

Dr. Lorena Acuña - Curriculum Vitae

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Employment

Dec 2022-Present Postdoctoral researcher - APEX, Max Planck Institute for Astronomy, Germany
Oct 2019-Nov 2022 Doctorant contractuel (Graduate researcher) - Aix-Marseille University, France.

Education

2022 PhD in Astrophysics - Aix-Marseille University, France.
Thesis: *Modeling the populations of the low mass planets: transition between super-Earths and mini-Neptunes.*
Advisors: Prof. Magali Deleuil and Prof. Olivier Mousis.
2019 MSc in Astrophysics - Lund University, Sweden.
Thesis: *Detailed analysis of chemical composition of stars harbouring Earth-like planets.*
Supervisor: Dr. Fan Liu.
2017 BSc in Physics - Complutense University of Madrid, Spain.
Thesis: *The current state of the art in exoplanet research.*
Supervisor: Prof. Elisa de Castro Rubio.

Scholarships

June 2019 - Aug 2019 LEAPS Summer program - European Space Agency/Leiden Observatory.
Exploring the clearness/cloudiness of the atmosphere of gas giant exoplanets.
Supervisors: Dr. Nicolas Crouzet and Dr. Sandor Kruk
Jan 2017 - June 2017 Collaboration scholarship - Spanish Ministry of Education.
Determining the membership of FGKM stars to young kinematic groups and associations by using GAIA data.
Supervisor: Prof. David Montes Gutiérrez.

Conferences and seminars

Invited talks

1. PLATO ESP2024 conference "Planetary Systems - Formation to observed architectures", Catania (Italy). May 2024.
2. UPV-EHU seminar, Universidad del País Vasco, Bilbao (Spain). December 2023.
3. Severo Ochoa colloquium, Instituto de Astrofísica de Andalucía (IAA), Granada (Spain). November 2023.
4. Semaine de l'Astrophysique Française 2023. Strasbourg (France). June 2023.
5. DLR-EPA seminar, Berlin (Germany). February 2023.

Contributed talks

1. Exoplanets V, Leiden (The Netherlands). June 2024.
2. "Density matters", Ringberg Castle, Kreuth (Germany). February 2024.
3. PLATO German Community meeting, Berlin (Germany). April 2023.
4. "Celebrating JWST's first six months of exoplanet data". Ringberg Castle, Kreuth (Germany). Nov. 2022.
5. Europlanet Science Congress 2022 (EPSC2022). Granada (Spain), Sept. 2022.
6. Semaine de l'Astrophysique Française 2022. Besançon (France). June 2022.
7. PLATO mission conference 2021. Virtual, Oct. 2021.
8. Europlanet Science Congress 2021 (EPSC2021). Virtual, Sept. 2021.
9. Semaine de l'Astrophysique Française (SF2A). Virtual, June 2021.
10. PLATO mission conference 2020. Virtual, Dec. 2020.

Contributed posters

1. TESS Science conference II. Virtual, August 2021.
2. ARIEL: Science, Mission & Community 2020. ESTEC, Noordwijk, The Netherlands. January 2020.

Service

2024 Panel member and reviewer for funding proposals in NASA Exoplanets Research Program (XRP)

2024 Referee for Astronomy & Astrophysics

July 2024 Local organizing committee member for conference "Challenge Accepted: Linking Planet Formation with Present-Day Atmospheres".
Max Planck Institute for Astronomy, Heidelberg (Germany)

2023-present Member, PLATO interior and atmosphere working groups

Observational programs

JWST Cycle 2 Co-I: GO 4098 "Exploring the existence and diversity of volatile-rich water worlds"
PIs Prof. B. Benneke, Prof. T. Mikal-Evans

2019B-2022B Co-I: 48 hrs each semester. SOPHIE Spectrograph.
Observatoire de Haute Provence, France.

Teaching

April 2024-July 2025 Master student supervision: Yared Reinarz
Heidelberg university. Co-supervised with Prof. Laura Kreidberg

2024A semester Tutor for undergraduate course "Introduction to GPU Accelerated Computing"
Heidelberg university. 2 ECTS.

Outreach

September 2023 MPIA Open day
Led and organised station on exoplanet interiors. Engaged Q&A with public.

2021-2022 Engaged in Q&A and telescope show with Marseille's planetarium
and outreach association 'Andromede'.

2017-2019 Board member of ALVA - Lund University, Sweden.
Arranged workshop on astrophotography, participated in teaching sessions
about telescope usage and Q&A in stargazing nights.

Skills

■ Programming Languages

Fortran, Python, C, IRAF, IDL, LaTeX, MATLAB, R, Maple, SME.

■ Languages

Spanish: native.

English: level C1, Advanced Certificate in English (CAE).

French: level B1, intermediate.

German, Swedish: elementary.

■ Other

Spanish driving license (B), 2014.