

Curriculum Vitae

Yamila Miguel

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My development as a scientist includes research, teaching, mentoring and outreach. In research, understanding the information hidden in atmospheric observable features in hot rocky and giant exoplanets is one of my main interests. These planets are targets for current and future space and ground base observations. Characterising their atmospheric structure, composition and spectral features, putting them - and our own Solar System - into context to link them with the planetary interior and its formation history is the aim of my work.

Teaching, mentoring and outreach are very rewarding activities for me and also a fundamental part of my growth as a scientist. Teaching is a way to guide students towards the development of curiosity and critical thinking. Promoting science through mentoring minorities allows me to contribute to both the scientific community and the society, and outreach gives me the chance to increase awareness of astrophysics, stimulate interest in science and inspire future scientists.

Research Interests: (Exo)planet interiors and atmospheres, Planetary systems formation.

Current Position

Assistant Professor, Leiden Observatory - The Netherlands

Education

2011 PhD Astronomy Universidad Nacional de La Plata (UNLP) - Argentina

2007 BA Astronomy UNLP - Argentina

Employment, Research Experience & Awards

Research

12 years

Teaching

7 years

Outreach

11 years

Publications - 32 publications in peer-reviewed international journals. Total citations: 727 (as January 2019).
H-index 17.

Employment, research experience and awards (continue)

2018-	Assistant Professor - Leiden Observatory - The Netherlands
2018-	Member of the Young Academy Leiden
2016 - 2017	CNES postdoctoral Fellowship - OCA - France
2015 - 2016	Henri Poincare Postdoctoral Fellowship - OCA - France
2013	Guest-Lecturer "Astrophysics & Astrobiology II" - Universität Heidelberg - Germany
2011 - 2014	MPIA Postdoctoral Fellowship - Germany
2010 - 2011	CONICET type II Graduate Fellowship - Argentina
2007 - 2009	CONICET type I Graduate Fellowship - Argentina
2005 - 2011	Educator, Science Coach - Mundo Nuevo ¹
2008 - 2010	Lecturer "Knowing the Universe" - UNLP - Argentina
2007 - 2011	Teaching Assistant "Spherical Astronomy" - UNLP - Argentina
2008 - 2009	Teaching Assistant "Calculus I" - UNLP - Argentina
2005 - 2007	Teaching Assistant "Modern Physics" - UNLP - Argentina
2005 - 2007	Teaching Assistant "Calculus I" - UNLP - Argentina
2007	Joaquin V. Gonzalez Award, to the best GPA - UNLP - Argentina
2001 - 2007	Museum Guide - Museum of Astronomy and Geophysics - UNLP

Publication List (Refereed papers in primary journals only)

1. **Miguel, Y.**, *Observability of molecular species in a nitrogen dominated atmosphere for 55 Cancri e*, 2018, *mnras*, 482, 2893 ([Link](#))
2. Guillot, T., **Miguel, Y.**, Militzer, B. et al. *A suppression of differential rotation in Jupiter's deep interior.*, 2018, **Nature**, 555, 227-230 (doi:10.1038/nature25775) ([Link](#))
3. Galanti, E., Kaspi, Y., **Miguel, Y.**, et al., *Saturn's Deep Atmospheric Flows Revealed by the Cassini Grand Finale Gravity Measurements.*, 2018, accepted for publication in GRL.
4. Kaspi, Y. , Galanti, E., Hubbard, W.B., Stevenson, D.J., Bolton, S.J., Iess, L., Guillot, T., Bloxham J., Connerney J.E.P., Cao, H., Durante, D., Folkner, W.M., Helled, R., Ingersoll, A.P., Levin, S.M., Lunine, J.I., **Miguel, Y.**, Militzer, B., Parisi, M., Wahl, S., M. *Jupiter's atmospheric jet streams extend thousands of kilometres deep*, 2018, **Nature**, 555, 223-226 (doi:10.1038/nature25793) ([Link](#))
5. Cilibrasi, M., Szulagyi, J., Mayer, L., Drazkowska, J., **Miguel, Y.**, Inderbitzi, P., *Satellites form fast & late: a population synthesis for the Galilean moons*, 2018, *mnras*, 480, 4355 ([Link](#))

¹ Science and technology outreach program. UNESCO, UNLP, and Ministry of Culture and Education of Buenos Aires initiative

Publications - (continue)

