


Rodrigo E. L. Córdoba Rosado

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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 Science Aug 2020 – May 2025 <i>Dissertation Title:</i> “Black Holes and Dark Matter: On the Connection between Active Galactic Nuclei and their Halo Environments”</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 <i>Dissertation Title:</i> “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>AGEL Postdoctoral Fellow Aug 2025 - Present Smithsonian Astrophysical Observatory, Center for Astrophysics Harvard & Smithsonian</p> <p>Resident Tutor Currier House, Harvard University 2025 – Present</p> <p>Graduate Fellow Liechtenstein Institute on Self Determination (LISD), Princeton University 2023 – 2025 Working with Prof. Danspeckgruber</p> <p>Non Resident Tutor Currier House, Harvard University 2022 – 2025</p> <p>Graduate Assistant in Instruction 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 Forbes College, Princeton University 2021 – 2025</p> <p>Graduate Researcher Department of Astrophysical Sciences, Princeton University 2020 – 2025</p> <p>Graduate Teaching Fellow Princeton University Preparatory Program (PUPP) 2020 – 2023</p> <p>Gates Cambridge Scholar University of Cambridge 2019 – 2020</p> <p>NASA/JPL Intern Caltech SURF Program, Jet Propulsion Laboratory, California Institute of Technology 2018</p> <p>SAO Intern Event Horizon Telescope, Smithsonian Astrophysical Observatory, Harvard University 2017 – 2018</p> <p>Clay Telescope Observer - Group Leader Center for Astrophysics Harvard & Smithsonian 2016 – 2019</p> <p>Affiliated Student - Banneker Institute Center for Astrophysics Harvard & Smithsonian 2016 – 2017</p> <p>Tutor - Bureau of Study Counsel Harvard University 2016 – 2019</p>
HONORS & AWARDS	Graduate Student Service Award, Association of Princeton Graduate Alumni 2025

Mentorship Award, Best of Access, Diversity and Inclusion Awards - Princeton University	2023
Group Programming Award, Best of Access, Diversity and Inclusion Awards - Princeton University	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
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 III: HOD Parameters for Type I and Type II Quasars”, *Submitted to The Astrophysical Journal*. Oct 2025. DOI:10.48550/arXiv.2510.11780

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”, *Accepted to The Astrophysical Journal*. Oct 2025. DOI: 10.48550/arXiv.2410.24020

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”, *The Astrophysical Journal*, Dec 2024. DOI: 10.3847/1538-4357/ad8342

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., 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.**; Doleman, 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>

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

Co-Lead

2025 – Present

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 – 2025

Co-Coordinator

2024 – 2025

Native Graduate Students of Princeton, Princeton University

Organizing Board

2022 – 2025

President

2024 – 2025

Public Observing Program, Princeton Department of Astrophysical Sciences

Telescope Trainer

2022 – 2025

Co-Coordinator

2022

National Program Subcommittee, Order of the Arrow, Boy Scouts of America

Board Member

2021 – Present

The Peoples’ Sky Conference, Council of Science and Technology, Princeton University

Co-Lead Organizer

2023 – 2024

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

Paper Presentation: <i>The Solstitial Axis: Solar Alignments in Ancient Mesoamerica</i> <i>Native American and Indigenous Studies Association Annual Conference, Oklahoma City, OK</i>	Oct 2025
Paper Presentation: <i>The Solstitial Axis: Solar Alignments in Ancient Mesoamerica</i> <i>Native American and Indigenous Studies Association Annual Conference, Oklahoma City, OK</i>	Jun 2025
Oral Presentation: <i>Black hole growth and connections to dark matter halos: new insights from wide-field cosmological surveys</i> <i>245th Meeting of the American Astronomical Society, National Harbor, MD</i>	Jan 2025
Oral Presentation: <i>Teotihuacan, Quasars, and Indigenous Astronomy in the 21st Century</i> <i>The Peoples' Sky Symposium, Princeton University</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
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

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 <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
(Invited) Explore the Universe: Featuring Astrophysicist Rodrigo Córdova Rosado, a Native American Heritage Month Event <i>Museum of Science, Boston</i>	Nov 2024
The History of the Universe, as Told by Dark Matter <i>TEDxMahwah, Mahwah, New Jersey</i> Video accessible here .	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
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) Native American and Indigenous Studies Association (NAISA)
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LANGUAGES	Spanish & English: Bilingual. Osage: Beginner-Intermediate.
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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