

Rodrigo E. L. Córdoba Rosado

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Osage Nation Tribal Enrollment No. 025118

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

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: Unobscured AGN residing in more massive halos”, *Submitted to The Astrophysical Journal*, May 2024 DOI: [10.48550/arXiv.2409.08314](#)

Córdova Rosado, R., Santini, L. M., “The Solstitial Axis: Solar Alignments in Ancient Mesoamerica”, *Submitted to the Journal of Archaeological Science*.

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](#)

IN PREPARATION

Córdova Rosado, R., Goulding, A., Greene, J., et al. “Cross-correlation of Luminous Red Galaxies with ML-selected AGN in HSC-SSP and DESI: A Spectroscopic Analysis.”

Córdova Rosado, R., Fuentes, A., “The Role of Celestial Ecology in Early Hominin Development.”

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 AT2017cjb ” 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	Honors Committee , Society of Indigenous Physicists	
	Committee Member	2024 – Present
	The Peoples’ Sky Conference , Council of Science and Technology, Princeton University	
	Co-organizer	2023 – 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
	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 ACADEMIC ENGAGEMENTS

Galaxy Group Lunch (Invited Talk)	
<i>Steward Observatory – University of Arizona Astronomy Department</i>	Nov 2024
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 <i>Killers of the Flower Moon</i>	
<i>Princeton University</i>	Nov 2023

Gravity Group Presentation <i>Department of Physics, Princeton University</i>	Oct 2023
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
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	
Solstices and Hilltops: A Brief Overview of Indigenous Astronomy <i>Native American History (HIS 271 / AMS 271), Princeton University</i>	Sep 2023
PUBLIC TALKS	
Ongoing series on Astronomy, Physics, and Archaeoastronomy <i>Daposka Ahnkodapi (Our School), Osage Nation, Pawhuska, OK</i> See here for recent review article.	2022 – Present
The History of the Universe, as Told by Dark Matter <i>TEDxMahwah, Mahwah, New Jersey</i>	Aug 2024
From Puerto Rico to the Study of Quasars <i>Hispanics Inspiring Students' Performance and Achievement (HISPA) Kick-off Event</i>	Sep 2023
Escuchando el vacío: La búsqueda de vida extraterrestre y Arecibo <i>Arecibo Observatory, Puerto Rico</i>	Oct 2022
Los agujeros negros: qué son y cómo los observamos <i>Arecibo Observatory, Puerto Rico</i>	May 2022
The History of the Universe <i>STEAM Teaching at Arecibo Academy, Arecibo Observatory, Puerto Rico</i>	Apr 2022
Astronomía y la Arqueoastronomía <i>STEAM Teaching at Arecibo Academy, Arecibo Observatory, Puerto Rico</i>	Mar 2021 & 2022, Oct 2022
Cosmología y Agujeros Negros <i>Colegio San Antonio & Colegio San Ignacio, San Juan, Puerto Rico</i>	Aug 2022
La Historia de Día de los Muertos <i>Day of the Dead Event, Office of Access, Diversity & Inclusion, Princeton University</i>	Nov 2021

Astronomía como Carrera Científica <i>Centro CRECE, San Juan, Puerto Rico</i>	Nov 2021
Student Observing Night and Presentation <i>Forbes College, Princeton University</i>	Sep 2021
Cosmología Moderna <i>STEAM Teaching at Arecibo (STAR) Academy, Arecibo Observatory, Puerto Rico</i>	May 2021
Archaeoastronomy of the American Southwest <i>Internal Symposium, Sidney Sussex College, Cambridge, UK</i>	Feb 2020
The Archaeoastronomy of Chaco Canyon <i>Internal Symposium, Gates Cambridge Scholars, University of Cambridge</i>	Feb 2020
La Primera Sombra de un Hoyo Negro <i>Colegio San Ignacio de Loyola, San Juan, Puerto Rico</i>	Sep 2019
Public Observing Night with PBHA Mission Hill Afterschool Program <i>Loomis-Michael Observatory, Harvard University</i>	Mar 2019
Eclipse Solar 2017 <i>Colegio San Ignacio de Loyola, San Juan, Puerto Rico</i>	Aug 2017

PROFESSIONAL ASSOCIATIONS	American Astronomical Society (AAS) Society of Indigenous Physicists (SIP) Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
LANGUAGES	Spanish & English: Bilingual. Osage: Beginner-Intermediate. Ancient Greek: Intermediate (reading); basic (speaking, writing).
SKILLS	Python, Linux/Unix, L ^A T _E X, MATLAB, Mathematica, C, Adobe Lightroom, American Mountain Guide Association (AMGA) Certified Climbing Instructor