6. Less, L., Folkner, W.M., Durante, D., Parisi, M., Kaspi, Y., Galanti, E., Guillot, T., Hubbard, W.B., Stevenson, D.J., Anderson, J.D., Buccino, D.R., Gomez Casajus, L., Milani, A., Park, R., Racioppa, P., Serra, D., Tortora, P., Zannoni, M., Cao, H., Helled, R., Lunine, J.I., **Miguel, Y.**, Militzer, B., Whal, S., Connerney, J.E.P., Levin, S.M., Bolton, S.J., *Measurement of Jupiter's asymmetric gravity field*, 2018, **Nature**, 555, 220-222 (doi: 10.1038/nature25776) ([Link](#))
7. Loyd, R. O. P., France, K., Youngblood, A., Schneider, Ch., Brown, A., Renyu, H., Segura, A., Linsky, J., Redfield, S., Tian, F., Rugheimer, S., **Miguel, Y.**, Froning, C. 2018, *ApJ*, 867, 71 ([Link](#))
8. Tinetti, G., ...**Miguel, Y.**, et al., 2018, *A chemical survey of exoplanets with ARIEL*, 2018, *Experimental Astronomy*, 46, 135 ([Link](#))
9. Turrini, D., **Miguel, Y.**, Zingales, T., Piccialli, A., Helled, R., Vazan, A., Wolkenberg, P., Oliva, F., Sindoni, G., Panić, O., Leconte, J. Min, M., Pirani, S., Selsis, F., Coudé du Foresto, V., Mura, A. *The contribution of the ARIEL space mission to the study of planetary formation*, 2018, *Experimental Astronomy*, 46, 45 ([Link](#))
10. Venot, O., Drummond, B., **Miguel, Y.**, Waldmann, I. P., Pascale, E., Zingales, T., 2018, *A better characterization of the chemical composition of exoplanets atmospheres with ARIEL*, 2018, *Experimental Astronomy*, 46, 101 ([Link](#))
11. Wang, D., **Miguel, Y.** & Lunine, J., *Modeling synthetic spectra for transiting extrasolar giant planets: detectability of H₂S and PH₃ with JWST*, 2017, *ApJ*, 850, 199 (arXiv:1711.00191). ([Link](#))
12. Mahapatra, G., Helling, Ch. and **Miguel, Y.**, *Cloud formation in evaporating planets: application to 55 Cnc e and CoRoT7b*, *MNRAS*, 472, 447 ([Link](#)).
13. Espinoza, N., Fortney, J., **Miguel, Y.**, Thorngren, D., Murray-Clay, R., *Metal enrichment leads to low atmospheric C/O ratios in transiting exoplanets*, 2017, *ApJL*, 838, 1 ([Link](#)).
14. Bolton, S. J., Adriani, A., Adumitroaie, V., Allison, M., Anderson, J., Atreya, S., Bloxham, J., Brown, S., Connerney, J. E. P., DeJong, E., Folkner, W., Gautier, D., Grassi, D., Gulkis, S., Guillot, T., Hansen, C., Hubbard, W. B., Less, L., Ingersoll, A., Janssen, M., Jorgensen, J., Kaspi, Y., Levin, S. M., Li, C., Lunine, J., **Miguel, Y.**, Mura, A., Orton, G., Owen, T., Ravine, M., Smith, E., Steffes, P., Stone, E., Stevenson, D., Thorne, R., Waite, J., Durante, D., Ebert, R. W., Greathouse, T. K., Hue, V., Parisi, M., Szalay, J. R., Wilson, R., 2017, *Jupiter's interior and deep atmosphere: the first close polar pass with the Juno spacecraft*, **Science**, 356 (6340), 821-825. ([Link](#)).
15. Kaspi, Y., Guillot, T., Galanti, E., **Miguel, Y.**, Helled, R., Hubbard, W. B., Militzer, B., Wahl, S. M., Levin, S., Connerney, J. E. P., Bolton, S. J., 2017, *The effect of differential rotation on Jupiter's low-degree even gravity moments*, *Geophys. Res. Lett.*, 44, 5960-5968. ([Link](#)).
16. Wahl, S. M., Hubbard, W. B., Militzer, B., Guillot, T., **Miguel, Y.**, Movshovitz, N., Kaspi, Y., Helled, R., Reese, D., Galanti, E., Levin, S., Connerney, J. E., Bolton, S. J., 2017, *Comparing Jupiter interior structure models to Juno gravity measurements and the role of a dilute core*, *Geophys. Res. Lett.*, 44 (11), 4649-4659 ([Link](#))
17. Youngblood, A., France, K., Loyd, P.R.O, Brown, A., Mason, J. P., Schneider, Ch. P., Tilley, M., Berta-Thompson, Z., Buccino, A., Froning, C., Hawley, S. L., Linsky, J., Mauas, P. J. D., Redfield, S., Kowalski, A., **Miguel, Y.**, et al, *The MUSCLES Treasury Survey IV: Scaling Relations for Ultraviolet, Ca II K, and Energetic Particle Fluxes from M dwarfs*, 2017, *ApJ* 843 (1), 31 ([Link](#)).

