

Camila Pulgarés Muñoz

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ABOUT ME

Astrophysics PhD student at Mullard Space Science Laboratory, University College London. My main interests are the study of protoplanetary disks and their dust properties, planet formation, and radio astronomy. I am also passionate about scientific communication, so I am a former member of the Antü-Küyen outreach group and a current member of the outreach team of Centro de Astrofísica y Tecnologías Afines (CATA).

EDUCATION

[10/2025 – Current]

PhD in Astrophysics

Mullard Space Science Laboratory, University College London, London, UK

[03/2023 – 09/2025]

Master of Science, in Astronomy

Universidad de Chile, Santiago, Chile

[03/2019 – 12/2022]

Bachelor of Science, in Astronomy

Universidad de Chile, Santiago, Chile

RESEARCH EXPERIENCE

[03/2023 – Current]

Graduate Student Researcher

Universidad de Chile

Master's Thesis: *Multi-wavelength analysis of dust properties of the AGE-PRO protoplanetary disks.*

Advisor: Prof. Laura M. Pérez. Collaborators: Dr. Anibal Sierra, Dr. Carolina Agurto, Prof. Paola Pinilla

Analysis of ALMA Band 3 and 5 continuum observations of the 30 protoplanetary disks from the AGE-PRO Large Program. Self-calibration of visibility data to enhance the signal-to-noise ratio. Obtain disk sizes and resolved spectral indices from visibility fitting with the code Frankenstein. Infer dust properties such as temperature, dust masses, and maximum grain size, with radiative transfer models. Compile all this information together to establish how the solid component of planet-forming disks evolves with time.

[08/2022 – 12/2022]

Undergraduate Student Researcher

Universidad de Chile

Studying the kinematic and physical conditions of the protoplanetary disk HD135344B.

Advisor: Prof. Simón Casassus

Reducing ALMA data of CO isotopologue lines to produce spectral image cubes. Using the ConeRot and Slab.Line packages to obtain channel and moment maps, as well as the rotation curves of the disks.

[01/01/2022 – 31/01/2022]

Undergraduate Student Researcher

Universidad de Chile

Continuum imaging of young protoplanetary disks in Lupus I.

Advisors: Dr. Carolina Agurto, Prof. Laura M. Pérez

Using Common Astronomy Software Applications to imaging young protoplanetary disks from Lupus I as a preliminary work to an observational proposal.

TEACHING EXPERIENCE

[03/2024 – 07/2024]

Teaching Assistant

Professional Development in Astronomy, Universidad de Chile

[01/01/2023 – 31/01/2023]

Lecturer

Summer School for high-school and primary school students, Universidad de Chile

Planning and teaching two astronomy and physics courses for children and teenagers:

- Formation, Life, and Death of Stars
- Introduction to General Relativity

[03/2022 – 07/2022]

Tutoring

Introduction to Classical Physics, Universidad de Chile

Teaching a first year student of the Faculty of Physical and Mathematical Sciences as part of the PACE Program, which consists of accompanying students from vulnerable sectors with high performance during their secondary education.

[01/01/2022 – 31/01/2022]

Lecturer

Summer School for high-school and primary school students, Universidad de Chile

Planning and teaching two astronomy and physics courses for children and teenagers:

- Formation, Life, and Death of Stars
- Introduction to General Relativity

[08/2021 – 12/2023]

Grading Assistant

Grader of exams for different Physics and Mathematics courses for first and second year students at the Faculty of Physical and Mathematical Sciences, Universidad de Chile.

- Single Variable Calculus
- Linear Algebra
- Introduction to Classical Physics
- Introduction to Modern Physics

HONOURS AND AWARDS

[2020 – 2022]

Outstanding Student at Faculty of Physical and Mathematical Sciences

Universidad de Chile

SKILLS

Python / Linux (Terminal Commands, Bash/Shell) / Common Astronomy Software Applications (CASA) / LaTeX / Git / SAO DS9 / IRAF

LANGUAGE SKILLS

Mother tongue(s): Spanish

Other language(s): English (intermediate)

CONFERENCES

[11/11/2024 – 15/11/2024]

XIX SOCHIAS Annual Meeting

Arica, Chile

Contributed talk: "*Dust properties and evolution in the AGE-PRO protoplanetary disks*"

[24/09/2024 – 27/09/2024]

Born in Fire: Eruptive Stars and Planet Formation

Santiago, Chile

Poster contribution: "*Evolution of solids and their properties in the AGE-PRO protoplanetary disks*"

[08/08/2024 – 09/08/2024]

II Simposio de Postgrado FCFM 2024

Santiago, Chile

Poster contribution: "*The evolution of solids and their properties in planet-forming disks*"

[16/01/2024 – 19/01/2024]

1st FARGO Workshop

Santiago, Chile

Hands-on applications.

[03/10/2023 – 04/10/2023]

ESO/ALMA Workshop - Discos de Santiago

Santiago, Chile

Poster contribution: "*Physical properties of protoplanetary disks*"

[31/07/2023 – 04/08/2023]

SPP 1992 Summer School 2023

Rauenberg, Germany

Hands-on Numerical Astrophysics School for Planet Formation Sciences

Writing and communicating your science

Santiago, Chile

ESO conference about academic writing and presentations.

OUTREACH

[01/07/2023 – Current]

Centro de Astrofísica y Tecnologías Afines (CATA)

Speaker at multiple public talks and workshops in several schools in Chile.

[01/03/2023 – Current]

National Astronomical Observatory (NAO)

Guide and speaker for public tours to the NAO, Chile.

[01/07/2021 – 01/03/2023]

Antü-Küyen (Astronomy Club at Universidad de Chile)

Speaker at multiple public talks, and create content for social networks. Led multiple projects within the group.