

Curriculum Vitae

Ariane Trudeau

EDUCATION AND EMPLOYMENT

- **Postdoctoral Fellow (2025-now)**, Institute of Astronomy and Astrophysics, (ASIAA)
- **Postdoctoral Associate (2022-2025)**, Astronomy Department, University of Florida
- **Ph. D. in Physics (2018-2022)**, University of Victoria GPA: 9.0/9.0, Supervisor: Dr. Jon Willis (University of Victoria)
- **M. Sc. in Physics (2016-2018)**, Université de Montréal, GPA: 4.2/4.3, Supervisors: Dr. Julie Hlavacek-Larrondo (Université de Montréal) and Dr Tracy Webb (McGill)
- **B. Sc. in Physics (2013-2016)**, Université de Montréal, GPA: 3.92/4.3

RESEARCH EXPERTISE

- High redshift clusters, including cluster detection, cluster galaxy formation and evolution and quenching
- Brightest Cluster Galaxies
- Spectral Energy Distribution fitting
- Stacking analyses

AWARDS, GRANTS AND FUNDING

- **AAS International Travel Grant** (\$1203 USD), for the First Structures of the Universe 2024 conference, 2024
- **NSERC Postgraduate Scholarship-Doctoral** (also know as [PGS D](#); Canadian government funding 21,000\$ CAD/year for 3 years), 2018-2021
- **MSI Fellowship**, based on academic excellence for new members of the McGill Space Institute (10,000\$ CAD), 2017-2018
- **CRAQ Scholarship** (Centre de Recherche en Astrophysique du Québec), for interuniversity co-directions (7500\$ CAD), 2016-2017 and 2017-2018 (twice)
- **Hubert-Reeves Scholarship**, an award for students demonstrating a strong motivation in pursuing studies in astrophysics at Université de Montréal (3000\$ CAD), 2016
- **Excellence Scholarship of the Physics Department of Université de Montréal** (10,000\$ CAD), 2016
- **Trottier Excellence Scholarship** for IREx Summer Students, an award associated with a summer internship at the Institut de Recherche sur les Exoplanètes (3000\$ CAD), 2015
- **Dean Honour List**, an excellence mention, 2014-2016

POSTERS AND TALKS

- **March 2026, Colloquium** National Tsing Hua University (Hsinchu City, Taiwan): “A deep plunge into clusters and their galaxies”
- **September 2025, Talk** CL2025: Entering a Golden Age of Galaxy Cluster Studies, 1st East Asian Workshop on Galaxy Clusters (Taipei, Taiwan): “From the star formation history of the core to the structure of the outskirts: stacking analyses of the MaDCoWS2 clusters between $z=0.5$ and 2”
- **June 2024, Talk** First Structures of the Universe 2024 (Paris, France): “The star formation histories of clusters from $z=0.5$ to 2.5 and the onset of environmental quenching from a statistical point of view,” Zenodo: [12547317](https://zenodo.org/record/12547317)
- **September 2023, Talk** First Structures of the Universe 2023 (Paris, France): “A statistical analysis of the SFH of clusters at $0.5 < z < 2.5$,” Zenodo: [8324449](https://zenodo.org/record/8324449)
- **July 2021, Talk** Galaxy Cluster Formation II (GCF II, online): “Revealing the star formation history of a mature galaxy cluster at $z=2$ ”, recorded: <https://www.youtube.com/watch?v=KKtM-5G50mY>, Zenodo: [4976415#YT-rbaArQbQ](https://zenodo.org/record/4976415#YT-rbaArQbQ)
- **May 2021, Poster** Multi-object Spectroscopy for Statistical Measures of Galaxy Evolution (online): “Revealing the star formation history of a mature galaxy cluster at $z=2$ ”

- **March 2020, Talk** IAU Symposium 359: Galaxy Evolution and Feedback across Different Environments (GALFEED; Bento Gonçalves, Brazil). “Unraveling the early evolution of BCGs: an AGN-starburst connection in the core of a 1.71 galaxy cluster”
- **July 2019, Poster** Tracing Cosmic Evolution with Clusters of Galaxies (Sexten, Italy). “Insights on Brightest Clusters Galaxies early evolution: radio observations of a $z=1.71$ BCG”
- **October 2016, Poster** Exploring the Universe with JWST -II (Montréal, Canada). “Polarization of A/B Stars in the Young Cluster NCG 6611”

SCIENTIFIC PUBLICATIONS

ORCID: [0000-0003-3428-1106](https://orcid.org/0000-0003-3428-1106)

