

**JORGE MORENO, Ph.D**  
**CURRICULUM VITAE**

Physics & Astronomy, Pomona College  
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[Items completed at Pomona College indicated in blue](#)

- Summary** Extramural funding: ~ \$979,000  
27 publications: first author: 7 | second/third author: 4 | single author: 1  
155 talks: colloquia: 99 | invited conference: 14 | contributed conference: 24 | public: 18  
24 supervised research assistants: undergraduate: 21 | graduate: 3 | postdoctoral: 1
- Education** University of Pennsylvania – PhD in Physics & Astronomy  
Cinvestav-IPN (Mexico) – BSc, MSc
- Employment** Pomona College – Assistant Professor of Astronomy (2017 – present)  
Visiting Scholar, Harvard-Smithsonian Center for Astrophysics (2015 – present)
- Assistant Professor, Cal Poly Pomona (2014 – 2017)  
CITA Prize Fellow, University of Victoria (2012 – 2014)  
Postdoctoral Research Fellow, SISSA/ISAS-Trieste (2010 – 2012)  
Visiting Assistant Professor, Bryn Mawr College (Sp 2010)  
Visiting Assistant Professor, Haverford College (2008 – 2010)
- Extramural Funding** [\\$10,000 – Downing Fellowship – University of Cambridge](#)  
[AU\\$ 350,000 – Australian Research Council – \*Timing AGN Feedback\*](#)  
[\\$3000 – Center for Teaching and Learning – \*Decolonizing the Astro 121-125 series\*](#)  
[\\$3000 – Center for Teaching and Learning – \*Decolonizing the Astro 1-2 series\*](#)  
[\\$125,000 – Pomona College – \*Start-up Package\*](#)  
[\\$278,022 – National Science Foundation – \*Galaxy Encounters on FIRE\*](#)  
[\\$50,000 – Harvard FAS/GSE – \*Harvard Aztlán Institute\*](#)  
[\\$10,000 – Harvard Institute for Theory and Computation – \*Visiting Scholars Program\*](#)  
[\\$40,000 – Cal Poly Pomona – \*Start-up Package\*](#)  
[CA\\$ 100,000 – Canadian Institute for Theoretical Astrophysics – \*National Prize Fellowship\*](#)  
[\\$30,000 – CONACyT – \*Postdoctoral Fellowship\*](#)  
[€ 12,000 – Young Research Grant – \*Interacting Galaxies & Binary Quasars\*](#)  
[\\$4000 – Sherman Fairchild Grant – \*Halo Mergers in Excursion Set Theory\*](#)  
[\\$85,000 – CONACyT – \*PhD Student Fellowship\*](#)
- Awards/Honors** [Claremont Colleges Diversity Teaching Award \(2020\)](#)  
[Wig Distinguished Professor Award \(2020\)](#)  
[Squire Prize Lectureship \(2020\)](#)  
[Joseph Morgan Physics Prize Lectureship \(2019\)](#)  
[SACNAS Outstanding Research and Professional Mentor Award \(2019\)](#)  
[Keynote Speaker – Claremont Unified School District ESL Reclassification Ceremony \(2019\)](#)  
[Keynote Speaker – Pasadena City College, MESA Graduation Ceremony \(2017\)](#)  
[Best Conference Contribution – Mapping the Pathways of Galaxy Transformation \(2016\)](#)  
[Keynote Speaker – Pasadena City College, MESA Graduation Ceremony \(2015\)](#)  
[CITA Prize Fellowship, University of Victoria \(2012 – 2014\)](#)  
[Best Cosmology Contribution – Essential Cosmology for the Next Generation \(2012\)](#)  
[Conacyt Graduate Fellowship, University of Pennsylvania \(2003 – 2008\)](#)

Penn Teaching Assistant Training Award (2004)

Penn Prize for Excellence in Teaching by Graduate Students (2004)

