Felipe Mauricio Alarcón Peña

Postdoctoral Fellow · ERC-Unveil · Università degli Studi di Milano

felipe.alarcon@unimi.it · falarconp.github.io
ORCID 0000-0002-2692-7862 · Chilean
Spanish (native) · English (C2) · Italian (B2)

Academic appointment

Oct 2024–present **Postdoctoral Fellow, ERC-Unveil**
Università degli Studi di Milano · Milano, Italy

Education

Sep 2018–Aug 2024 **Ph.D. in Astronomy and Astrophysics**
University of Michigan · Michigan, USA

Mar 2017–Jan 2019 **M.Sc. in Astronomy** · High Honors
Universidad de Chile · Santiago, Chile

Mar 2013–Dec 2016 **B.Sc. in Astronomy** · High Honors
Universidad de Chile · Santiago, Chile · Ranked first in graduating cohort

Awards, fellowships and grants

2023 NRAO Student Observing Support Program · approximately USD 20,000.

2019, 2022, 2023 Rackham Conference Travel Grant, University of Michigan.

2019 Rackham International Student Fellowship, University of Michigan · approximately USD 15,000.

2018–2022 Fulbright Scholar.

2018 National Master Fellowship, CONICYT (now ANID), Chile. Full M.Sc. tuition and stipend; ranked 25th of 1,939 applicants nationwide (top 1.3%).

2017–2018 Short research internships for graduate students at NASA JPL / CSUN, "Estadías Cortas de Investigación para alumnos de postgrado, Convocatoria 2017–2018."

2017–2018 Grant for Astronomy Outreach in Rural Communities in Chile, Vicerrectoría de Asuntos Académicos, Universidad de Chile.

2013–2016 Outstanding Student, School of Physical and Mathematical Sciences, Universidad de Chile (top 5% of cohort). Universidad de Chile Scholar (full B.Sc. tuition).

Mentoring and teaching

2026–present **M.Sc. Student Advisor** · Università degli Studi di Milano, Italy
Christian Manuzi.

Summer–winter 2022 & 2023 **Undergraduate Student Advisor** · University of Michigan, USA
Eshan Raul.

Winter & fall 2019 **Graduate Student Instructor** · University of Michigan, USA
Astronomy 101: The Solar System and the Search for a New Earth.

2015–2018 **Teaching Assistant** · Universidad de Chile, Santiago, Chile

Planetary Sciences	Mar–Jun 2018
Introduction to Cosmology	Mar–Jun 2017; Aug–Dec 2017
Electromagnetism; Introduction to Algebra	Mar–Jun 2016
Newtonian Systems	Aug–Dec 2015; Aug–Dec 2016
Introduction to the Newtonian Physics	Mar–Jun 2015

Observing proposals

Principal investigator

Facility / programme	Cycle / semester	Allocation / rank
JWST 11087	Cycle 5	3.1 h
ALMA 2024.1.01515	Cycle 11	3.8 h; rank C
ALMA 2023.1.00901.S	Cycle 10	∼16 h; rank B
Magellan / Clay	2024A	Half-night
ALMA 2022.1.01308.S	Cycle 9	7.6 h ;rank C

Co-investigator

Facility / programme	Cycle / semester	Allocation / rank
ALMA 2026.1.00236.S	Cycle 13	80.5 h ACA; rank A
ALMA 2026.1.00071.S	Cycle 13	7.1 h; rank B
ALMA 2026.1.00064.S	Cycle 13	10.4 h; rank C
ALMA 2025.1.00857.S	Cycle 12	15.9 h + 5.5 h; rank C
ALMA 2025.1.00645.S	Cycle 12	80.5 h ACA; rank C
ALMA 2025.1.00192.S	Cycle 12	11.9 h; rank C
JWST 7340	Cycle 4	9.2 h
ALMA 2024.1.00964	Cycle 11	9.1 h; rank B
ALMA 2024.1.00790	Cycle 11	3.3 h + 1.5 h; rank B
HST 18114	Cycle 33	12 orbits
JWST 5816	Cycle 3	11.7 h
JWST 5261	Cycle 3	8.4 h
ALMA 2023.1.00787.S	Cycle 10	12.1 h; rank C
ALMA 2022.1.01291.S	Cycle 9	20.7 h; rank C
ALMA 2022.1.00247.S	Cycle 9	8.8 h; rank A
ALMA 2021.1.00899.S	Cycle 8	8.8 h; rank B
HST 15971	Cycle 27	4 orbits
ALMA 2018.1.01309.S	Cycle 5	15.3 h; rank A
Magellan / Clay	2024A	1 night

Talks

Invited talks

Mar 2024 — Thermochemical evolution in 3D flows of protoplanetary disks
University of Wisconsin-Madison.

