# Catarina Aydar

📍 University of São Paulo, R. do Matão, 1226, E309, Cidade Universitária
São Paulo (SP) - Brazil

📞 +55 11 974 003 630

✉ catarina.aydar@gmail.com

🆔 0000-0001-5609-2774

## EDUCATION

**2021 – ...**  **PhD in Astronomy**

Institute of Astronomy, Geophysics and Atmospheric Science, University of São Paulo
- Advised by Claudia Mendes de Oliveira and Roderik Overzier
- The cosmic evolution of galaxies and their black holes

**2019 – 2021**  **Master degree in Astronomy**

Institute of Astronomy, Geophysics and Atmospheric Science, University of São Paulo
- Advised by João Steiner, Claudia Mendes de Oliveira and Roderik Overzier
- Thesis: Diagnostic diagrams for the classification of galactic nuclei: comparison of traditional and alternative diagrams

**2014 – 2018**  **Bachelor degree in Physics**

Physics Institute of the University of São Paulo
- Initiation to scientific research advised by João Steiner
- Thesis: *Alternative criteria for galactic nuclei classification*

## TEACHING EXPERIENCE

**2020 - 2021**  **Tutor of Astrominas: seizing the scientific Universe for female High school students**

Introduction to natural sciences for 14-17 year old girls (Prof. Elysandra Cypriano)

**2020**  **Tutor of Improvement course in astronomy for High school teachers**

Course of basic astronomy for High school teachers (Prof. João Steiner)

**2019**  **Monitor of Astronomy: a general overview II**

Undergraduate course of basic extragalactic astronomy (Prof. João Steiner)

## OBSERVATIONAL EXPERIENCE

**2021**  **James Webb Space Telescope (NIRSpec)**

**"The role of radio AGN feedback in massive galaxies at z=4-6"**
Co-Investigator, Cycle 1, 24 hours

**2021**  **Hubble Space Telescope (ACS/WFC3)**

**"The host galaxy and environment of a radio galaxy near the epoch of reionization"**
Co-Investigator, Cycle 29, 18 orbits

**2019**  **Pico dos Dias Observatory**

**"Color-magnitude diagram of NGC 4755"**
Co-Investigator, 2019A, 6 hours

## PUBLICATIONS

**2021**  **Chemical abundances of Seyfert 2 AGNs – VII. Direct abundance determination of neon based on optical and infrared emission lines**

Armah, Dors, **Aydar** et al. 2021, submitted paper for MNRAS

2021   **Alternative diagnostic diagrams for galactic nuclei classification**
**Aydar** et al., submitted proceeding for the Asociación Argentina de Astronomía

2021   **Alternative classification diagrams for AGN-Starburst galaxies**
**Aydar** et al. 2021; Proceedings of the International Astronomical Union, 359:415

2020   **Alternative classification diagrams for AGN/starburst galaxies**
**Aydar** et al. 2020; Boletín de la Asociación Argentina de Astronomía, 61:82

## EVENTS

2021   **Chemical abundances in gaseous nebulae: from the Milky Way to the Early Universe**
University of Paraíba Valley, virtual event
- Poster Alternative diagnostic diagrams for galactic nuclei classification
- Local Organizing Committee and chair

2021   **Quasars & galaxies on the edge of cosmic reionisation**
Royal Astronomical Society Meeting, virtual event

2021   **Astrocientistas - Brazilian meeting of girls and women in astrophysics, cosmology, and gravitation**
Virtual event

2018 – 2020   **IAG Science day**
University of São Paulo, virtual event
- 2020: Honorable mention for the video Classification of Galactic Nuclei
- 2020: Local Organizing Committee
- 2019: Talk *Alternative diagnostic diagrams: Classifying galactic nuclei*
- 2018: Talk *Alternative diagnostic diagrams for galactic nuclei*

2020   **Galaxy evolution and feedback across different environments**
International Astronomical Union Symposium 359, Bento Gonçalves, Brazil
- Poster Alternative classification diagrams for AGN-Starburst galaxies

2019 – 2020   **First light: stars, galaxies and black holes in the epoch of reionization**
University of São Paulo, São Paulo, Brazil
- Poster Alternative classification diagrams for AGN/starburst galaxies
- Local Organizing Committee
- Presencial event on 2019 and virtual event on 2020

2019   **Latin American Regional Meeting of the IAU**
LARIM, Antofagasta, Chile
- Prize of best poster on the section of Active Galactic Nuclei
- Poster Alternative classification diagrams for AGN/starburst galaxies

2019   **The cosmic baryon cycle: impact on galaxy evolution**
Annual GMT community science meeting, Carlsbad, United States of America
- Poster Alternative classification diagrams for AGN/starburst galaxies

2019   **Interaction between science, communication and society**
University of São Paulo, São Paulo, Brazil

2018   **TORUS**
Puerto Varas, Chile
- Poster Alternative classification diagrams for AGN/starburst galaxies

| 2018 | **Science with SOAR and Gemini telescopes: preparing for the GMT** |
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| | University of Paraíba Valley, São José dos Campos, Brazil |
| | • Poster Alternative classification diagrams for AGN/starburst galaxies |

| 2018 | **Symposium of Scientific Initiation** |
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| | University of São Paulo, São Paulo, Brazil |
| | • Poster Alternative classification diagrams for AGN/starburst galaxies |

| 2018 | **GMT Brazilian Office workshop** |
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| | Technology Institute of Mauá, São Caetano do Sul, Brazil |

| 2018 | **IAG-USP Advanced school on astrophysics** |
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| | University of São Paulo, São Paulo, Brazil |

| 2017 | **GMT: science and instrumentation workshop** |
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| | University of São Paulo, São Paulo, Brazil |

| 2017 | **Python Boot Camp** |
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| | University of São Paulo, São Paulo, Brazil |

| 2014 | **Introduction to astronomy and astrophysics** |
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| | University of São Paulo, São Paulo, Brazil |

## OUTREACH

| 2021 | **Interview for the National TV News ("Jornal Nacional")** |
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| | Two research groups from Brazil are participating on one of the main astronomical projects of the century |

| 2021 | **A new look on black holes** |
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| | Live from the National Observatory about the Brazilian projects with the JWST |

| 2021 | **Traveling to Mars?** |
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| | Activity with students from Camino School about human missions to Mars |

| 2020 | **Is science racist?** |
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| | Organizer and chair of the debate from University of São Paulo |

| 2020 | **Female representation in science** |
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| | Round table promoted by the Coffee with Chemistry from University of Ponta Grossa |

| 2020 | **Interview for Santa Cecília TV News Portal** |
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| | Interview about the 2020 Nobel Prize on Physics |

| 2020 | **Meeting a scientist** |
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| | Interview and conversation with a 12 year old girl |

| 2018 | **Avistar - Brazilian Bird Fair** |
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| | Talk *Seeing astronomical objects across the light spectrum* at the Butantan Institute |

## SKILLS

| Languages | English – Fluent (CAE, FCE) |
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| | Spanish – Fluent |
| | Portuguese – Native |
| | French – Conversational |

| Programming | Python |
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