## Publications

27. Qi J., Torrey P., **Moreno J.**, Hemler Z. S., Hernquist L., TNG Collaboration, *Resolved main sequence relations for IllustrisTNG Galaxies at  $z=0$* , MNRAS, submitted
26. Mercado F. J., Bullock J. S., Boylan-Kolchin M., **Moreno J.**, Wetzel A., El-Badry K., Graus A. S., Fitts A., Hopkins P. F., *Totally metal: a relationship between stellar metallicity gradients and galaxy age in simulated and observed dwarf galaxies*, MNRAS, submitted.
25. Flores Velázquez J. A., Gurvich A. B., Faucher-Giguère C. A., Bullock J. S., Starkenburg T. K., **Moreno J.**, Sparre M., Hayward C. C., *The timescales probed by SFR indicators applied to the FIRE simulations*, MNRAS, submitted.
24. Shah E. A., et al., *Investigating the effect of galaxy interactions on AGN enhancement at  $0.5 < z < 3.0$* , ApJ, in press.
23. **Moreno J.**, et al. *Spatially resolved star formation and fuelling in interacting galaxies*, MNRAS, in press (2020)
22. Bluck et al., *How do central and satellite galaxies quench? - Insights from spatially resolved spectroscopy in the MaNGA survey*, MNRAS, in press (2020).
21. Patton et al., *Interacting galaxies in the IllustrisTNG simulations - I: Enhanced star formation*, MNRAS, 494, 4969 (2020)
20. Blumenthal K., **Moreno J.** et al. *Galaxy interactions in IllustrisTNG-100, I: The power and limitations of visual identification*, MNRAS, 492, 2075 (2020)
19. Shankar F. et al. *Breaking degeneracies: Accretion histories, scaling relations, clustering, and implications for the mean radiative efficiency of SMBHs*, Nature, 4, 282 (2020)
18. Bottrell et al., *Interacting galaxies on FIRE-2: Deep learning predictions of galaxy merger stage and the importance of observational realism*, MNRAS, 590, 5390 (2019)
17. **Moreno J.**, et al. *Interacting galaxies on FIRE-2: The connection between enhanced star formation and interstellar gas content*, MNRAS, 485, 1320 (2019)
16. Bluck A. F. L., et al., *What shapes a galaxy? Unraveling the role of mass, environment and star formation in forming galactic structure with the SDSS, Illustris and L-Galaxies*, MNRAS, 485, 666 (2019)
15. Vallejo J. & **Moreno J.**, *Intergalactic Pachamama: Kichwa Cosmology vs. Western Astrophysics*, Smithsonian Folklife. Language & Traditional Knowledge (2018)
14. Bluck A. F. L., et al., *The impact of galactic properties and environment on the quenching of central and satellite galaxies: a comparison between SDSS, Illustris and L-Galaxies*, MNRAS 462, 2559 (2016)
13. Patton D. R., et al., *Galaxy pairs in the Sloan Digital Sky Survey - XI. Measuring the influence of the closest companion out to wide separations*, MNRAS 461, 2589 (2016)
12. Shankar F., et al., *Avoiding progenitor bias: the structural and mass evolution of brightest group and cluster galaxies in hierarchical models since  $z \leq 1$* , ApJ 802, 73 (2015)
11. **Moreno J.**, et al. *Mapping galaxy encounters in numerical simulations: The spatial extent of induced star formation.*, MNRAS 448, 1107 (2015)
10. Shankar F., et al., *Environmental Dependence of Bulge-Dominated Galaxy Sizes in Hierarchical Models of Galaxy Formation*, MNRAS 439, 3189 (2014)
9. Bluck A. F. L., et al., *Bulge Mass is King: The Dominant Role of the Bulge in the Fraction of Passive Galaxies in the Sloan Digital Sky Survey*, MNRAS, 411, 599 (2014)