Nov 2023 — Thermochemical evolution in 3D flows of protoplanetary disks
CCA Star and Planet Formation Group, Flatiron Institute.

Jan 2023 — The evolution in protoplanetary disks: From thermal changes in outbursting sources to the chemistry of planet-forming regions
Astrochemistry Seminar, Leiden Observatory.

Jan 2023 — Viscous heating as the dominant heat source inside the snowline of V883 Ori
Planet Formation Journal Club, Universidad Adolfo Ibáñez.

Oct 2022 — Chemical Evolution in planet-forming regions of protoplanetary disks
Exoplanet Journal Club, University of Chicago.

Sep 2020 — Chemical evolution in protoplanetary disks with dust substructure
Max Planck Institute for Astronomy, Star-Planet Formation Group.

Contributed talks

Jul 2026 — A promising unique CPD candidate in the Eta Cha Association
Discs on the Exe · Exeter, UK.

Jul 2026 — A promising unique CPD candidate in the Eta Cha Association
UKI Accretions Disks Meeting 2026 · Cambridge, UK.

Oct 2025 — A promising CPD candidate in a member of the evolved Eta Cha stellar Association
XX SOCHIAS Annual Meeting.

Mar 2025 — Correlation in the emission of carbon-bearing species with dynamical state of protoplanetary disks
ESO: Towards new frontiers: The astrochemical journey from young stellar nurseries to exoplanets.

Mar 2025 — A possible companion candidate in one of the Eta Cha members
Gas Accretion in Planet Formation (GAP).

Jun 2024 — How can we strategize to detect more protoplanets?
ERC workshop on Disk & Planet Formation.

Oct 2022 — Atomic Carbon as a tracer of hidden flows and a kinematic anomaly in the HD 163296 disk
From Clouds to Planets II: The Astrochemical Link.

Jul 2021 — Molecules with ALMA at Planet-forming Scales (MAPS) VIII: Gap Chemistry in AS 209 — Gas Depletion or Chemical Processing?
Astrochemical Frontiers 2.

Dec 2020 — Chemical gap theory applied to AS 209: Revealing the Chemistry of Planet Formation
Five years after HL Tau: a new era in planet formation.

Jul 2020 — Chemical evolution in protoplanetary disks with dust substructure
Astrochemical Frontiers: Quarantine Edition.

Poster presentations

Dec 2023	Radiative Transfer Effects of accreting planets in planet-feeding gas 10 years of ALMA.
Jul 2023	Radiative Transfer Effects of accreting planets in planet-feeding gas 2023 Kavli-IAU Astrochemistry Symposium: Astrochemistry VIII — From the First Galaxies to the Formation of Habitable Worlds.
Jun 2023	Radiative Transfer Effects of accreting planets in planet-feeding gas Gordon Research Conference.
Jun 2019	Chemical evolution in protoplanetary disk with dust substructures Gordon Research Conference.
Mar 2018	Measuring Physical Conditions and Turbulent Velocity in Protoplanetary Disks Diversis mundi: The Solar System in an Exoplanetary context.

Professional service and outreach

Peer review	Scientific referee for *ApJ*, *ApJL*, *MNRAS*, *A&A* and *New Astronomy*.
2024	Member, Ph.D. Admissions Committee, Astronomy Department, University of Michigan.
2023	Member, Local Organizing Committee, Kavli-IAU Astrochemistry Symposium VIII.
University of Michigan	Colloquium speaker lunch organizer with graduate students; Star and Planet Formation Journal Club organizer.
2013–2018	Astronomy tutor for Chilean participants in international Astronomy Olympiads.

Research collaborations

MAPS · ALMA Large Program

PDRs4All · JWST Early Release Science program

DEC/O · ALMA Large Program and infrared JWST DEC/O

Technical skills

Programming	Python, Julia, Fortran, R, C++
Scientific software	RADMC-3D, FARGO3D, RAC2D, Meudon

Referees

Ph.D. adviser	**Prof. Edwin (Ted) Bergin** · University of Michigan, USA ebergin@umich.edu
Postdoctoral adviser	**Prof. Stefano Facchini** · Università degli Studi di Milano, Italy stefano.facchini@unimi.it
Scientific collaborator	**Prof. Richard Teague** · MIT, USA rteague@mit.edu