

# Cristina García Vergara

## Research Appointments

- Dec 2016 – present **Postdoctoral Research Associate**, Leiden Observatory, Leiden University, The Netherlands.  
*Advisors:* Dr. Jacqueline Hodge and Prof. Huub Röttgering.  
7 months on maternity leave and child care.
- Jun 2016 – Aug 2016 **Technical staff**, Pontificia Universidad Católica de Chile (PUC).  
*Advisor:* Prof. Felipe Barrientos.

## Education

- Aug 2010 – May 2016 **Ph.D. in Astrophysics (double degree)**, Pontificia Universidad Católica de Chile (PUC) and Max Planck Institute for Astronomy (MPIA), University of Heidelberg, Germany.  
I was accepted in the joint Ph.D. degree program between PUC and University of Heidelberg, which allowed me to conduct research at both universities and obtain a doctoral degree from both institutions. I was an IMPRS member at MPIA between Aug 2014 and Dec 2015. Graduated *magna cum laude*.  
*Thesis title:* "Quasars Environments at  $z \sim 4$ ". *Supervisor:* Prof. Felipe Barrientos and Prof. Joseph Hennawi.  
Two years were fully focused on the approval of courses (12 courses).
- Mar 2005 – Jul 2010 **B.Sc. Astronomy**, Pontificia Universidad Católica de Chile (PUC).  
Graduated with maximum distinction. *Thesis Title:* "Mass Determination of Galaxy Clusters of RCS2 (Red-Sequence Cluster Survey 2)". *Supervisor:* Prof. Felipe Barrientos.

## Grants and Scholarships

- 2019 Leids Kerkhoven-Bosscha Fonds (LKBF).  
2017 Postdoctoral Fellowship, CONICYT, Chile.  
2017 Leids Kerkhoven-Bosscha Fonds (LKBF).  
2013 Scholarship for double degree, VRI, PUC.  
2013 Santiago-Heidelberg Doctoral Exchange Fellowship, DAAD, Germany.  
2012 Scholarship for Doctoral Studies in Chile, CONICYT, Chile.  
2010 PhD Scholarship for Students in National Programs, MECESUP, Chile.

## Teaching Experience and Supervision

- Sep 2021 – Feb 2022 Teacher assistant for the course "Numerical recipes in Astrophysics" at Leiden University.
- Nov 2020 Invited Lecturer at AstroTwinCoLo 2020, for the course "The large-scale structure of the universe" (20 hours).
- Aug 2020 – Jul 2021 Supervision of Master Student: Jeger Broxterman, *Thesis title:* "Clustering of AGNs in the Elais-N1 field".
- Aug 2020 – Jul 2021 Supervision of Master Student: Jaro Molenkamp, *Thesis title:* "Clustering of SFGs in the Lockman field".

- Sep 2020 – Feb 2021 Teacher assistant for the course “Numerical recipes in Astrophysics” at Leiden University.
- Oct 2018 – Jul 2019 Supervision of Master Student: Jacob Bieker, *Thesis title*: “Clustering and physical properties of CO emitters in Wide ASPECS”.
- Mar 2015 – Jul 2015 Teacher assistant for the course “Extragalactic Astrophysics” at PUC.
- Aug 2010 – Dic 2010 Teacher assistant for the course “Experimental Astrophysics” at PUC.

## Professional services

Referee for the Astrophysical Journal (ApJ)

## Telescope Time Allocation

- 2021 (Cycle 8) **20.8 hours at ALMA**, "The impact of accreting black-holes on the star-forming ISM", P.I: Calistro-Rivera, G., Proposal: 2021.1.00421.S.
- 2019 (Cycle 7) **20.5 hours at ALMA**, "Small-Scale Clustering of CO emitters around Quasars at  $z \sim 4$ ", P.I: García-Vergara, C., Proposal: 2019.1.00411.S.
- 2017 (Period 99) **48 hours at APEX/LABOCA**, "A search for dusty starbursts in overdense regions around luminous quasars at  $z = 3.8$ ", P.I: Aravena, M., Ref. C099.F0011.
- 2015 (Period 95) **7.5 hours at GEMINI-SOUTH/GMOS**, "The First QSO-LAE Cross Correlation Function Measurement at  $z \sim 4$ ", P.I: García-Vergara, C., Program ID: GS-2015A-Q-59.
- 2014 (Period 94) **30 hours at VLT/FORS2**, "Are Luminous Quasars at  $z \sim 4$  Tracers of the Most Massive Dark Matter Halos?", P.I: Barrientos, F., Run ID: 094.A-0900(A).
- 2012B **1 night at Baade/IMACS**, "Microlensing, galactic extinction and flux ratios in quadruply imaged lensed quasars", P.I: Anguita, T.
- 2010B **1 night at Baade/IMACS**, "Multiplexed Spectroscopy of Strong Lensing Cluster Cores with GISMO", P.I: Barrientos, F.

## Observing Experience

- Feb 2013 **1 night at Walter Baade Telescope** with *IMACS*, Las Campanas Observatory, La Serena, Chile. Project: “An IMACS Survey of the Virgo Cluster Core: Tidal Stripping, Dark Matter, the Baryonic Orbital Anisotropy” (P.I: Prof. A. Jordán).
- Jan 2013 **3 nights at SOAR Telescope** with *GOODMAN* Spectrograph, Cerro Pachón, La Serena, Chile. Project: “Cosmology with Close Quasar Pairs” (P.I: Prof. F. Barrientos).
- Sep 2012 **1 night at Walter Baade Telescope** with *IMACS*, Las Campanas Observatory, La Serena, Chile. Project: “Microlensing, galactic extinction and flux ratios in quadruply imaged lensed quasars” (P.I: Prof. T. Anguita).
- Sep 2010 **1 night at Walter Baade Telescope** with *IMACS*, Las Campanas Observatory, La Serena, Chile. Project: “Multiplexed Spectroscopy of Strong Lensing Cluster Cores with GISMO” (P.I: Prof. F. Barrientos).
- Oct 2009 **2 nights at Walter Baade Telescope** with *IMACS*, Las Campanas Observatory, La Serena, Chile. Project: “Spectroscopic Identification of the Largest Sample of Strong Gravitational Lensing Giant Arc System” (P.I: Prof. F. Barrientos).