8. **Moreno J.**, et al., *The Dynamics of Galaxy Pairs in a Cosmological Setting*, MNRAS, 436, 1765 (2013)
7. Hayward C. C., et al., *Spatially Unassociated Galaxies Contribute Significantly to the Blended Submillimetre Galaxy Population*, MNRAS, 434, 2572 (2013)
6. **Moreno J.**, *The Cosmic Evolution of Halo Pairs I*, MNRAS, 419, 411 (2012)
5. **Moreno J.**, Giocoli C. & Sheth R. K., *Dark Matter Halo Creation in Moving Barrier Models*, MNRAS, 397, 299 (2009)
4. Giocoli C., et al., *A Merger Tree with Micro-solar Resolution:  $\gamma$ -Ray Emission from the Sub-halo Population*, MNRAS, 395, 1620 (2009)
3. **Moreno J.**, Giocoli C. & Sheth R. K., *Merger History Trees of Dark Matter Haloes in Moving Barrier Models*, MNRAS, 391, 1729 (2008)
2. Giocoli C., **Moreno J.**, Sheth R. K. & Tormen G., *An Improved Model for the Formation Times of Dark Matter Haloes*, MNRAS, 376, 977 (2007)
1. García-Compeán H. H. & **Moreno J.**, *Remarks on Non-Commutative Solitons*, Rev. Mex. Fis., 49, 28 (2003)

**Research  
Supervision**

Dr. Rebecca McElroy – University of Sydney, Sp20 – present (Postdoctoral co-advisor)  
 Jia Qi – University of Florida, Su20 – present (PhD thesis co-advisor)  
 Madalyn Weston – University of Missouri, F19 – present (PhD thesis)  
 Dr. Kelly Blumenthal – IfA Hawaii & Harvard, Su18 – Su19 (PhD thesis co-advisor)  
 Sunny Rhodes – Pomona College, Sp19 – Sp20  
 Micaela Berglund – Pomona College, Sp19 – Sp20  
 Camille Molas – Pomona College, Su18  
 Fernando Barceló – Pomona College, Su18 – present  
 Jordan Green – Pomona College, Su18  
 Luis Martínez – Harvey Mudd College & Harvard, Su18 – present (Chambliss)  
 Greta Zhong – Pomona College, F17  
 Wanying (Sal) Fu – Pomona College, F17-Sp18 (Now NSF GRF at UC Berkeley)  
 Angela Twum – Pomona College & Harvard, Su17 – present  
 Michael Bueno – Haverford College & Harvard, Su17 – Su18 (Now at Northwestern)  
 Monica Gallegos García – UCSC & Harvard, Su17 – Su18 (Now Ford at Northwestern)  
 Tenley Hutchinson-Smith – Spelman College & Harvard, Su17 (Now at UC Santa Cruz)  
 Noryn Rosario – Cal Poly, F16  
 José Flores Velázquez – Cal Poly & Harvard, Sp16 – Sp17 (Now NSF GRF at UC Irvine)  
 Adrianna Perez – CSU Dominguez Hills & Harvard, Sp16 – Su18 (Now at Harvard)  
 Areli Rojas – Cal Poly & Harvard, W15 – Sp17  
 Luis Nuñez – Cal Poly & Harvard SAO-REU, W15 – Sp18 (Now at Penn State)  
 Francisco Mercado – Cal Poly, Harvard, 2015-2017 (Now at UC Irvine)  
 Brianna Thierjung – Cal Poly & Harvard, Su 2015  
 Gunjan Bansal – University of Victoria, Su13 (Now at Leiden Observatory)  
 Dr. Oliver Elbert – Haverford College, Su09 (Recent PhD, UC Irvine)

**Prize  
Lectureships**

Squire Lectureship – Grinnell College (1/24/20)  
 Joseph Morgan Lectureship – Texas Christian University (10/22/19)

