

Chanda Prescod-Weinstein

Current positions

- 2019- *Assistant Professor*, Department of Physics and Astronomy, University of New Hampshire, Durham, U.S.A.
- 2019- *Core Faculty*, Department of Women's and Gender Studies, University of New Hampshire, Durham, U.S.A.
- 2018- *Research Affiliate*, Program in Science, Technology and Society, Massachusetts Institute of Technology, Cambridge, U.S.A.

Education

- 2011 PhD in Physics, University of Waterloo & Perimeter Institute, Waterloo, Canada, Dissertation: *Cosmic Acceleration as Quantum Gravity Phenomenology*, advisors: Dr. Lee Smolin & Professor Niayesh Afshordi
- 2005 MSc in Astronomy & Astrophysics, University of California, Santa Cruz, U.S.A., advisor: Professor Anthony Aguirre
- 2003 AB in Physics and Astronomy & Astrophysics, Harvard College, Cambridge, U.S.A., Thesis: *A Study of Winds in Active Galactic Nuclei*, advisor: Dr. Martin Elvis

Appointments held

- 2016-2018 Research Associate in Physics, University of Washington, Seattle, U.S.A.
- 2011-2016 Dr. Martin Luther King, Jr. Fellow in Physics, Massachusetts Institute of Technology, Cambridge, U.S.A.
- 2010-2011 NASA Postdoctoral Program Fellow, Observational Cosmology Lab, Goddard Space Flight Center, Greenbelt, U.S.A.

Grants Awarded

- 2021-2022 Principal Investigator, NASA, \$92,832, "NICER Neutron Stars with Dark Matter"
- 2021-2024 Co-Principal Investigator, Department of Energy Group Grant, \$131,000, "High Energy Theoretical Physics at the University of New Hampshire" (amount requested: \$1,862,091)
- 2021-2022 Principal Investigator, FQXi, \$15,000, "Cite Black Women and Gender Minorities in Physics Project"
- 2020-2022 Principal Investigator, Heising-Simons Foundation, \$92,000, funding for Winter 2021 "A Rainbow of Dark Sectors" conference at Aspen Center for Physics and for Community Frontier Contributions to 2021-22 Snowmass Process
- 2019-2022 Principal Investigator, National Science Foundation, \$214,000, " Making Galaxies Out of An (Ultra)light Invisible Matter Halo"
- 2019-2021 Co-Principal Investigator, Department of Energy Group Grant, \$43,000, "High Energy Theoretical Physics at the University of New Hampshire" (amount requested: \$1,069,939)
- 2016-2018 Principal Investigator, FQXi Physics of the Observer Large Grant, \$100,522.31, "Epistemological Schemata of Astro | Physics: A Reconstruction of Observers"
- 2011-2016 Dr. Martin Luther King Postdoctoral Fellowship, M.I.T.

- 2010-2011 NASA Postdoctoral Program Fellowship, Goddard Space Flight Center
- 2004-2007 National Science Foundation Graduate Research Fellowship

Prizes & Awards

- 2022 Top Prize (Mid- to Later-Career Researcher Category), National Academies Eric and Wendy Schmidt Awards for Excellence in Science Communication
- 2022 Phi Beta Kappa Award in Science for *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred*
- 2022 PEN Oakland Josephine Miles Literary Award for *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred*
- 2022 2021 Los Angeles Times Book Prize, Science and Technology Category for *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred*
- 2021 Distinguished Alumni Award, University of Waterloo Faculty of Science
- 2021 University of New Hampshire College of Engineering and Physical Sciences Award for Excellence in Research by an Assistant Professor
- 2021 University of New Hampshire Gold Level Sustainability Award for Research and Scholarship
- 2021 American Physical Society Edward A. Bouchet Award
- 2020/2021 Women in Science at Yale Distinguished Scientist of the Year Award (award receipt postponed to 2021 due to COVID-19 outbreak)
- 2017 LGBT+ Physicists Acknowledgement of Excellence Award
- 2013 Infinite Kilometer Award, M.I.T. School of Science
- 2007 Barbados House Canada Inc. Gordon C. Bynoe Scholarship Award
- 2001 Harvard Foundation for Intercultural and Race Relations Award