Publications - (continue)

18. **Miguel, Y.** Guillot, T. and Fayon, L. *Jupiter internal structure: the effect of different equations of state*, 2016, *A&A*, 596, A114. ([Link](#))
19. **Miguel, Y.** & Ida, S., *A semi-analytical model for exploring Galilean satellites formation from a massive disk*, 2016, *Icarus*, Volume 266, 1 ([Link](#)).
20. France, K., Loyd, P., Youngblood, A., Brown, A., Schneider A., Hawley, S., Froning, C., Linsky, J. L., Roberge, A., Buccino, A., Davenport, J. R., Fontenla, J. M., Kaltenegger, L., Kowalski, A. F., Mauas, P.J., **Miguel, Y.**, Redfield, S., Rugheimer, S., Tian, F., Vieytes, M. C., Walkowicz, L. M., Weisenburger, K. L., *The MUSCLES treasury survey I. Motivation and Overview*, 2016, *ApJ*, 820, 89 ([Link](#)).
21. Youngblood, A., France, K., Loyd, P.R.O., Linsky, J. L., Redfield, S., Schneider, C., Wood, B., Brown, A., Froning, C., **Miguel, Y.**, Rugheimer, S., Walkowicz, L., *The MUSCLES Treasury Survey II: Intrinsic Lyman Alpha and Extreme Ultraviolet Spectra of K and M Dwarfs with Exoplanets*, 2016, *ApJ*, 824, 101 ([Link](#)).
22. Domagal-Goldman, S.D., Wright, K.E., Adamala, K., Arina de la Rubia, L., Bond, J., Dartnell, L.R., Goldman, A.D., Lynch, K., Naud, M., Paulino-Lima, I.G., Singer, K., Walter-Antonio, M., Abrevaya, X., C., Anderson, R., Arney, G., Atri, D., Azúa-Bustos, A., Bowman, J., S., Brazelton, W. J., Brenneka, G. A., Carns, R., Chopra, A., Colangelo-Lillis, J., Crockett, C., J., DeMarines, J., Frank, E. A., Frantz, C., de la Fuente, E., Galante, D., Glass, J., Gleeson, D., Glein, G.R., Goldblatt, C., Horak, R., Horodyskyj, L., Kaçar, B., Kereszturi, A., Knowles, E., Mayeur, P., McGlynn, S., **Miguel, Y.**, Montgomery, M., Neish, C., Noack, L., Rugheimer, S., Stüeken, E. E., Tamez-Hidalgo, P., Imari Walker, S., Wong, T., *The Astrobiology Primer v2.0*, 2016, *Astrobiology*. Aug 2016, 16(8): 561-653 ([Link](#)).
23. **Miguel, Y.**, Kaltenegger L., Linsky, Jeffrey L. & Rugheimer, S., *The effect of Lyman α radiation on mini-Neptune atmospheres around M stars: application to GJ 436b*, 2015, *MNRAS*, 446, 345 ([Link](#)).
24. Barge, L. M., Branscomb, E., Brucato, J. R., Cardoso, S. S. S., Cartwright, J. H. E., Danielache, S. O., Galante, D., Kee, T. P., **Miguel, Y.**, Mojzsis, S., Robinson, K. J., Russell, M. J., Simoncini, E., Sobron, P., 2017, *Thermodynamics, Disequilibrium, Evolution: Far-From-Equilibrium Geological and Chemical Considerations for Origin-Of-Life Research*, *Origins of Life and Evolution of Biospheres*, 47 (1), 39-56 ([Link](#)).
25. **Miguel, Y.** & Kaltenegger L., *Exploring atmospheres of hot mini-Neptunes and extrasolar giant planets orbiting different stars with application to HD 97658b, WASP-12b, CoRoT-2b, XO-1b and HD 189733b*, 2014, *ApJ*, 780, 166 ([Link](#)).
26. **Miguel, Y.**, Kaltenegger L., Fegley, B. Jr. & Schaefer L., *Composition of hot super-Earth atmospheres: exploring Kepler candidates*, 2012, *ApJ Letters*, 742, L19 ([Link](#)).
27. Kaltenegger L., **Miguel, Y.** & Rugheimer, S., *Rocky exoplanet characterization and atmospheres*, 2012, *International Journal of Astrobiology*, 11, 297 ([Link](#)).
28. **Miguel, Y.**, Guilera, O. & Brunini, A., *The diversity of planetary systems architectures: contrasting theory with observations*, 2011, *MNRAS*, 417, 314 ([Link](#)).
29. **Miguel, Y.**, Guilera, O. & Brunini, A., *The role of the initial surface density profiles of the disc on giant planet formation: comparing with observations*, 2011, *MNRAS*, 412, 2113 ([Link](#)).
30. **Miguel, Y.** & Brunini, A., *Planet formation: statistics of spin rates and obliquities of extrasolar planets*, 2010, *MNRAS*, 403, 1935 ([Link](#)).

