program Summer Research Fellowship	2017 & 2016
Eagle Scout	2012

SELECTED PUBLICATIONS

A full list of publications can be found [here](#).

PAPERS

Córdova Rosado, R., Goulding, A., Greene, J., et al. “Cross-correlation of Luminous Red Galaxies with ML-selected AGN in HSC-SSP II: AGN classification and clustering with DESI spectroscopy”, *Submitted to The Astrophysical Journal*, Oct 2024. DOI: [10.48550/arXiv.2410.24020](#)

Danieli, S., **et al.** “Merian: A Wide-Field Imaging Survey of Dwarf Galaxies at z 0.06-0.10”, *Submitted to The Astrophysical Journal*, Oct 2024. DOI: [10.48550/arXiv.2410.01884](#)

Córdova Rosado, R., Goulding, A., Greene, J., et al. “Cross-correlation of Luminous Red Galaxies with ML-selected AGN in HSC-SSP: Unobscured AGN residing in more massive halos”, *Accepted in The Astrophysical Journal*, Oct 2024. DOI: [10.48550/arXiv.2409.08314](#)

Córdova Rosado, R., Santini, L. M., “The Solstitial Axis: Solar Alignments in Ancient Mesoamerica”, *Submitted to Latin American Antiquity*. Sep 2024.

Luo, Y., **et al.**, “The Merian survey: design, construction, and characterization of a filter set optimized to find dwarf galaxies and measure their dark matter halo properties with weak lensing”, *Monthly Notices of the Royal Astronomical Society*, Mar 2024. DOI: [10.1093/mnras/stae925](#)

Córdova Rosado, R., Hensley, B., Clark, S., Duivenvoorden, A., et al. “The Atacama Cosmology Telescope: Galactic Dust Structure and the Cosmic PAH Background in Cross-correlation with WISE”, *The Astrophysical Journal*, Jan 2024. DOI: [10.3847/1538-4357/ad05cd](#)

Raymond, A.; Palumbo, D.; Paine, S.; Blackburn, L. **Córdova Rosado, R.**; Doeleman, S; et al., “Evaluation of New Submillimeter VLBI Sites for the Event Horizon Telescope,” *The Astrophysical Journal, Supplemental Series* Feb 2021. DOI: [10.3847/1538-3881/abc3c3](#)

Event Horizon Telescope Collaboration **et al.**, “First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole,” *The Astrophysical Journal Letters* Apr 2019. DOI: [10.3847/2041-8213/ab0ec7](#)

Event Horizon Telescope Collaboration **et al.**, “First M87 Event Horizon Telescope Results. II. Array and Instrumentation,” *The Astrophysical Journal Letters* Apr 2019. DOI: [10.3847/2041-8213/ab0c96](#)

CONFERENCE POSTERS

Córdova Rosado, R., Goulding, A., Greene, J., et al.; “Stronger Clustering in Unobscured AGN with an HSC \times WISE Selection” at the 2024 Ford Fellows Conference, Washington, D.C., USA, Jun 2024.

Córdova Rosado, R., Masters, D., Rhodes, J., “Constraints on the Dark Energy Survey’s Photometric Galaxy Redshifts,” at the 233rd American Astronomical Society Meeting, Seattle, Washington, USA, Jan 2019. Online Poster: <https://goo.gl/1ZosGD>

Córdova Rosado, R., et al., “Joint Meteorological Statistics of Observing Sites for the Event Horizon Telescope,” at the 231st American Astronomical Society Meeting, Washington, D.C., USA, Jan 2018. Press Discussion: <https://goo.gl/awSb7S>

DATA RELEASES

Bieryla, A.; Carmichael, T; Challis, P.; **Cordova, R.**; Finkbeiner, D.; Gilchrist, R.; Komorowski, E.; Alonso-Monsalve, E. “spectral ID of supernova AT2017cfc ” 2017. <http://www.astronomersteletgram.org/?read=10178>

Cordova, R.; Cummins, K. “Transit Observation of HAT-P-37-b ” 2016. <http://var2.astro.cz/tresca/transit-detail.php?id=1461173881>

PUBLIC-FACING WRITING

See translations and full text [here](#).

Córdova Rosado, R. “Huye Luna, Luna, Luna”, Jul 2023, [Article link](#).

Córdova Rosado, R. “Homo naledi, seres de la estrella creciente”, Jun 2023, [Article link](#).

