

# Nicolás Garavito-Camargo – Curriculum Vitae

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Steward Observatory, University of Arizona, 933 North Cherry Av. Tucson, AZ.

E-mail: [jngaravitoc@email.arizona.edu](mailto:jngaravitoc@email.arizona.edu)

Website: [jngaravitoc.github.io](https://jngaravitoc.github.io)

Github: [github.com/jngaravitoc](https://github.com/jngaravitoc)

## Research Interests

Galaxy Dynamics, Local Group Dynamics, Dwarf Galaxies, Galactic Archaeology, Astrophysical probes of Dark Matter, Galaxy Formation and Evolution.

## Education

**Ph.D.**, Astronomy and Astrophysics, University of Arizona, *Expected May 2021*.

*Advisor: Dr. Gurtina Besla.*

**M.Sc.**, Physics, Universidad de Los Andes, Bogotá, Colombia, 2015.

*Advisor: Dr. Jaime E. Forero-Romero.*

**B.Sc.**, Physics, Universidad Nacional de Colombia, Bogotá, Colombia, 2013.

*Advisor: Dr. Rigoberto A. Casas Miranda.*

## Fellowships, Grants, and Awards

University of Arizona College of Science award for Excellence in Service for graduate students, 2020.

*(Awarded to one graduate student across the college of science per year.)*

University of Arizona theory travel grant, 2018.

University of Arizona theory travel grant, 2016.

IAU travel grant, 2016.

McCarthy-Stoeger scholarship, 2015-2017.

SpaceArt scholarship, Bogotá Planetarium: For developing art and science material for children, 2014.

Best research project at the Gaia Summer school, UNAM, Mexico City, 2013.

## Publications list

[ORCID](#), [ADS](#), [arXiv](#).

Refereed: 9 - first author: 3.

10. *Quantifying the impact of the Large Magellanic Cloud on the structure of the Milky Ways dark matter halo using Basis Function Expansions*  
**Garavito-Camargo, Nicolás**; Besla, Gurtina; Laporte, Chervin; Price-Whelan, Adrian M.; et al. ApJ submitted (2020).
9. *Quantifying the Stellar Halo's Response to the LMC's Infall with Spherical Harmonics.*  
Cunningham, Emily C; **Garavito-Camargo, Nicolas**, Deason, Alis J; Johnston, Kathryn V. et al. ApJ, 898, 1,(2020).
8. *The orbital histories of Magellanic Satellites Using Gaia DR2 proper motions.*  
Patel, Ekta; Kallivayalil, Nitya; **Garavito-Camargo, Nicolas** et al. ApJ 893, 121, (2020).
7. *The highest-speed local dark matter particles come from the Large Magellanic Cloud.*  
Besla, Gurtina; Peter, Annika; **Garavito-Camargo, Nicolas**. JCAP, 11, 13, (2019).

6. *Hunting for the DM Wake induced by the LMC.*  
**Garavito-Camargo, Nicolas**; Besla, Gurtina; Laporte, Chervin F.P; Johnston, Kathryn V; Gómez, Facundo A; Watkins, Laura. *ApJ Accepted*, (2019).
5. *The influence of Sagittarius and the Large Magellanic Cloud on the stellar disc of the Milky Way Galaxy.*  
Laporte, Chervin F. P; Johnston, Kathryn V; Gómez, Facundo A; **Garavito-Camargo, Nicolas**; Besla, Gurtina. *MNRAS*, 481, 286L, (2018).
4. *The Extremely Luminous Quasar Survey in the Sloan Digital Sky Survey Footprint. II. The North Galactic Cap Sample.*  
Schindler, Jan-Torge; Fan, Xiaohui; McGreer, Ian D; Yang, Jinyi; Wang, Feige; Green, Richard; **Garavito-Camargo, Nicolas** et al., *ApJ*, 863, 144S, (2018).
3. *Modelling the gas kinematics of an atypical Ly $\alpha$  emitting compact dwarf galaxy.*  
Forero-Romero, Jaime E., Gronke, Max., Remolina-Gutierrez, Maria Camila, **Garavito-Camargo, Nicolas**, Dijkstra M. *MNRAS*, 474, 12F, (2018).
2. *Response of the Milky Way's disc to the Large Magellanic Cloud in a first infall scenario.*  
Laporte, C.; Gomez, F; Besla, Gurtina; Johnston, Kathryn V; & **Garavito-Camargo, Nicolas**. *MNRAS*, 473, 1218L, (2018).
1. *The impact of gas bulk rotation on the morphology of the Lyman-alpha line.*  
**Garavito-Camargo, J.N**; Forero-Romero J.E; Dijkstra M. *ApJ*, 795, 120, (2014).

