

CHRISTIAN CAPANELLI

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<https://christiancapanelli.com>

EDUCATION

McGill University – Montréal, QC Ph.D. in Physics Supervisors: Evan McDonough, Katelin Schutz, Robert Brandenberger	2022 - Present
Brown University – Providence, RI M.S. in Physics Supervisor: Stephon Alexander	2020 - 2022
University of Michigan – Ann Arbor, MI B.S. in Physics & Mathematics	2016 - 2020

AWARDS

FRQ-NT Doctoral Scholarship <i>Fonds de recherche du Québec</i>	2024
IPP Early Career Theory Fellowship <i>Canadian Institute of Particle Physics (IPP)</i>	2023
Highly Qualified Personnel Award, Arthur B. McDonald Institute <i>Canada First Research Excellence Fund (CFREF)</i>	2022
Trottier Space Institute (TSI) Graduate Fellowship <i>Trottier Family Foundation</i>	2022

PUBLICATIONS

- C. Capanelli, L. Jenks, E. W. Kolb, E. McDonough, *Runaway Gravitational Production of Dark Photons*. (2024) [[arXiv:2403.15536](https://arxiv.org/abs/2403.15536)] - Pre-print.
- C. Capanelli, L. Jenks, E. W. Kolb, E. McDonough, *Cosmological Implications of Kalb-Ramond-Like-Particles*. (2023) [[arXiv:2309.02485](https://arxiv.org/abs/2309.02485)] - Submitted to JHEP.
- S. Alexander, C. Capanelli, E.G.M. Ferreira, E. McDonough, *Cosmic Filament Spin from Dark Matter Vortices*. *Phys. Lett. B* 833 (2022) 137298. [[arXiv:2111.03061](https://arxiv.org/abs/2111.03061)].

PRESENTATIONS & INVITED TALKS

- Kavli IPMU, U. Tokyo - Theoretical Cosmology Journal Club: *Spin-1 Dark Matter with Non-thermal Histories*, May 8, 2024.
- McGill University - Graduate Seminar Series: *Fake Photons and Imposter Axions: Dark Matter in Disguise*, February 26, 2024.
- McGill University - High Energy Theory Journal Club: *Cosmological Production of Kalb-Ramond-like Particles*, February 14, 2024.
- Winnipeg Institute for Theoretical Physics - Summer School: *Freeze-in Production of Kalb-Ramond Dark Matter*, August 15, 2023.
- University of Chicago - Astroparticle Cosmo Journal Club: *Kalb-Ramond Dark Matter*, May 31, 2023.

VISITING POSITIONS

Kavli IMPU – Tokyo, Japan Position: Ph.D. Student Supervisor: Elisa G.M. Ferreira	April 2024
Kavli Institute for Cosmological Physics (KICP) – Chicago, IL Position: Ph.D. Student Supervisor: Edward W. Kolb	May 2023

ACTIVITIES & INVOLVEMENT

EDI Committee <i>McGill Department of Physics</i>	2023 - 2024
Workspace & Accessibility Officer <i>McGill Graduate Association of Physics Students</i>	2023 - 2024

TEACHING

McGill University Undergraduate Thesis Supervision, now PhD at University of California, Berkeley	2023-2024
Topics in Classical Mechanics - TA	WN 2024
Space, Time, & Matter - TA	FA 2023
General Relativity - TA	WN 2023
Honours Classical Mechanics 1 - TA	FA 2022
Brown University Intro to Relativity & Quantum Mechanics - Grader Electromagnetism & Waves - Grader	SU 2021 SP 2021
University of Michigan Honors Multivariable Calculus - TA Physics for the Life Sciences - TA Classical Mechanics - TA Electricity & Magnetism - TA	FA 2019 WN 2019 FA 2018 WN 2018