Publications - (continue)

31. **Miguel, Y.** & Brunini, A., *Core instability models of giant planet accretion II: forming planetary systems*, 2009, MNRAS, 392, 324 ([Link](#)).
32. **Miguel, Y.** & Brunini, A., *Core instability models of giant planet accretion and the planetary desert*, 2008, MNRAS, 387, 463 ([Link](#)).

[Link to all publications \(ADS\)](#)

Book Chapters

Miguel, Y., *Juno revela los misterios del gigante gaseoso de nuestro sistema solar*, for the book: "La ciencia desde Paraguay. Periodismo y divulgación de Ciencia del Sur", editorial Servilibro, Paraguay, 2018.

Miguel, Y., *Ciencias Basics y Prosperidad*, for the book: "100 políticas para la Argentina del 2030", Eduardo Levy Yeyati Ed.- 1a ed. - Ciudad Autónoma de Buenos Aires: Ciudad de Lectores, 2017.

Miguel, Y., & Kaltenegger, L., 2013, *Hot Super-Earth Atmospheres*, for the book: "The Early Evolution of the Atmospheres of Terrestrial Planets", *Astrophysics and Space Science*, Volume 35. ISBN 978-1-4614-5190-7. Springer Science+Business Media New York, p. 53

Contribution to symposia

Chaparro Molano, G., Agreda, E., **Miguel, Y.**, Casas-Miranda, R. A., 2017, Planet formation in density perturbed transitional disks: a grid model approach, *Revista Mexicana de Astronomía y Astrofísica Conference Series*, 49, 69

Linsky, J. L., France, K., **Miguel, Y.**, and Kaltenegger, L., 2016, Quiescent and flaring Lyman- α radiation of host stars and effects on exoplanets, *Proceedings of the International Astronomical Union, IAU Symposium*, Volume 320, pp. 391-396

van Boekel, R., Benneke, B., Heng, K., Hu, R., Madhusudhan, N., Quanz, S., Beuermann, Y., Bouwman, J., Chen, G., Decin, L., de Kok, R., Glauser, A., Gudel, M., Hauschildt, P., Henning, T., Jeers, S., Jin, S., Kaltenegger, L., Kerschbaum, F., Krause, O., Lammer, H., Luntzer, A., Meyer, M., **Miguel, Y.**, Mordasini, C., Ottensamer, R., Rank-Lueftinger, T., Reiners, A., Reinhold, T., Schmid, H., Snellen, I., Stam, D., Sun, Z., Vandenbusche, B., 2012, The Exoplanet Characterization Observatory (EChO): performance model EclipseSim and applications, *Space Telescopes and Instrumentation 2012: optical, infrared, and millimeter wave. Proceedings of the SPIE*, 8442, article id. 84421F, 21

Miguel, Y., Guilera, O. M., & Brunini, A., 2011, Planetary systems formation and the diversity of extrasolar systems, *The Astrophysics of Planetary Systems: Formation, Structure, and Dynamical Evolution*, *Proceedings of the International Astronomical Union, IAU Symposium*, Volume 276, p. 441-442

Fernandez-Lajus, E., **Miguel, Y.**, Fortier, A., & Di Sisto, R. P., 2011, Monitoring and analyzing exoplanetary transits from Argentina, *The Astrophysics of Planetary Systems: Formation, Structure, and Dynamical Evolution*, *Proceedings of the International Astronomical Union, IAU Symposium*, Volume 276, p. 416-417

White papers

France, K., Shkolnik, E., Linsky, J., Roberge, A., Ayres, T., Barman, T., Brown, A., Davenport, J., Desert, J.M., Domagal-Goldman, S., Fleming, B., Fontenla, J., Fossati, L., Froning, C., Hallinan, G., Hawley, S., Hu, R., Kaltenegger, L., Kasting, J., Kowalski, A., Loyd, P., Mauas, P., **Miguel, Y.**, et al., 2015, Characterizing the Habitable Zones of Exoplanetary Systems with a Large Ultraviolet/Visible/Near-IR Space Observatory, Submitted in response to NASA call for white papers: "Large Astrophysics Missions to Be Studied by NASA Prior to the 2020 Decadal Survey" (arXiv:1505.011840). ([Link](#))