**Invited Colloquia  
(United States)**

Virginia/NRAO (TBD), UC Santa Cruz (TBD), U Florida (TBD), Stanford (TBD), Wisconsin (01/28/21), UCLA (12/02/20), Berkeley (10/29/20), Michigan (10/08/20), IAS (10/05/20), Wesleyan (09/30/20), Grinnell (1/23/20), TCU (10/21/19), Arizona/NOAO (10/17/19), UC Merced (9/6/19), IfA Hawaii (8/7/19), Rutgers (7/15/19), CCA (7/11/19), Rio Hondo College (3/1/18), CU Boulder (10/2/17), Denver (9/29/17), Colorado College (9/28/17), Pomona (4/1/17), CSU Northridge (11/23/16), OSU (11/17/16), Alabama (11/2/16), Pomona (9/11/16),

Penn (9/9/16), Princeton (9/8/16), Carnegie-Pasadena (4/17/16), UMass-Amherst (3/24/16), Yale (3/22/16), Rochester (3/21/16), Harvard (12/1/15), CSU Los Angeles (11/19/15), Caltech (11/9/15), CSU Dominguez Hills (11/4/15), CSU San Marcos (10/15/15), Harvard (7/31/15), UC Irvine (4/7/15), Harvard (2/25/15), Tufts (2/24/15), Pomona (12/1/14), UC Riverside (10/15/14), Cal Poly San Luis Obispo (2/11/14), Cal Poly Pomona (1/28/14), Michigan (12/15/09), Columbia (11/5/09), LANL (10/21/09), Wesleyan (9/30/09), Carnegie-Washington (9/25/09), Cal Poly Pomona (5/22/09), UC San Diego (5/19/09), UC Irvine (5/18/09), Caltech (5/15/09), UC Berkeley (5/12/09), Stanford (5/11/09), UC Santa Barbara (5/8/09), Harvard (5/5/09), Texas (4/21/09), Williams (3/13/09), Colgate (3/10/09), Haverford (4/22/08), Weber State (3/20/08)

**Invited Colloquia (Overseas)** [ANU \(TBD\)](#), [Liverpool \(12/09/20\)](#), [Oxford \(6/20/19\)](#), [UC London \(6/19/19\)](#), [Durham \(6/18/19\)](#), [Cambridge \(6/17/19\)](#), [ANU \(2/19/19\)](#), [SfA-Sydney \(9/18/17\)](#), [UNAM-Ensenada \(9/12/14\)](#), [Saint Mary's \(1/31/14\)](#), [OA-Trieste \(10/16/13\)](#), [MPIA-Heidelberg \(10/10/13\)](#), [ITA-Heidelberg \(10/9/13\)](#), [HITS-Heidelberg \(10/8/13\)](#), [MPfRA-Bonn \(10/4/13\)](#), [MPA-Garching \(10/2/13\)](#), [MPE-Garching \(10/1/13\)](#), [Durham \(9/25/13\)](#), [Observatoire Paris \(7/19/13\)](#), [CEA Saclay \(7/18/13\)](#), [Imperial \(7/15/13\)](#), [Nottingham \(7/4/13\)](#), [Waterloo \(3/1/13\)](#), [Toronto \(2/12/13\)](#), [HIA-Victoria \(2/12/13\)](#), [OA-Brera \(11/25/11\)](#), [Milano-Bicocca \(11/23/11\)](#), [GEPI-Paris \(9/7/11\)](#), [OA-Trieste \(9/24/10\)](#), [Groningen \(10/15/09\)](#), [MPA-Garching \(10/13/09\)](#), [SISSA \(10/9/09\)](#), [ITA-Heidelberg \(10/7/09\)](#), [INAOE \(1/10/09\)](#), [UNAM \(1/8/09\)](#), [Cinvestav \(1/7/09\)](#)