- Karolina Garcia, Anthony H. Gonzalez, Mark Brodwin, Peter Eisenhardt, Tyler George, Nadia Hansen, S.A. Stanford, Daniel Stern, Khunanon Thongkham, **Ariane Trudeau**, et al., The IRAC Distant Cluster Survey, submitted to ApJ on March 23 (2026)
- **A. Trudeau**, et al., [Euclid: A blue galaxy population and a brightest cluster galaxy in the making in a \$z \sim 1.74\$ MaDCoWS2 galaxy cluster candidate](#), A&A, 709, A198 (2026)
- Khunanon Thongkham, Anthony H. Gonzalez, Mark Brodwin, **Ariane Trudeau**, et al., [The Massive and Distant Clusters of WISE Survey 2: Splashback Radii to \$z=1.65\$ from Galaxy Density Profiles](#), ApJ, 1000, 81 (2026)
- **A. Trudeau**, et al., [The Massive and Distant Clusters of WISE Survey 2: Detection of splashback radii in galaxy cluster total light stacks](#), ApJ, 998, 198 (2026)
- Mustafa Muhibullah, Mark Brodwin, Michael McDonald, Anthony H. Gonzalez, Emily Moravec, Thomas Connor, S. A. Stanford, Taweewat Somboonpanyakul, Florian Ruppin, Peter R. M. Eisenhardt, Bandon Decker, Daniel Stern and **Ariane Trudeau**, [The Massive and Distant Clusters of WISE Survey. XII. Exploring X-Ray Active Galactic Nuclei in Dynamically Active Massive Galaxy Clusters at \$z \sim 1\$](#) , ApJ, 983, 47 (2025)
- Khunanon Thongkham, Anthony H. Gonzalez, Mark Brodwin, **Ariane Trudeau**, et al., [The Massive and Distant Clusters of WISE Survey 2: Second Data Release](#), ApJ, 976, 186 (2024)
- **A. Trudeau**, et al., [The Massive and Distant Clusters of WISE Survey 2: A Stacking Analysis Investigating the Evolution of Star Formation Rates and Stellar Masses in Groups and Clusters](#), ApJ, 972, 27 (2024)
- Khunanon Thongkham, Anthony H. Gonzalez, Mark Brodwin, **Ariane Trudeau**, et al., [The Massive and Distant Clusters of WISE Survey 2: Equatorial First Data Release](#), ApJ, 967, 123 (2024)
- **A. Trudeau**, et al., [The XXL survey: XLIX. Linking the members star formation histories to the cluster mass assembly in the \$z = 1.98\$ galaxy cluster XLSSC 122](#), MNRAS, 515, 2529 (2022)
- **A. Trudeau**, et al., [The XXL survey: XLII. Detection and characterisation of the galaxy population of distant galaxy clusters in the XXL-N/VIDEO field: A tale of variety](#), A&A, 642, A124 (2020)
- J. Hlavacek-Larrondo, C. L. Rhea, T. Webb, M. McDonald, A. Muzzin, G. Wilson, K. Finner, F. Valin, N. Bonaventura, M. Cooper, A. C. Fabian, M.-L. Gendron-Marsolais, M. J. Jee, C. Lidman, M. Mezcua, A. Noble, H. R. Russell, J. Surace, **A. Trudeau**, H. K. C. Yee, [Evidence of Runaway Gas Cooling in the Absence of Supermassive Black Hole Feedback at the Epoch of Cluster Formation](#), ApJL, 898, L50 (2020)
- **Ariane Trudeau**, et al., [Multiwavelength radio observations of a Brightest Cluster Galaxy at \$z=1.71\$: Detection of a modest Active Galactic Nucleus and evidence for extended star formation](#), MNRAS, 487, 1210 (2019)

TEACHING, MENTORING AND SERVICE

- NOIRLab American Time Allocation Committee (Extragalactic 2) semester 2025B (panel that read and evaluate proposal submitted to the NOIRlab telescopes to determine how to allocate telescope time)
- Teaching assistantship, paid, for the ASTR 102 course at University of Victoria (seven semesters between fall 2018 and spring 2022) a complementary course designed for non-science students. In charge of a lab section: lecture, supervision and help of the students and correction of the laboratory reports. About 49 hours of work per session. Taught online in 2020-2021 due to COVID-19.
- Academic mentoring, paid, (fall 2016) in physics of a student with a disability, Cégep level (equivalent to last year of high school or 1st year of university). 7 hours 45 minutes (including preparation) made for the Bureau de Soutien aux Étudiants en Situation de Handicap of Université de Montréal (BSESH; Office of Support for Students in Handicap Situation).
- Academic mentoring, volunteering, (summer 2014) in mathematics, to help a student with a disability to finish his first year of high school, in mathematics. About 50 hours including concept explanation, preparation and correction.