International Collaborations

- **Juno Mission:** member of the science team of NASA Juno mission orbiting Jupiter since 2016 and until 2021. I am a member of the interior working group. We published 6 papers (Bolton et al., 2017; Wahl et al., 2017; Kaspi et al., 2017; Guillot et al., 2018; Kaspi et al., 2018; less et al., 2018). PI: Scott Bolton (SWRI, Texas, US). Working mostly with Tristan Guillot (Observatoire de la Cote d'Azur, France; William B. Hubbard (University of Arizona, US), Burkhard Militzer (U. of Berkeley, US), Yohai Kaspi (Weizmann , Israel) and Ravit Helled (U. of Zurich, Switzerland).
- **ARIEL consortium:** *ARIEL is an ESA M4 mission* whose objective is to observe exoplanet atmospheres from Jupiter-size down to Earth-size exoplanets in the visible and the infrared. It will be a dedicated telescope to observe exoplanet atmospheres. I am part of the ARIEL science team and leader of the "Chemistry on exoplanets atmospheres Working Group" together with Olivia Venot. I am also part of the planet formation and interiors working groups. Where we study the possibilities to understand different formation scenarios and the physics and chemistry that we will be able to discover with ARIEL capabilities. This consortium has members of all over Europe. PI of the mission: Giovanna Tinetti (University College, London, UK)
- **MUSCLES treasure survey collaboration:** it is a survey that aims to observe M stars in the UV. These stars are the focus of many surveys to search of habitable exoplanets and understand the star is crucial to determine the habitability of those worlds. So far we got Hubble time to observe 6 M stars in the UV. I am a member of the successful proposal, which highlights the relevance of understanding M stars in the UV to model exoplanet atmospheres (France et al., 2016; Youngblood et al., 2016; Youngblood et al., 2017; Loyd et al., 2018). PI: Kevin France (U. Boulder, Colorado, US). (HST program 13650)
- **Mega-MUSCLES treasure survey collaboration:** is an expansion of the MUSCLES project to: a) new M dwarf exoplanet hosts with varying properties; b) reference M dwarfs below 0.3 solar masses that may be used as proxies for M dwarf planet hosts discovered after HST's lifetime; and c) more rapidly rotating stars to probe XUV evolution over gigayear timescales. We got Hubble time, the observations will be made during 2018 and 2019. PI: Cynthia Suzanne Froning (University of Texas at Austin, US). (HST program 15071)

Grants and funding

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| 2016 | CNES postdoctoral fellowship, funded for 2 years. |
| 2016 | Projects of Scientific and Technological Investigation (PICT). Given by the National Agency of scientific and technology promotion, Argentina. PI: Marcelo Miller (UNLP) |
| 2015 | Henri Poincare postdoctoral fellowship, funded for 1 year. |
| 2009 | Project of Investigation (PIP) . Given by the National Scientific and Technical Research Council (CONICET), Argentina. PI: Juan Carlos Forte (UNLP) |

Grants and funding - (continue)

- 2009 Project of Investigation La Plata National University. PI: Rosa Orellana (UNLP)
- 2009 Grants for the IAU XXVII General Assembly
- 2007 Project of Investigation (PIP) . Given by the National Scientific and Technical Research Council (CONICET), Argentina. PI: Adrian Brunini (UNLP)

Selected Invited Colloquia (last 5 years)

- 2018 Radboud University Colloquium, Nijmegen, The Netherlands
- 2018 Amsterdam University, Amsterdam, The Netherlands
- 2018 Imperial College, London, UK
- 2018 UCL, London, UK
- 2018 Birmingham University, Birmingham, UK
- 2018 Talk at the Master career day, Utrecht, The Netherlands
- 2018 ESTEC, The Netherlands
- 2018 Max Planck Institute for Astronomy, Germany
- 2018 Main colloquium at Harvard-Smithsonian Center for Astrophysics, US
- 2018 Lunch talk at Harvard-Smithsonian Center for Astrophysics, US
- 2018 Delft University of Technology, Delft, Netherlands
- 2017 University of Bordeaux, France
- 2017 University of Aarhus, Denmark
- 2017 University of Leiden, The Netherlands
- 2017 University of Oxford, UK
- 2017 University of Bern, Switzerland
- 2017 University of Zurich, Switzerland
- 2017 Observatoire de la Cote d'Azur, France
- 2017 National University of Asuncion, Paraguay
- 2016 University of California Santa Cruz, US
- 2016 St. Andrews University, UK
- 2016 Harvard University, Department of Earth and Planetary Sciences, US
- 2016 Lunch talk at Harvard-Smithsonian Center for Astrophysics, US
- 2016 National University of La Plata, Argentina