Córdova Rosado, R. “Cuatro minutos: Starship y el inicio de una nueva era de exploración espacial”, *El Nuevo Día*, Apr 2023, [Article link](#).

Córdova Rosado, R. “Universos paralelos de dos telescopios boricuas”, *El Nuevo Día*, Oct 2022, [Article link](#).

Córdova Rosado, R. “El telescopio espacial James Webb y el futuro de la astronomía puertorriqueña”, *El Nuevo Día*, Jul 2022, [Article link](#).

SERVICE APPOINTMENTS	Responsible Siting Working Group , Black Hole Initiative, Harvard University	
	Member	2024 – Present
	Honors Committee , Society of Indigenous Physicists	
	Committee Member	2024 – Present
	Princeton American Indian & Indigenous Studies Working Group , Princeton University	
	Organizing Board	2023 – Present
	President	2024 – Present
	Native Graduate Students of Princeton , Princeton University	
	Organizing Board	2022 – Present
	President	2024 – Present
	The Peoples’ Sky Conference , Council of Science and Technology, Princeton University	
	Co-Lead Organizer	2023 – Present
	Public Observing Program , Princeton Department of Astrophysical Sciences	
	Telescope Trainer	2022 – Present
	Co-Coordinator	2022
	National Program Subcommittee , Order of the Arrow, Boy Scouts of America	
	Board Member	2021 – Present
	National Scholarship Committee , 2023 National Jamboree, Boy Scouts of America	
	Director	2022 – 2023
	Climate Committee , Princeton Department of Astrophysical Sciences	
	Graduate Student Representative	2021 – 2023
	Graduate Student Committee , Princeton Department of Astrophysical Sciences	
	Graduate Student Representative	2020 – 2022
	Advisory Group to the Diversity and Inclusion National Committee , Boy Scouts of America	
	Founding Member	2020 – 2023
	Camp Guajataka Summer Program , San Sebastián, Puerto Rico	
	Archaeology Instructor	2020
	Gates Scholars’ Sustainability Working Group , University of Cambridge	
	External Action Group Leader	2019 – 2020
	Student Astronomers of Harvard-Radcliffe (STahr) , Harvard University	
	President & Observatory Director	2018 – 2019
	Harvard College Astrophysical Society , Harvard University	
	Co-President	2017 – 2018
	Harvard Archery Team , Harvard University	
	President/ USA Archery Level 2 Instructor	2016 – 2018

PRESENTATIONS INVITED TALKS

Galaxy Group Lunch

Steward Observatory – University of Arizona Astronomy Department

Nov 2024

KIPAC Tea Talk <i>Kavli Center for Astrophysics and Cosmology, Stanford University</i>	Nov 2024
Friday Lunch Seminar <i>Black Hole Initiative, Harvard University</i>	Oct 2024
ITC Luncheon <i>Center for Astrophysics Harvard & Smithsonian</i>	Oct 2024
Galaxy Lunch <i>Astronomy Department, Yale University</i>	Oct 2024
Monday Afternoon Talk <i>MIT Kavli Institute for Astrophysics and Space Research</i>	Oct 2024
Oral Presentation <i>Seminar in honor of HSH, The Hereditary Prince Alois of Liechtenstein & HRH, The Hereditary Princess Sophie of Liechtenstein, LISD, Princeton University</i>	Sep 2023
Gravity Group Presentation <i>Department of Physics, Princeton University</i>	Oct 2023

CONTRIBUTED TALKS AND OTHER ACADEMIC ENGAGEMENTS

Oral Presentation <i>The Origin and Evolution of Supermassive Black Holes Conference, Sexten Center for Astrophysics, Sexten, Italy</i>	Jul 2024
Oral Presentation <i>Asterisms: The Relations among their Verbal, Numerical, and Visual Representations Across Cultures in Research and Public Outreach, Institute for Advanced Study, Princeton</i>	Feb 2024
Panel Discussion after screening of Killers of the Flower Moon <i>Princeton University</i>	Nov 2023
CMB Group Meeting Presentation <i>Astronomy Department, Harvard University</i>	Jul 2023
Oral Presentation <i>From the Galaxy to the Big Bang Conference, Bayuls Sur Mer, France</i>	Jun 2023
Oral Presentation <i>CMB Foregrounds and Galactic Science Workshop, Tenerife, Spain</i>	Dec 2022
Panel Discussion with Osage Nation Principal Chief, Geoffrey Standing Bear <i>Department of Anthropology, Princeton University</i>	Nov 2022
Collaboration Meeting Presentation <i>Atacama Cosmology Telescope Collaboration</i>	Oct 2022
Collaboration Meeting Presentation <i>Atacama Cosmology Telescope Collaboration</i>	Jul 2021
Dissertation Presentation <i>Department of Archaeology, University of Cambridge</i>	Mar 2020
Senior Thesis Presentation <i>Center for Astrophysics Harvard & Smithsonian</i>	Apr 2019
JPL Astrophysics Summer Intern Colloquium <i>Jet Propulsion Laboratory, California Institute of Technology</i>	Aug 2018
Astrophysics Laboratory Research Presentation <i>Center for Astrophysics Harvard & Smithsonian</i>	Apr 2018
Junior Thesis Presentation <i>Center for Astrophysics Harvard & Smithsonian</i>	Dec 2017

