

Rodrigo E. L. Córdoba Rosado

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Osage Nation Tribal Enrollment No. 025118

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| KEYWORDS | Active Galactic Nuclei (16), Large-scale structure of the universe (902), Observational cosmology (1146) | |
| EDUCATION | Princeton University , Princeton, New Jersey, USA | |
| | Ph.D. in Astrophysical Sciences (Expected May 2025) | Aug 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” | |
| | 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 | 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 |
| | 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 | 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 |

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| 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”, *In HSC Collaboration review*. Oct 2024.

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](https://doi.org/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](https://doi.org/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](https://doi.org/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](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)

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 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 | 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

| | |
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| Friday Lunch Seminar | |
| <i>Department of Astrophysical & Planetary Sciences, CU Boulder</i> | Nov 2024 |
| Galaxy Group Lunch | |
| <i>Steward Observatory – University of Arizona Astronomy Department</i> | Nov 2024 |
| KIPAC Tea Talk | |
| <i>Kavli Center for Astrophysics and Cosmology, Stanford University</i> | Nov 2024 |

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| 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 <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 |
| 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 | |
| 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 | |

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| | 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> 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 |
| | 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) | |
| 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 | |