## First author publications in preparation

1. *The Milky Ways plane of satellites as evidence of the motion of the MWs disk induced by the LMC*  
Garavito-Camargo, Nicolás; Patel, Ekta; Besla, Gurtina; Price-Whelan, Adrian; Laporte, Chervin; Gómez, Facundo A; (2020).

## White papers

2. *Mass Spectroscopy of the Milky Way*  
Dey, Arjun. et al. (incl. **Garavito-Camargo**). [Astro2020: Decadal Survey on Astronomy and Astrophysics, Vol. 51, Issue 3, id. 489 \(2019\)](#).
1. *The Multidimensional Milky Way.*  
Sanderson, Robyn E .et al. (incl. **Garavito-Camargo**) 2019. [Astro2020: Decadal Survey on Astronomy and Astrophysics, 2019, Vol. 51, Issue 3, id. 347 \(2019\)](#).

## Talks

17 Total, 9 International.

## Conferences

- The Local Group: Assembly and Evolution, virtual conference, August 2020\*.
- European Astronomical Society meeting, virtual meeting, June 2020\*.
- Durham University, UK, [Small Galaxies Cosmic Questions](#), August, 2019\*.
- MPA, Heidelberg, [Stellar halos across the cosmos](#), July 2018\*.
- LARIM, Cartagena, Colombia, October 2016\*.
- EWASS, Geneva, Switzerland, July 2014\*.

## Seminars

- Harvard Center for Astrophysics, GCSP seminar, October 2020.
- Carnegie Observatories, seminar, October 2020 †.
- University of California Berkeley, lunch talk, September 2020.
- The Royal Observatory of Edinburgh, UK, Coffee Talk, August 2019 †.
- W.M. Keck Observatory, Journal Club, June 2019.
- Magellanic Cloud Fest III, University of Arizona, May, 2019.
- JILA Seminar, JILA Institute, University of Colorado, December 2017.
- STScI Galaxies Journal Club. December 2016.
- Magellanic Cloud Fest II, University of Arizona, March 2016.
- UNAM, Mexico City, Mexico, Nov 2013.
- Centro de Investigaciones De Astronomía CIDA, Merida, Venezuela, July 2013.

\* *Contributed talk in conferences*      † *Invited*

## Posters

- European Astronomical Society meeting, virtual meeting, June 2020.
- Rediscovering our Galaxy, IAU symposium 334, Potsdam, Germany. July 2017.

## Professional Experience

- Referee for the *Monthly Notices of the Royal Astronomical Society* 2019-present.
- Co-organizer, [Diversity Journal Club](#), Steward Observatory, 2018-present.
- Writer for [Astrobits](#), 2018-present.
- Proposal reviewer for [Colombian Science Clubs](#), 2018.
- Local Organizing Committee of the [Andean Cosmology School](#), Universidad de Los Andes, 2015.
- Organizer of the student astronomy seminar at the Planetarium of Bogotá, 2014-2015.

## Outreach

- Co-creator of the [mentorship program](#) for astronomy students in Colombia. 2020-present. (The mentorship program pairs up students with professional astronomers to provide guidance thorough the application process to graduate programs)
- Creator, [Astrocharlas](#), Steward Observatory, 2018-present. (Spanish outreach series talks in astronomy)
- Classroom astronomer, NOAO Project [ASTRO](#), 2018-2019.
- Discussion leader, NOAO [Teen Astronomy Cafe](#), 2018.
- Mentor, Tucson Initiative for Minority Engagement in Science and Technology Program [TIMESTEP](#), 2016-2018.
- Planetarium SpaceArt mentor for Children, Bogotá, Colombia, 2013-2014.

## Teaching Experience

- TA, Astronomy Tutoring for Majors & Minors Program. University of Arizona, Spring 2019.
- Computational Physics, Teaching assistant, PHYS305. University of Arizona. Spring 2018.
- Computational Tools: Universidad de los Andes, 1<sup>st</sup> Semester-2015.
- Computational Methods Laboratory: Universidad de los Andes, 1<sup>st</sup> Semester-2015.
- Computational Tools: Universidad de los Andes, 2<sup>nd</sup> Semester-2014.
- Computational Methods Laboratory: Universidad de los Andes, 2<sup>nd</sup> Semester-2014.
- TA, Computational Methods: Universidad de los Andes, 2<sup>nd</sup> Semester-2014.
- Computational Tools: Universidad de los Andes, 1<sup>st</sup> Semester-2014.
- Computational Methods Laboratory: Universidad de los Andes, 1<sup>st</sup> Semester-2014.
- TA, Computational Methods: Universidad de los Andes, 1<sup>st</sup> Semester-2014.
- Physics I Laboratory: Universidad de los Andes, 2<sup>nd</sup> Semester-2013.

## Observing Experience

- VATT telescope. Mt Graham, Arizona - 4 nights, 2016.
- CIDA, Merida, Venezuela - 2 nights, 2013.