Cyril Creque-Sarbinowski

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Education

Johns Hopkins University (JHU) — **Baltimore, MD**
Ph.D in Physics & Astronomy — *2017-2022*
Advisor: Marc Kamionkowski

Massachusetts Institute of Technology (MIT) — **Cambridge, MA**
B.S. in Physics and Mathematics — *2013-2017*

Positions Held

Center for Computational Astrophysics (CCA) — **New York, NY**
Flatiron Research Fellow — *Aug. 2022-Present*

New York University (NYU) — **New York, NY**
Visiting Scholar — *Sep. 2022-Present*

Teaching

PHYS 111: Introductory Physics — **Moravian University**
Guest Lecturer — *Spring 2022*

PHYS2300: Quantum Theory of Fields I — **Brown University**
Guest Lecturer — *Spring 2022*

AS.171.107 General Physics for Physical Science Majors — **JHU**
Teaching Assistant — *Fall 2017*
Lecturer: Prof. Robert Leheny & Prof. Rosemary Wyse

AS.173.111 General Physics Laboratory I — **JHU**
Section Head — *Fall 2017*

Awards, Scholarships, Fellowships

National Science Foundation
Graduate Research Fellow — *2019-2022*

Gates Millenium Scholars Program
Scholar — *2013-2022*

Kelly Miller Fellowship
Fellow — *2017-2019*

Conferences, Workshops, Seminars

* = *Invited*

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

Publications

[1] **C. Creque-Sarbinowski**, S. Alexander, M. Kamionkowski, and O. Philcox, "Parity-Violating Trispectrum from Chern-Simons Gravity," arXiv:2303.04815 [astro-ph.CO].

[2] 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].

[3] 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].

[4] S. Alexander and **C. Creque-Sarbinowski**, "Chern-Simons Gravity and Neutrino Self-Interactions," arXiv:2207.05094 [hep-ph].

[5] **C. Creque-Sarbinowski**, J. Hyde, and M. Kamionkowski, "High-Energy Astrophysical Neutrinos from Cosmic Strings," arXiv:2206.06377 [hep-ph].

[6] **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].

[7] **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].

[8] **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].

[9] **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].

[10] **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].

[11] **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].