**Conference Talks – Invited** [Where the Star Formation Ends \(Leiden, Netherlands, 4/20\)](#)  
[2019 EWASS - Diversity and Inclusion Session \(Lyon, France, 6/19\)](#)  
[Open Questions in Astrophysics \(Copenhagen, Denmark, 7/18\)](#)  
[Galaxy Interactions and Mergers Across Cosmic Time \(Sexten, Italy, 3/18\)](#)  
[From Black Hole to Environment \(Canberra, ACT, Australia, 9/17\)](#)  
[2016 Pasadena Postdoc Retreat \(Guest Faculty Speaker – Arrowhead Lake, CA, 5/16\)](#)  
[2016 Meeting of the Society for Advancement of Chicanos/Hispanics and Native America scientists \(SACNAS – Long Beach, CA, 10/16\)](#)  
[The Changing Face of Galaxies \(Hobart, Tasmania, Australia, 9/16\)](#)  
[Mapping the Pathways of Galaxy Transformation \(Catalina Island, CA, 8/16\)](#)  
[2015 Conference of the National Society of Black Physicists \(NSBP – Baltimore, MD, 2/15\)](#)  
[Decoding the Assembly of Galaxies \(Leiden, the Netherlands, 10/14\)](#)  
[CITA Fellows Meeting \(Toronto, ON, 2/14\)](#)  
[CITA Fellows Meeting \(Toronto, ON, 2/13\)](#)  
[Keck Northeast Astronomy Consortium Meeting Meeting \(KNAC – Middletown, CT, 7/10\)](#)

**Conference Talks – Contributed** [Growing Black Holes: Accretion & Mergers \(Katmandu, Nepal, TBD\)](#)  
[Galaxy Evolution & Feedback Across Different Environments \(Bento Gonçalves, Brazil, 2/20\)](#)  
[Nine Billion Years of Neutral Gas \(Garching, Germany, 7/19\)](#)  
[2019 EWASS - Resolved ISM Session \(Lyon, France, 6/19\)](#)  
[Linking Galaxies from the Epoch of Initial Star Formation to Today \(Sydney, Australia, 2/19\)](#)  
[KIAA Forum on Gas in Galaxies \(Beijing, China, 6/18\)](#)  
[2016 AAS Meeting \(Kissimmee, FL, 1/16\)](#)  
[Drifting through the Cosmic Web \(7/15 - declined due to US immigration reasons\)](#)  
[Galaxies of Many Colours \(Marstrand, Sweden, 6/15 – in absentia, presented by J. Scudder\)](#)  
[Galaxies in 3D Across the Universe \(Vienna, Austria, 7/14\)](#)  
[ESO 3D \(Munich, Germany, 3/14\)](#)  
[Physical Processes of Galaxy Formation \(Aix-en-Provence, France, 7/13\)](#)  
[Mind the Gap \(Cambridge, UK, 7/13\)](#)  
[Galaxy Mergers in an Evolving Universe \(Hualien, Taiwan, 10/11\)](#)  
[ICTP School on Cosmology and Astrophysics \(Trieste, Italy, 6/10\)](#)  
[Intermediate-Mass Black Holes Meeting \(Irvine, CA, 4/09\)](#)

6<sup>th</sup> Philadelphia Area Astronomy Meeting (Philadelphia, PA, 3/09)  
Essential Cosmology for the Next Generation (Los Cabos, Mexico, 1/09)  
9<sup>th</sup> Great Lakes Cosmology Workshop (Pittsburgh, PA, 6/08)  
5<sup>th</sup> Philadelphia Area Astronomy Meeting (Chester, PA, 4/08)  
Galactic Structures & Structure of Galaxies (Ensenada, Mexico, 3/08)  
3<sup>rd</sup> Canada-America-Mexico Physics Conference (Montreal, Quebec, 8/07)  
8<sup>th</sup> Great Lakes Cosmology Workshop (Columbus, OH, 5/07)  
IV Workshop on Gravitation & Mathematical Physics (Chapala, Mexico, 11/01)  
VII Workshop on Particles & Fields (Zacatecas, Mexico, 11/01)  
TASI: Strings, Branes & Extra Dimensions (Boulder, CO, 6/01)