Selected Invited Colloquia - (continue)

- 2015 Cornell University, US
- 2015 Osservatorio di Arcetri, Italy
- 2014 American Museum of National History, US
- 2013 Harvard Smithsonian Center for Astrophysics, US
- 2013 Tokyo Institute for Technology, Japan
- 2012 Tokyo Institute for Technology, Japan
- 2012 Max Planck Institute for Astronomy, Germany

Invited Speaker at Conferences

- 2018 European Planetary Science Conference, Berlin, Germany
- 2018 Euroscience open forum (largest interdisciplinary science meeting in Europe), Toulouse, France
- 2018 PEPSci network workshop, Leiden, Netherlands
- 2018 Circumplanetary Disks and Satellite Formation, Nagoya, Japan (Review)
- 2017 Exoplanets and Planet Formation, Shanghai, China (Review)
- 2017 Nordita PTA program, Stockholm, Sweden
- 2017 The atmospheres of disks and planets, Ringberg Castle, Bavaria, Germany (Review)
- 2016 5th Joint Workshop on High Pressure, Planetary and Plasma Physics (HP4), Hamburg, Germany
- 2015 11th Recontres du Vietnam: Exoplanetary Science. Quy Nhon, Vietnam
- 2015 Workshop for the opening of the Carl Sagan Institute at Cornell University - US
- 2014 VII Thermodynamics, Disequilibrium and Evolution (TDE) Focus Group workshop, Tokyo, Japan
- 2014 Japanese-German Frontiers of Science Symposium - Bremen, Germany
- 2013 Joint Workshop on High Pressure, Planetary, and Plasma Physics DLR - Germany
- 2012 Annual Meeting of the Astronomische Gesellschaft - Hamburg, Germany
- 2012 NASA Working Group: "Thermodynamics, Disequilibrium and Evolution" - Spain

Contributed talks at Conferences (last 5 years)

- 2018 Juno meeting, San Antonio, US
- 2018 ARIEL meeting, Prague, Czech Republic
- 2018 Meeting of Astronomers in the Netherlands (NAC), Groningen, Netherlands
- 2018 Conference Water in the Solar System, Zurich, Switzerland

Contributed talks at Conferences - (continue)

- 2017 JSPS Symposium Planet2, Villefranche sur Mer, France
- 2017 Juno meeting, San Antonio, US
- 2016 Juno meeting, Boulder, US
- 2015 Exoplanetary Atmospheres and Habitability, Nice, France

Teaching

- 2018 - **Lecturer** at Leiden University in "Stellar Structure and Evolution". Course for Master students.
- 2013 **Guest-Lecturer** at Heidelberg University, 1 class at Kaltenegger's course "Astrophysics & Astrobiology II". Course for Master and graduate level.
- 2008 - 2010 **Lecturer** at the UNLP in "Knowing the Universe". Course for general public.
- 2007 - 2011 **Teaching assistant** at the UNLP in "Spherical Astronomy". Course for undergraduate level.
- 2008 - 2010 **Teaching assistant** at the UNLP in "Calculus I". Course for undergraduate level.
- 2005 - 2007 **Teaching assistant** at the UNLP in "Modern Physics". Course for undergraduate level.
- 2005 - 2007 **Teaching assistant** at the UNLP in "Calculus I". Course for undergraduate level.

Mentored and supervised students

- 2018 - PhD student Mantas Zilinskas at Leiden University.
- 2018 - 2019 Master students Amy Louca, Christopher Seay and Spandan Dash at Leiden University.
- 2018 Summer student Jose Gomez in the context of LEAPS summer program.
- 2016 Summer student Nestor Espinoza. Co-advised him in a project studying $\%$ ratios in exoplanet atmospheres as part of the Kavli Summer Program in Santa Cruz, US.
- 2015 - 2017 Ernesto Ágreda Bastidas, a master physics student at the National University of Colombia, Bogota, Colombia. Mentored him in the improvement of my code to form planetary systems.
- 2014 MPIA PhD student Taisiya Kopytova. I co-advised her in the modelling of thermal structure, photochemistry and spectra of direct imaging exoplanets.
- 2010 - 2012 Jessica Giovanna Caceres Reategui, a master physics student at the National University of St Augustin of Arequipa, Peru. Mentored her in her in the formation of giant planets.