Honors

- 2022 William Starr Lecturer and Freshman Common Read Author, Vassar College (September 2022)
- 2022 Co-Inaugural Vera Rubin Distinguished Visiting Professor, UC Santa Cruz (April 2022)
- 2022 Presidential Scholar, Amherst College (March 2022)
- 2022 Finalist, PEN America/E.O. Wilson Prize in Literary Science Writing for *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred*
- 2022 Lewis-Ezekoye Distinguished Lecturer in Africana Studies, Barnard College of Columbia University (January 2022)
- 2021 Shortlist, Brooklyn Public Library Literary Prize, Non-fiction for *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred*
- 2021 Freshman Common Read Author and Lecturer, Virginia Tech Residential College (September 2021)
- 2021 Finalist, New England Book Award, Non-Fiction for *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred*
- 2020 Nature 10: Ten People Who Shaped Science in 2020
- 2019 Occidental College Stafford Ellison Wright Black Alumni Scholar-in-Residence
- 2019 Finalist, *Signs Journal* Catharine A. Stimpson Prize
- 2017- FQXi Member
- 2012 Young Scientist, Lindau Nobel Laureates Conference in Physics
- 2012 Society for the Advancement of Chicanos/Hispanics and Native Americans in the Sciences

2004-2007 Summer Leadership Institute Graduate
National Science Foundation Graduate Research Fellow

Research and Scholarship

*Authorship is alphabetical except where * appears, in which case students and postdoctoral researchers typically appear first.*

Physics Publications (Peer-Reviewed)

- 2022 K. Kirkpatrick, A. Mirasola, and **C. Prescod-Weinstein**, Analysis of Bose-Einstein condensation times for self-interacting scalar dark matter, *Physical Review D* **106**, 043512, [arXiv:2110.08921 \[hep-ph\]](#)
- 2022 N. Glennon, E. Nadler, N. Musoke, A. Banerjee, **C. Prescod-Weinstein**, and R. Wechsler,* Using UltraDark to Explore Solitonic Tidal Disruptions with Self-Interactions, *Physical Review D* **105**, 123540, [arXiv:2110.08921 \[hep-ph\]](#)
- 2021 N. Glennon and **C. Prescod-Weinstein**, Using PySIUltraLight to Model Scalar Dark Matter with Self-Interactions, *Physical Review D* **104**, 083532, [arXiv:2011.09510 \[astro-ph.CO\]](#)
- 2021 T. Riley et al.*, A NICER View of the Massive Pulsar PSR J0740+6620 Informed by Radio Timing and XMM-Newton Spectroscopy, *Astrophysical Journal Letters* **918**, L27, [arXiv:2105.06980 \[astro-ph.HE\]](#)
- 2020 K. Kirkpatrick, **C. Prescod-Weinstein**, and A. Mirasola, Relaxation times for Bose-Einstein condensation in axion miniclusters, *Physical Review D* **102**, 103012, [arXiv:2007.07438 \[hep-ph\]](#)
- 2019 eXTP subgroup led by A. Santangelo, Physics and astrophysics of strong magnetic field systems with eXTP, *Science China: Physics, Mechanics, & Astronomy* **62**, 2, [arXiv:1812.04460 \[astro-ph.HE\]](#)
- 2019 eXTP subgroup led by J.J.M. in't Zand, Observatory science with eXTP, *Science China: Physics, Mechanics, & Astronomy* **62**, 2, [arXiv:1812.04023 \[astro-ph.HE\]](#)
- 2019 eXTP subgroup led by A. Watts, Dense matter with eXTP, *Science China: Physics, Mechanics, & Astronomy* **62**, 2, [arXiv:1812.04021 \[astro-ph.HE\]](#)
- 2018 M. DeCross, D. Kaiser, A. Prabhu, **C. Prescod-Weinstein**, and E. Sfakianakis, Preheating after Multifield Inflation with Nonminimal Couplings, III: Dynamical spacetime results, *Phys. Rev. D* **97**, 023528, [arXiv:1610.08916 \[astro-ph.CO\]](#)
- 2018 M. DeCross, D. Kaiser, A. Prabhu, **C. Prescod-Weinstein**, and E. Sfakianakis, Preheating after Multifield Inflation with Nonminimal Couplings, II: Resonance Structure, *Phys. Rev. D* **97**, 023527, [arXiv:1610.08868 \[astro-ph.CO\]](#)
- 2018 M. DeCross, D. Kaiser, A. Prabhu, **C. Prescod-Weinstein**, and E. Sfakianakis, Preheating after Multifield Inflation with Nonminimal Couplings, I: Covariant Formalism and Attractor Behavior, *Phys. Rev. D* **97**, 023526, [arXiv:1510.08531 \[astro-ph.CO\]](#)
- 2017 A. Nelson and **C. Prescod-Weinstein**, Relaxion: A Landscape Without Anthropics, *Phys. Rev. D* **96**, 113007, [arXiv:1708.00010 \[hep-ph\]](#)
- 2015 A. Guth, M.P. Hertzberg, and **C. Prescod-Weinstein**, Do Dark Matter Axions Form a Condensate with Long-Range Correlation?, Editors' Suggestion in *Phys. Rev. D* **92**, 103513, [arXiv:1412.5930 \[astro-ph.CO\]](#)
- 2015 **C. Prescod-Weinstein** and E. Bertschinger,* An Extension of the Faddeev-Jackiw Tech-

