

## EDUCATION

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- **University of Colorado Boulder** Boulder, United States  
*PhD. candidate in Astrophysics* *September 2021 – present.*
- **McGill University** Montreal, Canada  
*MSc. in Physics* *September 2019 – August 2021*
- **Pontificia Universidad Católica de Chile (PUC)** Santiago, Chile  
*Lic. in Astronomy* *March 2014 – November 2018*

## SCHOLARSHIPS & AWARDS

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- **CU Boulder Outreach Award Mini Grant 2023-2024:** Granted by Office for Outreach and Engagement at CU Boulder.
- **Graduate Mobility Award:** Granted by McGill University.
- **Science Graduate Student Travel Awards:** Granted by Faculty of Science, McGill University.
- **Trottier Graduate Award 2019-2020, 2020-2021:** Granted by McGill Space Institute, McGill University.
- **Wolfe Fellowship in Scientific and Technological Literacy 2019-2020:** Granted by Graduate and Postdoctoral Studies, McGill University.
- **CONICYT Becas-Chile Study Abroad Graduate Scholarship:** Granted by CONICYT, Government of Chile (declined).
- **Gratuidad Scholarship 2018:** Full tuition fee waiver, granted by Government of Chile.
- **Familia PUC Scholarship:** Partial tuition fee waiver, granted by PUC.

## RESEARCH EXPERIENCE

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- **PhD Student** CU Boulder, United States  
*Revealing the accretion flow in M87\*: Insights from Faraday Rotation* *May 2022 – present*
  - **Supervisor:** Prof. Jason Dexter
- **MSc Student** McGill University, Canada  
*A broad-band view of the black hole binary MAXI J1820+070* *September 2019 - August 2021*
  - **Supervisors:** Prof. Daryl Haggard, Dr. Alexandra Tetarenko.
- **Undergraduate Student** PUC, Chile  
*X-ray spectral analysis of the quiescent low-mass X-ray binary in the globular cluster M30* *August 2018 - July 2019*
  - **Supervisors:** Dr. Sebastien Guillot, Prof. Andreas Reisenegger.
- **Vicerrectoría de Investigación** PUC, Chile  
*Diverse short-term projects as an undergraduate student*
  - **Systematic and statistical uncertainties in estimating mass accretion rate in qLMXBs:** Supervised by Prof. Andreas Reisenegger, January 2018.
  - **Study of Magnetohydrodynamics applications in stellar winds:** Supervised by Prof. Márcio Catelan, January 2017.
  - **Stellar evolution with PGPUC Code:** Supervised by Dr. Aldo Valcarce and Prof. Márcio Catelan, 2016.

## REFEREED PUBLICATIONS

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3. **Echiburú-Trujillo, C.**, Tetarenko, A. J., Haggard, D., et al. 2024, *Chasing the Break: Tracing the Full Evolution of a Black Hole X-Ray Binary Jet with Multiwavelength Spectral Modeling*, ApJ, 962, 116.
2. Zhao, Y., Heinke, C. O., Cohn, H. N., Lugger, P. M., Guillot, S., **Echiburú, C.**; Shishkovsky, L., Strader, J., Chomiuk, L., Bahramian, A., Miller-Jones, J. C. A., Maccarone, T. J., Tremou, E.; Sivakoff, G. R., 2020, *A deep Chandra survey for faint X-ray sources in the Galactic globular cluster M30, and searches for optical and radio counterparts*, MNRAS, 499, 3338.
1. **Echiburú, C. S.**, Guillot, S., Zhao, Y., Heinke, C. O., Özel, F., Webb, N. A., 2020, *Spectral analysis of the quiescent low-mass X-ray binary in the globular cluster M30*, MNRAS, 495, 4508.