Outreach and Gender Equality Activities

- 2018 **Member** of RISE (Researchers In Science for Equality), network from Leiden University
- 2014 - 2015 **Role Model** in the "Science is a girl thing!", part of the "Women in Research and Innovation" campaign which aims to encourage girls to develop an interest in science and to encourage young women in scientific careers.
- 2005 - 2011 **Educator, Science Coach** in "Mundo Nuevo", a program of science and technology dedicated to outreach. It is part of the UNESCO initiative, the UNLP, and the direction of culture and education of Buenos Aires. My job consisted in giving lectures and perform lab experiments about different astronomical and physical phenomena at kindergartens, elementary and high schools, including seminars for teachers.
- 2008 - 2010 **Coordinator and chair of weekly seminars.** Handled 100% of the organisation of weekly seminars for general public given at the Department of Astronomy and Geophysical Sciences - UNLP. From searching scientific speakers for the seminar to organise and chair the event.
- 2009 **Participant in the International Astronomy Year** initiated by the IAU and UNESCO. I participated actively and organised activities for the International Astronomical Year in Argentina. The special projects that I participated are *400 Years of the Telescope*, *100 hours with Astronomy*, *She is an astronomer* and *Astronomical coffee*.
- 2008 **Lecturer in Astronomy course.** Teaching in the Astronomy Course (8 x 1.5hr classes) for the staff at the Malargue Planetary, Mendoza - Argentina. The topics were: stellar and planetary system formation and evolution, general characteristics of our Solar System, characteristics of extrasolar planets and detection methods.
- 2001 - 2007 **Museum Guide** at the Museum of Astronomy and Geophysics of La Plata. Outreach activities for general public at the observatory and museum, three times a week, including guided tours and workshops for schools (all levels) and University students.

Selected Invited Public Colloquia (more than 50 given)

- 2018 TEDx RiodeLaPlata - Buenos Aires Argentina. Event with **2500 people** at the Colon Theatre.
- 2018 "Astronomy on Tap" - Leiden, The Netherlands
- 2017 "Astronomy on Tap" - Aarhus, Denmark
- 2017 Planetarium - La Plata, Argentina
- 2017 Meeting of members of the "Club de Astronomia", Villa Mercedes, San Luis, Argentina
- 2016 JSOCA - journée scientifique in Cannes
- 2016 Planetarium - La Plata, Argentina
- 2013 Meeting of members of the Internationale Amateursternwarte - Frankfurt, Germany
- 2013 Albertus-Magnus-Schule Bischofliches Gymnasium - Germany
- 2009 1st Patagonia Meeting on Astronomy Education Esquel - Argentina

Selected invited public colloquia - (continue)

- 2009 Dardo Rocha, cultural center La Plata - Argentina
- 2009 37th Science and Technology National Festival San Bernardo - Argentina
- 2009 35th Buenos Aires International Book Festival Buenos Aires - Argentina
- 2009 School of Astronomy and Geophysical Sciences La Plata - Argentina
- 2009 School of Astronomy and Geophysical Sciences La Plata - Argentina

Media

Press releases, Newspapers & Magazines

- 2018 Leiden University Press release about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) ([Link](#))
- 2018 NASA Press release about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) ([Link](#))
- 2018 CNES Press release about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) ([Link](#))
- 2018 Press article at "Infobae" National Newspaper, Argentina ([Link](#))
- 2018 Press article and interview about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) on the Dutch journal "de Volkskrant" ([Link](#)).
- 2018 Press article and interview about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) on the Dutch journal "AD" ([Link](#)).
- 2018 Press article and interview about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) on the Dutch journal "Astronomie.nl" ([Link](#)).
- 2018 Press article and interview about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) on the journal "Physics Today" ([Link](#)).
- 2018 Press article and interview about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) on the newspaper "El Pais" from Spain ([Link](#)).
- 2018 Press article and interview about our papers (Guillot, Miguel et al., 2018; Kaspi et al., 2018; less et al., 2018) at the popular science news website "IFL science!" ([Link](#)).
- 2018 Press article for "Sputnik" science magazine ([Link](#))
- 2018 Press article about Jupiter's atmosphere at "Kijk" news website ([Link](#)).
- 2018 Press article at "Forbes" magazine ([Link](#))
- 2018 Press article for "El tribuno" newspaper ([Link](#)).
- 2018 Press article for the magazine "Expertas" from Argentina ([Link](#)).
- 2018 Press article for "Clarín" National Newspaper, Argentina ([Link](#)).