nique to Fields in Curved Spacetimes, *Class. Quantum Grav.* **32** 075011, [arXiv:1404.0382 \[hep-th\]](#)

2009 **C. Prescod-Weinstein** and L. Smolin, Disordered Locality as an Explanation for the Dark Energy, *Phys. Rev. D* **80**, 063505, [arXiv:0905.3551v2 astro-ph.CO](#)

2009 **C. Prescod-Weinstein**, N. Afshordi and M. Balogh,* Stellar Black Holes and the Origin of Cosmic Acceleration, *Phys. Rev. D* **80**, 043513, [arXiv:0903.5303v3 \[hep-th\]](#)

Physics Publications Under Review

2022 N. Rutherford, G. Raaijmakers, **C. Prescod-Weinstein**, and A. Watts,* Constraining Asymmetric Dark Matter In and Around Neutron Stars. Under consideration at Physical Review D. [arXiv:2208.03282 \[astro-ph.HE\]](#)

Selected Physics Publications on arXiv

2022 Report of the Cosmic Frontier for Snowmass 2021 led equally by A. Chou, M. Soares-Santos, and T.M.P. Tait, [arXiv:2211.09978 \[hep-ex\]](#)

2022 Snowmass 2021 Cross Frontier Report: Dark Matter Complementarity (Extended Version) (alphabetical authorship), [arXiv:2210.01770 \[hep-ph\]\[astro-ph.CO\]\[hep-ex\]\[hep-th\]](#)

2022 Report of the Topical Group on Cosmic Probes of Dark Matter for Snowmass 2021 led equally by A. Drlica-Wagner, **C. Prescod-Weinstein**, and H-B Yu, [arXiv:2209.08215 \[astro-ph.CO\]\[hep-ex\]](#)

2022 Snowmass2021: Vera C. Rubin Observatory as a Flagship Dark Matter Experiment led by Y. Y. Mao, [arXiv:2203.07252 \[astro-ph.CO\]](#)

2019 STROBE-X collaboration led by P. Ray, STROBE-X: X-ray Timing and Spectroscopy on Dynamical Timescales from Microseconds to Years, [arXiv:1903.03035 \[astro-ph.IM\]](#)

2019 LSST Dark Matter Group led by A. Drlica-Wagner & Y. Mao, Probing the Fundamental Nature of Dark Matter with the Large Synoptic Survey Telescope, white paper, [arXiv:1902.01055 \[astro-ph.CO\]](#)

D. J. .E. Marsh, V. Poulin, **C. Prescod-Weinstein**, and T. L. Smith, Gravitational probes of ultra-light axions, white paper, [arXiv:1904.09003 \[astro-ph.CO\]](#)

2010 **C. Prescod-Weinstein** and N. Afshordi,* Using Dark Matter Haloes to Learn about Cosmic Acceleration: A New Proposal for a Universal Mass Function, [arXiv:1010.5501 \[astro-ph.CO\]](#)

Social Studies Publications (Peer-Reviewed)

2021 K. Rosa, J. Blue, S. Hyater-Adams, G. Cochran, and **C. Prescod-Weinstein**,* *Resource Letter RP-1: Race and physics*, American Journal of Physics **89**, 751 (2021)

2021 G. Cochran, S. Hyater-Adams, C. Alvarado, **C. Prescod-Weinstein**, and A. Daane,* Social Justice and Physics Education, appears in peer-reviewed *Teaching and Learning for Social Justice and Equity in Higher Education: Content Areas*

2020 **C. Prescod-Weinstein**, Making Black Women Scientists Under White Empiricism: the Racialization of Epistemology in Physics, *Signs Journal* Winter 2020 issue, finalist for the 2019 Catharine A. Stimpson Prize