**Public  
Presentations**

Collective Pedagogy Talk at the University of Michigan (10/09/20)  
Collective Pedagogy Talk at Wesleyan University (10/02/20)  
TIMESTEP at the University of Arizona (10/18/19)  
Claremont Unified School District ESL Reclassification Ceremony (Claremont, CA, 6/19)  
Science Fiction Festival, Queens Museum (Queens, NY, 5/19)  
AAPT New Faculty Workshop (Washington DC, 6/18)  
Harvard Aztlán Symposium Presentation (Cambridge, MA, 8/18)  
Workshop on Zapatista Principles (Cambridge, MA, 6/18)  
Collective Pedagogy Talk at CU Boulder (10/03/17)  
Collective Pedagogy Talk at CU Boulder (09/29/17)  
MESA Graduation Ceremony (Pasadena, CA, 7/17)  
Innovation Speaker, Summer App (Pasadena, CA, 7/17)  
Workshop on Zapatista Principles (Cambridge, MA, 6/17)  
Astronomy on Tap (Pasadena, CA, 3/17)  
AAS Town Hall on Racism in Astronomy (Grapevine, TX, 1/17)  
Harvard Aztlán Symposium Presentation (Cambridge, MA, 8/16)  
Fremont BUILD speaker (English/Spanish) (Pomona, CA, 2/16)  
Harvard Aztlán Institute Symposium (Cambridge, MA, 8/15)  
MESA Graduation Ceremony (Pasadena, CA, 7/15)  
Multicultural Scholar Program, Haverford College (2008 – 2010)  
IYA: No Night Without A Telescope, Haverford College (11/10)  
Scholar in Residence, Radnor Elementary School (2008 – 2009)  
Distinguished Visitor, Arete Preparatory Academy (5/09)

**Service**

Physics and Astronomy Colloquium Committee, Pomona College (Chair, 2019 – 2020)  
Research Computing Advisory Group (Sp 2018 – present)  
AAS Committee on the Status of Minorities in Astronomy (Chair, 2016 – 2018)  
AAS Committee on the Status of Minorities in Astronomy (Member, 2015 – 2016)  
Chambliss Awards, American Astronomical Society (Judge, Kissimmee, 2/15)  
Diverse Roots to the Universe – Harvard Latino Initiative (Panelist, Cambridge, 8/15)  
Succeeding in Graduate School – Harvard-Smithsonian CfA (Panelist, Cambridge, 7/15)  
Student Awards, National Society of Black Physicists (Judge, Baltimore, 2/15)  
Astronomy and Astrophysics (Reviewer, 2015 – present)  
Astrophysics Journal (Reviewer, 2015 – present)  
Seminar Committee, Cal Poly Pomona (Chair, 2014 – 2017)  
Physics Club, Cal Poly Pomona (2014 – 2017)  
Interacting Galaxies & Binary Quasars (SOC/LOC Chair, Trieste, 4/12)  
Monthly Notices of the Royal Astronomical Society (Reviewer, 2008 – present)  
Astro Science Discussion Leader, University of Victoria (2013 – 2014)  
Astronomy Lunch Seminar Organizer, Haverford College (2008 – 2014)  
Penn TA Training Program Leader, University of Pennsylvania (Summer 2004)

**Press**

Featured in “What does a scientist look like?” – by Lizzy Vlasses & Ashley Chase (2020)

Featured in “Who thinks about scale?” – by Ashley Chase (2020)

Featured in “Rooted under the stars” – Adler Planetarium (2020)

SACNAS, *August Mentor of the Month* (8/19)

The SPS Observer, *Activism is at the Core of Physics* (1/17)

Smithsonian Magazine, *Why the Universe Need More Black and Latino Astronomers* (8/16)

Science Tech Daily, *Astrophysicists Investigate Where Stars Form In Merging Galaxies* (2/15)

Royal Astronomical Society, *How Black Holes Shape Galaxies* (4/14)

AASWomen Newsletter, *Meeting with Extremely High Percentage of Women Speakers!* (11/11)

Penn News, *Graduate Teaching Prize Announcement* (4/04)

**Professional  
References**

**Abraham Loeb**, Frank B. Baird, Jr. Professor of Science, Harvard University  
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