Pablo A. Saavedra Morales

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EDUCATION AND TRAINING

Master of Science in Astronomy
Universidad de Chile [01/03/2024 – Current]

City: Santiago | **Country:** Chile | **Website:** https://das.uchile.cl/ | **Field(s) of study:** Natural sciences, mathematics and statistics: ● Physics | **Level in EQF:** EQF level 7 | **Thesis:** Study of the reprocessing of accretion discs using Swift data and model-based timing analysis

Bachelor of Science in Astrophysics
Universidad Técnica Federico Santa María [01/04/2020 – 18/12/2023]

City: Santiago | **Country:** Chile | **Website:** https://fisica.usm.cl | **Field(s) of study:** Natural sciences, mathematics and statistics: ● Physics | **Level in EQF:** EQF level 6 | **Thesis:** Measurement and Analysis of the Halo Occupation Distribution in the SDSS

PROJECTS

[01/03/2023 – Current]
Disc reprocessing and variability in AGN Analysed simultaneous X-ray and UV/optical light curves of five AGN using Swift data. Computed power spectral densities, phase lags, and coherence, and fit these results with an analytical model to constrain the system's geometry and test for the presence of a second reprocessor.

[01/05/2023 – 18/12/2023]
The halo-galaxy connection in the era of multi-tracer cosmology Studied the halo occupation distribution for a specific catalogue of galaxy groups, focusing on the contribution of central and satellite galaxies in different volume-limited samples. Analysed how parameters vary across absolute magnitude and redshift ranges.

[01/07/2022 – 01/01/2023]
Magnetic white dwarfs from the SDSS-V plate survey Classified spectra of magnetic white dwarfs by identifying Zeeman effect and metal line features, in order to prepare a dataset for training a machine learning model for automated spectral classification.

CERTIFICATIONS

[Google for Education, 16/11/2025]
Gemini Certification for University Students Training on the practical and responsible use of Generative AI tools (Gemini, NotebookLM) to enhance research productivity and workflow.

Mode of learning: Online

SKILLS

Programming Languages

Python / C / SQL / MATLAB

Software & Tools

VS Code / TOPCAT / SAOImage DS9 / IRAF / Splat-VO

Astronomical Applications

GF / SExtractor / GALFIT

HONOURS AND AWARDS

[17/10/2025] SOCHIAS
Winner — ALeRCE Hackathon Developed a project using ZTF light curves of AGN classified by the ALeRCE broker. Computed time lags between the g and r bands for AGN with different absolute magnitudes to explore wavelength-dependent variability timescales.

[03/12/2024] Universidad Técnica Federico Santa María
Distinción Académica "Federico Santa María y Carrera" Distinction awarded to the best graduate in the bachelor's degree in Astrophysics.

CONFERENCES AND SEMINARS

[10/03/2026 – 13/03/2026] Universidad de Concepción, Santiago, Chile
ALeRCE HackFest Workshop focused on the ALeRCE broker and its applications for the upcoming Vera C. Rubin Observatory.

[24/02/2026 – 25/02/2026] ESO Vitacura, Santiago, Chile
Writing and Communicating your Science Workshop Workshop led by Dr. Henri Boffin focusing on scientific communication: writing clear papers and proposals, and giving effective talks.

[26/01/2026 – 28/01/2026] Universidad Adolfo Ibañez, Viña del Mar, Chile
TITANs face-to-face Meeting 2025 Talk: Study of the reprocessing of accretion discs using Swift data and model-based timing analysis

[09/02/2026 – 11/02/2026] Ludwig Maximilians University of Munich, Garching, Germany (Virtual)
IMPRS Recruitment Workshop Selected to present Master's thesis research in a competitive workshop.

[30/10/2025 – 30/10/2025] Universidad Diego Portales, Santiago, Chile
Publishing Workshop (Elsevier) Mini-workshop led by Dr. Rebeca Aladro on scientific writing and publishing, covering authorship, peer review, publishing ethics, and the responsible use of AI in research.

[13/10/2025 – 17/10/2025] Universidad Austral, Puerto Montt, Chile
XX SOCHIAS Annual Meeting Poster: Reprocessing in AGN accretion discs - A study using SWIFT data and Transfer Function modelling

[28/08/2025 – 29/08/2025] Universidad de Chile, Santiago, Chile
III Simposio de Postgrado de Ingeniería, Ciencias e Innovación Poster: Constraining the X-ray to Optical TF in AGN using SWIFT Light Curves and Simulations

[30/06/2025 – 04/07/2025] Palazzo D'Avalos, Vasto, Italy
Vasto Accretion Meeting: AGN Poster: Constraining the X-ray to Optical TF in AGN using SWIFT Light Curves and Simulations

[11/12/2024 – 13/12/2024] Universidad de Concepción, Concepción, Chile
TITANs face-to-face Meeting 2024 Talk: Power-spectral density analysis of AGN with long-term light curves

[11/11/2024 – 15/11/2024] Universidad de Tarapacá, Arica, Chile

XIX SOCHIAS Annual Meeting Poster: Power-spectral density analysis of AGN with long-term light curves

[09/11/2023 – 11/11/2023] Universidad Austral, Valdivia, Chile
Cosmofisix Workshop Organized by the Coordinadora de Estudiantes de Ciencias Físicas y Astronómicas (CECFA)

LANGUAGE SKILLS

Mother tongue(s): Spanish

Other language(s): English

OUTREACH

[01/03/2024 – 01/06/2025]
Public Tours at the National Observatory on Cerro Calán

Guided school groups through the observatory, introducing them to its history and demonstrating the use of available telescopes, and leading guided solar or night observations, depending on the visit.

[01/03/2022 – 01/12/2023]
University Admissions Outreach Assistant (Physics Department)

Promoted the department's academic programmes at admission stands, engaged with prospective students, and

provided information about career opportunities.

TEACHING ASSISTANT EXPERIENCE

[01/07/2024 – 01/12/2025]
FCFM, Universidad de Chile

- Introduction to Astronomy (1 semester)
- Astronomy & Astrophysics (1 semester)

[01/07/2021 – 01/12/2023]
Universidad Técnica Federico Santa María

- General Physics II (2 semesters)
- General Physics III (3 semesters)
- General Physics IV (2 semesters)