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## International Conferences and Seminars

- Jan 2022 “Quasars and Galaxies through Cosmic Time”, Nucleo de Astronomia UDP and Max-Planck institute for astronomy – Virtual Meeting.  
**Invited Talk:** “The obscured and unobscured environment of high- $z$  quasars”.
- Jun 2021 “European Astronomical Society Annual Meeting (EAS) – Massive Galaxies: The Build-up of Monsters Through Cosmic History”, Leiden, The Netherlands – Virtual Meeting.  
**Invited Talk:** “Clustering of galaxies at different redshifts”.
- Jun 2021 “Galaxy Cluster Formation II: Mergers, Protoclusters, and Star Formation in Overdense Environments”, ESO, Garching, Germany – Virtual Meeting.  
**Contributed Talk:** “Protoclusters traced by high-redshift quasars”.
- Aug 2020 “Protoclusters: Galaxy evolution in confinement”, Instituto Astrofísica de Canarias, La Laguna, Spain and Observatório Nacional, Rio de Janeiro, Brazil – Virtual Meeting.  
**Poster:** “Characterizing the obscured and unobscured environments of quasars at  $z \sim 4$ ”.
- Jun 2020 “European Astronomical Society Annual Meeting (EAS) – Eight years of ALMA ground-breaking results: A joint venture between the ALMA user community and the ALMA Regional Centres”, Leiden, The Netherlands – Virtual Meeting.  
**Contributed Talk:** “The nature and fate of submillimeter galaxies”.
- May 2020 “LOFAR Deep Fields symposium”, The Netherlands – Virtual Meeting.  
**Contributed Talk:** “Clustering of sources in the LoTSS deep fields”.
- Jul 2019 “Supermassive Black Holes: Environment and Evolution”, IAASARS, Corfu, Greece.  
**Contributed Talk:** “Clustering of galaxies around  $z \sim 4$  quasars”.
- Jun 2019 “IAU Symposium 352: Uncovering early galaxy evolution in the ALMA and JWST era”, Viana do Castelo, Portugal.  
**Poster:** “Clustering of galaxies around quasars at  $z \sim 4$ ”.
- Aug 2017 “SMG20 - Twenty years of Submillimetre Galaxies: Star-forming galaxies at high redshifts.”, Durham University, United Kingdom.  
**Poster:** “An unbiased measurement of the SMG clustering”.
- July 2017 “Early stages of Galaxy Cluster Formation: Mergers, Protoclusters, and Star Formation in Overdense Environments”, ESO, Garching, Germany.  
**Contributed Talk:** “Protoclusters traced by high-redshift massive galaxies”.
- April 2016 “AGN group seminars”, Universidad Diego Portales, Santiago, Chile.  
**Talk:** “Luminous Quasars at  $z \sim 4$ ”.
- Sept 2015 “Demographics and Environment of AGN from Multi-Wavelength Surveys”, IAASARS, Crete Island, Chania, Greece.  
**Poster:** “Luminous Quasars at  $z \sim 4$ : Tracers of massive Dark Matter Halos”.
- Mar 2015 “Unveiling the AGN - Galaxy Evolution Connection”, Puerto Varas, Chile.  
**Poster:** “Are Luminous Quasars at  $z \sim 4$  Tracers of the Most Massive Dark Matter Halos?”.

- Aug 2014 “Galaxy Coffee seminars”, MPIA, Heidelberg , Germany.  
**Talk:** “Are Luminous Quasars at  $z \sim 4$  Tracers of the Most Massive Dark Matter Halos?”.
- Jul 2014 “Clustering Measurements of Active Galactic Nuclei”, ESO, Garching, Germany.  
**Contributed Talk:** “Are Luminous Quasars at  $z \sim 4$  Tracers of the Most Massive Dark Matter Halos?”.
- Jun 2014 “MPA-MPIA Workshop”, MPIA, Heidelberg, Germany.  
**Talk:** “Are Luminous Quasars at  $z \sim 4$  Tracers of the Most Massive Dark Matter Halos?”.
- Aug 2011 “Exploring the Nature of the Evolving Universe”, Pontifícia Universidade Católica do Rio de Janeiro, Brazil.  
**Poster:** “Mass Determination of Galaxy Clusters of RCS”.
- Jun 2011 “Multiwavelength Views of the ISM in High-redshift Galaxies”, ESO, Santiago, Chile.
- Dic 2009 “Rutgers-PUC Astrophysics Workshop”, PUC, Santiago, Chile.

## Attended Training Courses

- Nov 2018 “Basic Management and Leadership skills”, organized by the HRM Learning and Development, Leiden University.
- Nov 2018 “Basic project management: a primer for postdocs”, organized by the HRM Learning and Development, Leiden University.
- Sept 2018 “Giving and receiving feedback (in an intercultural and inclusive context)”, organized by the HRM Learning and Development, Leiden University.
- Oct 2015 “Effective communication for PhD students”, organized by the college of doctoral programs at PUC.

## Languages

- Spanish Native.
- English Fluent.
- Dutch Intermediate (B1.1 level).