## OBSERVING PROPOSALS

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PI on *Chandra* program 2024: “Searching for pulsating neutron stars inside the globular cluster M28” (61 h)  
Co-I on **NICER** program 2020: “Searching for soft X-ray pulsations in the quiescent low-mass X-ray binary inside the globular cluster M30” (69 h)

## TEACHING EXPERIENCE

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- **ASTR 1000 The Solar System**: CU Boulder, Spring 2022 & 2023.
- **ASTR 2030 Black Holes**: CU Boulder, Fall 2021 & 2022, Spring 2024.
- **PHYS 320 Introductory Astrophysics**: McGill, Fall 2020.
- **PHYS 181 Everyday Physics**: Guest lecture on neutron stars.
- **PHYS 181 Everyday Physics**: McGill, Winter 2020.
- **PHYS 101 Introductory Physics, PHYS 131 Mechanics & Waves**: McGill, Fall 2019.
- **Astronomy, Understanding the Universe From Our Home**: Lecturer, Fall 2019. As part of PACE PUC.
- **FIS 153 Electricity and Magnetism Laboratory**: PUC, Fall 2019.
- **AST 0321 Stellar Astrophysics Tutorial**: PUC, Spring 2018.
- **Astronomy, Understanding the Universe From Our Home**: Teaching Assistant, Fall & Spring 2018. As part of PACE PUC.
- **FIS 109C Physical for Science Tutorial**: PUC, Fall 2017.
- **FIS 109 Physical for Science Laboratory**: PUC, Spring 2016, Fall & Spring 2017, Fall 2019.
- **FIS 151 Statics and Dynamics Laboratory**: PUC, Spring 2015, Fall 2018.

## TALKS & POSTERS

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- **Spectral analysis of the quiescent low-mass X-ray binary in the globular cluster M30**: American Astronomical Society Annual Meeting 2020 (Virtual). May 2020.
- **Spectral analysis of the quiescent low-mass X-ray binary in the globular cluster M30 (Poster)**: Canadian Astronomical Society Annual Meeting 2020 (Virtual). May 2020.
- **Spectral analysis of the quiescent low-mass X-ray binary in the globular cluster M30**: PHAROS Conference 2020: The multi-messenger physics and astrophysics of neutron stars (canceled). Patras, Greece. April 2020.
- **Spectral analysis of the quiescent low-mass X-ray binary in the globular cluster M30**: East Asian Observatory Seminars. Hilo, HI, USA. February 2020.
- **The End of Stars, Neutron Stars**: Planetarium, University of Santiago. Santiago, Chile. August 2019.

## OUTREACH

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- **Hispanic Outreach at Fiske and the Observatory (HOFO)**: a group of native-Spanish-speaking graduate students and faculty from the Astrophysical and Planetary Sciences Department at CU Boulder, with the goal of collaborating with the local Hispanic community and opening the spaces, resources, and general astronomical knowledge housed at CU’s Observatory and Planetarium to them.
- **Multiculturalism at the Observatory**: bilingual outreach program that enables community members to explore the cosmos and the connection between astronomy and Hispanic cultures. It hosts alternating English and Spanish online observing nights the telescopes at CU’s Sommers-Bausch Observatory. **Tutor**. May - October 2021.
- **Academic Enrichment Clips, PACE PUC**: A 15 min. video explaining important concepts in astronomy, and a personal interview about my experience in STEM. Both aimed for students enrolled in the PACE PUC program (see *Teaching Experience* section). August 2020.
- **Journey Through the Universe**: Science education initiative in the Hawaii island. I assisted Dr. Alex Tetarenko in classroom activities for grade 4-6 students. Hilo, Hawaii, USA. March 2020.
- **Planetarium USACH: Guide**. Universidad de Santiago de Chile (USACH). April 2019 - August 2019.
- **Expo Prospective Students PUC**: A fair where senior year high school students explore undergraduate programs offered by PUC. Pontificia Universidad Católica de Chile. **Guide**. October 2017.
- **Week for Applicants PUC**: Similar to Expo Prospective Students PUC. Pontificia Universidad Católica de Chile. **Guide**. December 2016 and 2017.