

Rodrigo E. L. Córdoba Rosado

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Osage Nation Tribal Enrollment No. 025118

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| 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 Dissertation: “New Approaches to the Archaeoastronomy of Chaco Canyon” | 2019 – 2020 |
| Harvard University , Cambridge, Massachusetts, USA | <i>Cum Laude</i> Joint A.B. in Astrophysics-Physics | 2015 – 2019 |
| | Secondary in Archaeology | |
| PROFESSIONAL APPOINTMENTS | Graduate Fellow | |
| | Liechtenstein Institute on Self Determination (LISD), Princeton University Working with Prof. Danspeckgruber | 2023 – <i>Present</i> |
| | 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 |
| | 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 | |
| HONORS & AWARDS | 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., Santini, L. M., “The Solstitial Axis: Solar Alignments in Ancient Mesoamerica”, *Submitted to the Journal of Archaeological Science*.

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](https://doi.org/10.48550/arXiv.2409.08314)

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](https://doi.org/10.1093/mnras/stae925)

Córdova Rosado, R., Hensley, B., Clark, S., Duivendoorn, 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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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 × 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 AT2017cfb ” 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](#).

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

Galaxy Group Lunch (Invited Talk)
Steward Observatory – University of Arizona Astronomy Department Nov 2024

Oral Presentation
The Origin and Evolution of Supermassive Black Holes Conference, Sexten Center for Astrophysics, Sexten, Italy Jul 2024

Oral Presentation
Asterisms: The Relations among their Verbal, Numerical, and Visual Representations Across Cultures in Research and Public Outreach, Institute for Advanced Study, Princeton Feb 2024

Panel Discussion after screening of Killers of the Flower Moon
Princeton University Nov 2023

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| 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 |

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| 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, \LaTeX , MATLAB, Mathematica, C, Adobe Lightroom, American Mountain Guide Association (AMGA) Certified Climbing Instructor