Press releases, Newspapers & Magazines (continue)

- 2018 Article about the last Juno results at the popular science news website "Ciencia del Sur" ([Link](#)).
- 2018 Press article for "Perfil" National Newspaper, Argentina
- 2017 Press article of our paper Miguel et al. 2016 on the science news website sci-news.com. [Link](#)
- 2017 Interview for the popular science website "Ciencia del Sur" - cienciadelsur.com. [Link](#)
- 2017 Interview for "Hoy" Argentinian newspaper. [Link](#)
- 2017 Press release of the CONACYT, Paraguay. [Link](#)
- 2017 Interview for "La Nación", national newspaper from Paraguay. [Link](#)
- 2017 Interview for "Cosmopolitan" Magazine.
- 2017 Interview for "Clarín" Argentinian National newspaper. [Link](#)
- 2016 Interview for "Sputnik" an international science magazine. [Link](#)
- 2016 Interview for "Perfil" Argentinian national newspaper. [Link](#)
- 2016 Interview for "La Nacion" Argentinian national newspaper. [Link](#)
- 2016 Interview for "Hoy" Argentinian newspaper about the Juno mission. [Link](#)
- 2016 Interview for "Punto Noticias" Argentinian newspaper. [Link](#)
- 2009 Interview for "Billiken" magazine "Astronomy as a career".
- 2009 Interview for the Newsletter: "Boletín de Noticias del Observatorio Astronómico de La Plata".
- 2008 Interview for "Parateens" magazine "Working with stars, planets and galaxies".

Radio

- 2018 Interview for "Todo por la tarde" program at "San Rafael" radio in Mendoza, Argentina
- 2018 Interview for radio Futura, La Plata, Argentina.
- 2017 Interview for "Todo por la tarde" program at "San Rafael" radio in Mendoza, Argentina. [Link](#)
- 2017 Interview for a radio program at "Hoy Radio", Paraguay. [Link](#)
- 2017 Interview for a radio program at "Radio Cantilo", Argentina.
- 2016 Interview for a radio program at "Radio La Colmena", Argentina. [Link](#)
- 2016 Interview for a radio program at "Radio 10", Argentina. [Link](#)
- 2016 Interview for a radio program at "Radio Nacional", Argentina, about the Juno mission.
- 2016 Interview for a radio program at "San Rafael" radio in Mendoza, Argentina.
- 2016 Interview for a radio program at "Universidad Nacional de Tierra del Fuego", in Argentina.

Tv

- 2017 Interview for the program "Ciudadanos Ilustres" on Somos La Plata
2009 Participation in the Show "Zapping Zone" on Disney Channel Latinamerica.

Committees

- 2018 Member of the PhD opposition committee of Christian Eistrup
2018 Member of the PhD opposition committee of Mason Carney
2018 Member of the PhD opposition committee of Michael Wilby
2018 Member of the PhD opposition committee of Geert jan Talens
2018 Reader of the Master thesis of Dominique Petit dit de la Roche
2018 Member of Master Graduation committee for JM Espejo Salcedo
2018 Member of Master Graduation committee for MT Trueba van den Boom
2018 - Member of the committee for the new building offices and consultation rooms, Leiden University
2018 - Member of the committee for the PhD evaluation report for students, Leiden University
2018 - Member of the committee for the 6 month evaluation report for the PhD student Dario Campisi, Leiden University
2008 - 2011 Member of the committee for the change in the Astronomy baccalaureate degree program at the UNLP.
2009 - 2011 Academic Committee - Representing Graduate Students at the Department of Astronomical and Geophysical Sciences, UNLP.
2009 - 2011 Member of the Outreach Committee at the Astronomy and Geophysics department of the UNLP.

Conference Organizer: Scientific Organising Committee

- 2018 Extreme Solar Systems IV - Reykjavik - Iceland
2018 From Stars to Planets II - Gothenburg, Sweden
2018 convener of the session at EGU2019 - Juno at Jupiter: including collaborative Earth-based observations and comparison with other giant planets - Vienna - Austria
2018 co-convener of the session at EGU2019 - Atmospheric chemistry and elemental cycle on terrestrial planets - Vienna - Austria
2015 Planetary Systems: A Synergistic View - Quy Nhon - Vietnam
2014 Planetology beyond the Solar System - Ringberg
2013 Planet and Star Formation retreat - MPIA

Conference Organizer: Local Organizer Committee

- 2015 Exoplanetary Atmospheres and Habitability - OCA - France
- 2012 Characterising and Modelling Extrasolar Planetary Atmospheres - MPIA
- 2010 V Workshop of Planetary Science - UNLP

Refereeing

Astronomy & Astrophysics

Astrophysical Journal

Monthly Notices of the Royal Astronomical Society

Origin of Life and Evolution of Biospheres