

Nicolás Garavito-Camargo – Curriculum Vitae

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

E-mail: jngaravitoc@email.arizona.edu

Website: jngaravitoc.github.io

Github: 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 and Awards

University of Arizona, Theoretical Astrophysics Program, Graduate Student Research Prize 2021.

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, 2016, 2018.

Talks

26 Total: 17 in North America, 5 in Europe, 4 in Latin America.

Conferences

- [Division on Dynamics Astronomy](#), Virtual meeting, May 2021.
- [Streams 21](#), Virtual Conference, February 2021.
- [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.
- MPIA, Heidelberg, [Stellar halos across the cosmos](#), July 2018.
- LARIM, Cartagena, Colombia, October 2016.
- EWASS, Geneve, Switzerland, July 2014.

Seminars

- [ComSciCon](#), June 2021, †.
- Steward Observatory, Galaxy lunch talk, March, 2021.
- Universidad de los Andes, Astronomy Seminar, February, 2021.
- UC Irvine, Astronomy Seminar, January, 2021. †
- Steward Observatory, Early Career Scientist talk, December, 2020. †
- CCAPP, Seminar, December, 2020. †
- Princeton, Journal Club, November 2020. †
- KIPAC, Stanford, Tea-Talk, October 2020.
- 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.

†*Invited*

Posters

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

Grants

- LSSTC Grant Award #2021-51, 2001. PI: Andres A. Plazas Malagón
- University of Arizona theory travel grant, 2016, 2018.
- IAU travel grant.2016.

Telescope Time Awarded

- Blanco Telescope, “ *A VISTA-DECam Experiment in Near-Field Cosmology: Search for the Magellanic Dark Matter Wake*” cycle 2020B. PI: Julio Chaname, 3 nights

Professional Experience

Computational:

Esperience with C, C++, Python, OpenMP, HPC systems.

Service:

- Co-creator of the 10-week [internship program](#) for astronomy students in Colombia. 2021.
- 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 gradute programs)
- Referee for the *Monthly Notices of the Royal Astronomical Society* 2019-present.
- Co-organizer, [Diversity Journal Club](#), Steward Observatory, 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 gradute programs)
- Creator, [Astrocharlas](#), Steward Observatory, 2018-present. (Spanish outreach series talks in astronomy)
- Writer for [Astrobitos](#), 2018-present.
- 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, 1st 2014-2015.
- Computational Methods Laboratory: Universidad de los Andes, 1st 2014-2015.
- TA, Computational Methods: Universidad de los Andes, 2nd 2014.
- Physics I Laboratory: Universidad de los Andes, 2nd Semester-2013.

Observing Experience

- DECam, Blanco-4m telescope, CTIO, Chile. 3 nights, 2020.
- VATT telescope. Mt Graham, Arizona - 4 nights, 2016.
- CIDA, Merida, Venezuela - 2 nights, 2013.

Publications list

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

refereed: 11 – submitted: 1 – first author: 4 – *h*-index: 8 – citations : 292 (as of June 18th/2021)

12. *The Clustering of Orbital Poles Induced by the LMC: Hints for the Origin of Planes of Satellites*
Garavito-Camargo, Nicolás; Patel, Ekta; Besla, Gurtina; Price-Whelan, Adrian; Laporte, Chervin; Gómez, Facundo A; Kathryn V. Johnston; ApJ submitted (2021).
11. *Detection of the All-Sky Response of the Galactic Halo to the Magellanic Clouds*
Conroy, Charlie; Naidu, Rohan P; **Garavito-Camargo, Nicolás**; Besla, Gurtina; et al. Nature (2021).
10. *Quantifying the impact of the Large Magellanic Cloud on the structure of the Milky Way's dark matter halo using Basis Function Expansions*
Garavito-Camargo, Nicolás; Besla, Gurtina; Laporte, Chervin; Price-Whelan, Adrian M.; et al. ApJ accepted (2021).
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 α emitting compact dwarf galaxy.*
Forero-Romero, Jaime E., Gronke, Max., Remolina-Gutiérrez, 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).

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 \(2019\)](#).