

# Cyril Creque-Sarbinowski

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## Education

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<b>Johns Hopkins University (JHU)</b> <i>Ph.D in Physics &amp; Astronomy</i> Advisor: Marc Kamionkowski	<b>Baltimore, MD</b> 2017-2022
<b>Massachusetts Institute of Technology (MIT)</b> <i>B.S. in Physics and Mathematics</i>	<b>Cambridge, MA</b> 2013-2017

## Positions Held

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<b>Center for Computational Astrophysics (CCA)</b> <i>Flatiron Research Fellow</i>	<b>New York, NY</b> Aug. 2022-Present
<b>New York University (NYU)</b> <i>Visiting Scholar</i>	<b>New York, NY</b> Sep. 2022-Present

## Teaching

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<b>PHYS 111: Introductory Physics</b> <i>Virtual Guest Lecturer, <a href="#">Slides</a></i>	<b>Moravian University</b> Spring 2022
<b>PHYS2300: Quantum Theory of Fields I</b> <i>Guest Lecturer, <a href="#">Lecture Notes</a></i>	<b>Brown University</b> Spring 2022
<b>AS.171.107 General Physics for Physical Science Majors</b> <i>Teaching Assistant</i> Lecturer: Prof. Robert Leheny & Prof. Rosemary Wyse	<b>JHU</b> Fall 2017
<b>AS.173.111 General Physics Laboratory I</b> <i>Section Head</i>	<b>JHU</b> Fall 2017

## Awards, Scholarships, Fellowships

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<b>National Science Foundation</b> <i>Graduate Research Fellow</i>	2019-2022
<b>Gates Millenium Scholars Program</b> <i>Scholar</i>	2013-2022
<b>Kelly Miller Fellowship</b> <i>Fellow</i>	2017-2019

## Conferences, Workshops, Seminars

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\* = *Invited*, Hyperlinks to PDF of slides

<b>Seminar*</b> : Joint Tufts/MIT Cosmology Seminar	<i>Feb. 2023</i>
<b>Seminar*</b> : Brown University IDEA Seminar	<i>Feb. 2023</i>
<b>Conference</b> : National Society of Black Physicists Annual Conference	<i>Nov. 2022</i>
<b>Workshop*</b> : Guest Expert, Cosmology Talks Parity-Violation Mini-Workshop	<i>Nov. 2022</i>
<b>Seminar*</b> : Imperial College London	<i>Nov. 2022</i>
<b>Talk*</b> : Ohio State University Astroparticle Lunch Talk	<i>Sept. 2022</i>
<b>Talk</b> : Princeton University/Institute of Advanced Study Lunch Series	<i>Sept. 2022</i>
<b>Workshop (Organizer)</b> : NeXus Workshop	<i>Aug. 2022</i>
<b>Workshop</b> : Aspen Center for Physics	<i>May-June 2022</i>
<b>Seminar*</b> : Brown University	<i>March 2022</i>
<b>Workshop</b> : NeXus Workshop	<i>June 2021</i>
<b>Conference</b> : Pheno 2021	<i>May 2021</i>
<b>Conference</b> : XIX International Workshop on Neutrino Telescopes	<i>Feb. 2021</i>
<b>Conference</b> : Neutrino 2020	<i>Jun. 2020</i>
<b>Seminar*</b> : Bowdoin College	<i>Nov. 2019</i>
<b>Conference</b> : National Society of Black Physicists Annual Conference	<i>Nov. 2019</i>
<b>Conference</b> : Cosmic Controversies, Kavli Institute for Cosmological Physics	<i>Oct. 2019</i>
<b>Workshop</b> : Novel Ideas for Dark Matter, Princeton Center for Theoretical Science	<i>Jan. 2019</i>
<b>Conference</b> : National Society of Black Physicists Annual Conference	<i>Nov. 2018</i>
<b>Conference</b> : Identification of Dark Matter, Brown University	<i>Jul. 2018</i>
<b>Workshop</b> : Second Annual Line-Intensity Mapping Workshop (IM@Hopkins), Johns Hopkins University	<i>Jul. 2017</i>
<b>Conference</b> : Neutrinos and Light Particles in Cosmology, Berkeley Center for Cosmological Physics	<i>Jun. 2016</i>
<b>Conference</b> : National Society of Black Physicists Annual Conference	<i>Feb. 2015</i>

## Publications

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- C. Creque-Sarbinowski**, S. Alexander, M. Kamionkowski, and O. Philcox, “Parity-Violating Trispectrum from Chern-Simons Gravity,” [arXiv:2303.04815](#) [[astro-ph.CO](#)].
- B. Zhou, L. Reali, E. Berti, M. Çalışkan, **C. Creque-Sarbinowski**, M. Kamionkowski, and B. S. Sathyaprakash, “Subtracting Compact Binary Foregrounds to Search for Subdominant Gravitational-Wave Backgrounds in Next-Generation Ground-Based Observatories,” [arXiv:2209.01310](#) [[gr-qc](#)].
- B. Zhou, L. Reali, E. Berti, M. Çalışkan, **C. Creque-Sarbinowski**, M. Kamionkowski, and B. S. Sathyaprakash, “Compact Binary Foreground Subtraction in Next-Generation Ground-Based Observatories,” [arXiv:2209.01221](#) [[gr-qc](#)].

- S. Alexander and **C. Creque-Sarbinowski**, “Chern-Simons Gravity and Neutrino Self-Interactions,” [arXiv:2207.05094 \[hep-ph\]](#).
- C. Creque-Sarbinowski**, J. Hyde, and M. Kamionkowski, “High-Energy Astrophysical Neutrinos from Cosmic Strings,” [arXiv:2206.06377 \[hep-ph\]](#).
- C. Creque-Sarbinowski**, M. Kamionkowski, and B. Zhou, “Seeking neutrino emission from AGN through temporal and spatial cross-correlation,” *Phys. Rev. D* **105** no. 12, (2022) 123035, [arXiv:2111.08012 \[astro-ph.HE\]](#).
- C. Creque-Sarbinowski**, M. Kamionkowski, and B. Zhou, “AGN variability in the age of VRO,” *Astrophys. J.* **941** (2022) 41, [arXiv:2110.13149 \[astro-ph.GA\]](#).
- C. Creque-Sarbinowski**, J. Hyde, and M. Kamionkowski, “Resonant neutrino self-interactions,” *Phys. Rev. D* **103** no. 2, (2021) 023527, [arXiv:2005.05332 \[hep-ph\]](#).
- C. Creque-Sarbinowski**, L. Ji, E. D. Kovetz, and M. Kamionkowski, “Direct millicharged dark matter cannot explain the EDGES signal,” *Phys. Rev. D* **100** no. 2, (2019) 023528, [arXiv:1903.09154 \[astro-ph.CO\]](#).
- C. Creque-Sarbinowski** and M. Kamionkowski, “Searching for Decaying and Annihilating Dark Matter with Line Intensity Mapping,” *Phys. Rev. D* **98** no. 6, (2018) 063524, [arXiv:1806.11119 \[astro-ph.CO\]](#).
- C. Creque-Sarbinowski**, S. Bird, and M. Kamionkowski, “Cross-correlation between thermal Sunyaev-Zeldovich effect and the integrated Sachs-Wolfe effect,” *Phys. Rev. D* **94** no. 6, (2016) 063519, [arXiv:1606.00839 \[astro-ph.CO\]](#).