- 2020 M. Boveda, G. Cochran, and **C. Prescod-Weinstein**, Review of Intersectionality in STEM, appears in peer-reviewed *Handbook of Research on STEM Education*
- 2020 **C. Prescod-Weinstein**, Do we need inclusion or do we need justice?, *Understanding the Intersections of Race, Gender, and Gifted Education: An Anthology By and About Talented Black Girls and Women in STEM* (ed. Nicole M. Joseph)
- 2017 **C. Prescod-Weinstein**, Curiosity and the End of Discrimination, *Nature Astronomy* **1**, 0145

Social Studies Publications (Not Peer-Reviewed)

- 2023 **C. Prescod-Weinstein**, (Re-)Imagining Black Feminist Physics and Astronomy, to appear in *Routledge Companion on Intersectionalities*
- 2023 1) C. Prescod-Weinstein, Social Media Activism is Valuable Service, appears in *Ethics in Higher Education: Promoting Equity and Inclusion Through Case-Based Inquiry*
- 2022 A. Hodari, S. Krammes, **C. Prescod-Weinstein**, B. Nord, J. Esquivel, K. Assamagan,* How to Read the Snowmass White Papers on Power Dynamics in Physics, Informal Socialization in Physics Training, and Policing and Gatekeeping in STEM, [arXiv:2203.11523](https://arxiv.org/abs/2203.11523) [[physics.ed-ph](https://arxiv.org/abs/2203.11523)]
- 2022 A. Hodari, S. Krammes, **C. Prescod-Weinstein**, B. Nord, J. Esquivel, K. Assamagan,* Power Dynamics in Physics, [arXiv:2203.11513](https://arxiv.org/abs/2203.11513)[[physics.soc-ph](https://arxiv.org/abs/2203.11513)]
- 2022 A. Hodari, S. Krammes, **C. Prescod-Weinstein**, B. Nord, J. Esquivel, K. Assamagan,* Informal Socialization in Physics Training, [arXiv:2203.11518](https://arxiv.org/abs/2203.11518) [[physics.ed-ph](https://arxiv.org/abs/2203.11518)]
- 2022 A. Hodari, S. Krammes, **C. Prescod-Weinstein**, B. Nord, J. Esquivel, K. Assamagan,* Policing and Gatekeeping in STEM, [arXiv:2203.11508](https://arxiv.org/abs/2203.11508) [[physics.ed-ph](https://arxiv.org/abs/2203.11508)]
- 2022 **C. Prescod-Weinstein**, Book Review: Dear Science and Other Stories, by Katherine McKittrick (Duke University Press, 2021), *Catalyst: Feminism, Theory, Technoscience*, Volume 8, No. 1 [online](https://doi.org/10.1080/17513758.2021.1988888)
- 2022 **C. Prescod-Weinstein**, Social Media Activism is Valuable Service, appears in *Ethics in Higher Education: Promoting Equity and Inclusion Through Case-Based Inquiry*
- 2020 **C. Prescod-Weinstein**, What Can Entitlement Do For Us?, *Signs Journal Short Take* (October 2020)
- 2020 **C. Prescod-Weinstein**, L. M. Walkowicz, S. Tuttle, B. Nord, and H. R. Neilson,* Reframing astronomical research through an anticolonial lens – for TMT and beyond, [arXiv:2001.00674](https://arxiv.org/abs/2001.00674) [[astro-ph.IM](https://arxiv.org/abs/2001.00674)]
- 2017 **C. Prescod-Weinstein**, Black and Palestinian Lives Matter: Black and Jewish America in the Twenty-First Century, appears in *On Antisemitism: Solidarity and the Struggle for Justice*, Haymarket Books
- 2016 C. Brinkworth, A.B. Skaer, **C. Prescod-Weinstein**, J. Teske, and S. Tuttle,* Building an Inclusive AAS - The Critical Role of Diversity and Inclusion Training for AAS Council and Astronomy Leadership, [arXiv:1610.02916](https://arxiv.org/abs/1610.02916) [[astro-ph.IM](https://arxiv.org/abs/1610.02916)]

Books

- 2021 *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred*, March 9, 2021, Bold Type Books (Winner of the 2021 Los Angeles Times Book Prize in the Science and Technology Category, see ‘Prizes & Awards’ and ‘Honors’ above for all recognition)