GUEST LECTURES

Archaeoastronomy of North America and Ancient Mexico (2 Lecture Series) <i>An Overview of Ancient Astronomy Around the World (FRS 155), Princeton University</i>	Nov 2024
Osage History, Literature, Past, Present, and Future <i>Native American Literature: An Introduction (ETHN 0090D), Brown University</i>	Oct 2024

Solstices and Hilltops: A Brief Overview of Indigenous Astronomy
Native American History (HIS 271 / AMS 271), Princeton University

Sep 2023

PUBLIC TALKS

Ongoing series on Astronomy, Physics, and Archaeoastronomy

Daposka Ahnkodapi (Our School), Osage Nation, Pawhuska, OK

2022 – Present

See [here](#) for recent review article.

(Invited) Explore the Universe: Featuring Astrophysicist Rodrigo Córdova Rosado, a Native American Heritage Month Event

Museum of Science, Boston

Nov 2024

The History of the Universe, as Told by Dark Matter

TEDxMahwah, Mahwah, New Jersey

Aug 2024

Video accessible [here](#).

From Puerto Rico to the Study of Quasars

Hispanics Inspiring Students' Performance and Achievement (HISPA) Kick-off Event

Sep 2023

Escuchando el vacío: La búsqueda de vida extraterrestre y Arecibo

Arecibo Observatory, Puerto Rico

Oct 2022

Los agujeros negros: qué son y cómo los observamos

Arecibo Observatory, Puerto Rico

May 2022

The History of the Universe

STEAM Teaching at Arecibo Academy, Arecibo Observatory, Puerto Rico

Apr 2022

Astronomía y la Arqueoastronomía

STEAM Teaching at Arecibo Academy, Arecibo Observatory, Puerto Rico

Mar 2021 & 2022, Oct 2022

Cosmología y Agujeros Negros

Colegio San Antonio & Colegio San Ignacio, San Juan, Puerto Rico

Aug 2022

La Historia de Día de los Muertos

Day of the Dead Event, Office of Access, Diversity & Inclusion, Princeton University

Nov 2021

Astronomía como Carrera Científica

Centro CRECE, San Juan, Puerto Rico

Nov 2021

Student Observing Night and Presentation

Forbes College, Princeton University

Sep 2021

Cosmología Moderna

STEAM Teaching at Arecibo (STAR) Academy, Arecibo Observatory, Puerto Rico

May 2021

Archaeoastronomy of the American Southwest

Internal Symposium, Sidney Sussex College, Cambridge, UK

Feb 2020

The Archaeoastronomy of Chaco Canyon

Internal Symposium, Gates Cambridge Scholars, University of Cambridge

Feb 2020

La Primera Sombra de un Hoyo Negro

Colegio San Ignacio de Loyola, San Juan, Puerto Rico

Sep 2019

Public Observing Night with PBHA Mission Hill Afterschool Program

Loomis-Michael Observatory, Harvard University

Mar 2019

Eclipse Solar 2017

Colegio San Ignacio de Loyola, San Juan, Puerto Rico

Aug 2017

PROFESSIONAL ASSOCIATIONS

American Astronomical Society (AAS)

Society of Indigenous Physicists (SIP)

LANGUAGES

Spanish & English: Bilingual.

Osage: Beginner-Intermediate.

Ancient Greek: Intermediate (reading); basic (speaking, writing).

SKILLS

Python, Linux/Unix, L^AT_EX, MATLAB, Mathematica, C, Adobe Lightroom, American Mountain Guide Association (AMGA) Certified Climbing Instructor