

Dr. Rafael Luque

exoplanet.observer

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RESEARCH INTERESTS

High-resolution visible and NIR spectroscopy — Extremely precise radial velocities — Ground- and space-based transit photometry — Low-mass stars— Formation and evolution of planetary systems — Exoplanet demographics — Atmospheric compositions

EDUCATION

Ph.D. in Astrophysics

Canary Islands, Spain | Jan 2018 - Jun 2021

INSTITUTO DE ASTROFISICA DE CANARIAS AND UNIVERSITY OF LA LAGUNA

Thesis: Planetary systems around red dwarfs and activity of their host stars (*cum laude and international mention*)

Advisors: Prof. Enric Pallé and Dr. Grzegorz Nowak

M.Sc. in Physics (especialization in Astrophysics)

Heidelberg, Germany | Oct 2015 - Dec 2017

UNIVERSITY OF HEIDELBERG

Thesis: Two planets orbiting in 4:3 resonance around the K-giant 7 CMa (*with honors*)

Advisors: Prof. Andreas Quirrenbach and Priv. Doz. Sabine Reffert

B.Sc. in Physics

Granada, Spain | Oct 2010 - Jul 2015

UNIVERSITY OF GRANADA

Professional Certificate in Piano

Granada, Spain | Oct 2001 - Jul 2012

PROFESSIONAL CONSERVATORY OF MUSIC "ANGEL BARRIOS"

PROFESSIONAL EXPERIENCE

University of Chicago

Chicago, USA | Mar 2022 – present

"MARGARITA SALAS" POSTDOCTORAL FELLOW

Instituto de Astrofísica de Andalucía

Granada, Spain | Jun 2021 – Feb 2022

"SEVERO OCHOA" POSTDOCTORAL FELLOW

Max-Planck Institute for Astronomy

Heidelberg, Germany | Apr 2019 – Aug 2019

GRADUATE RESEARCH STAY

International Centre of Scientific Computing

Heidelberg, Germany | Sep 2017 – Dec 2017

RESEARCH ASSISTANT

Instituto de Astrofísica de Canarias

Canary Islands, Spain | Jul 2016 – Sep 2016

SUMMER INTERNSHIP

Instituto Nacional de Astronomía, Óptica y Electrónica

Puebla, Mexico | Jun 2013 – Aug 2013

SUMMER INTERNSHIP

GRANTS AND FUNDING AWARDS

Funding to organize the international conference ``Density Matters 2024"

Jun 2023

Ernst-Rudolf-Schloeßmann Stiftung. Amount: 40,000.00 EUR.

JWST Cycle 2 General Observer Program #3263

Jun 2023

Space Telescope Science Institute. Amount: 140,000.00 USD.

"Margarita Salas" Fellowship for young doctors

Dec 2021

Spanish Ministry of Education. Amount: 121,100.00 EUR.

"Severo Ochoa" Excellence Fellowship

Jun 2021

Instituto de Astrofísica de Andalucía. Amount: 30,000.00 EUR.

INPhINIT Fellowship Grant for Doctoral studies

Jan 2018

European Union's Horizon 2020 and "la Caixa" Banking Foundation. Amount: 125,400.00 EUR.

HONORS AND AWARDS

Honorary Mention, 2021 IAU PhD Prize

Division F Planetary Systems and Bioastronomy, International Astronomical Union.

Jun 2022

Best Astronomy PhD Thesis

Spanish Astronomical Society. Amount: 2,000.00 EUR.

Jun 2022

Best PhD Thesis in Astrophysics

University of La Laguna and Santander Bank. Amount: 1,000.00 EUR.

May 2022

Award "Valores de la Subbetica" (Distinguished Young Citizen)

Grupo de Desarrollo Rural de la Subbetica.

Oct 2021

Honorary Citizen of the Year

City council of Priego de Cordoba, Spain.

Feb 2020

Starlight Foundation Ambassador

Starlight Foundation.

Jun 2015

First Prize of the "IV Contest of University Entrepreneurs"

University of Granada. Amount: 3,000.00 EUR.

Oct 2014

MENTORING

Ritvik Basant

PHD THESIS CO-SUPERVISOR

University of Chicago | 2023 – 202X

Daniel Revilla Martinez de Albeniz

PHD THESIS CO-SUPERVISOR

Instituto de Astrofisica de Andalucia | 2023 – 202X

Jaume Orell Miquel

MSC THESIS SUPERVISOR

Instituto de Astrofisica de Canarias | 2019 – 2020

Sergio Alvarez

MSC THESIS CO-SUPERVISOR

Universidad Autonoma de Madrid | 2019 – 2020

PUBLIC OUTREACH (MOST RELEVANT)

Astrotourism Center "Los Coloraos"

DIRECTOR OF SCIENTIFIC RESEARCH

Gorafe, Spain | Sep 2019 - present

Private observatory devoted to the dissemination of astronomy in one of the darkest locations in continental Europe. Music, nature, gastronomy, and art complement our regular program focused on astronomical activities for all ages.

Turismo Astronomico Inc.

CO-FOUNDER

Oct 2014 - present

Dark-sky certification, outdoor lighting policy advice, astrotourism consultancy, site characterization, and development of amateur observatories to promote astronomy in the rural areas of the south of Spain

Junior Enterprise of Andalusian Outreach (JEDA Granada)

CO-FOUNDER AND HEAD OF THE ASTRONOMY DEPARTMENT

Oct 2014 - Oct 2015

Visits to scientific facilities, workshops, courses, experiment shows in schools, and public astronomical observations.

SKILLS

Languages: Spanish, English, Italian, German (basic), Nepali (basic)

Programming: Python, UNIX/MacOS, \LaTeX , HTML (basic)

Observing experience: Teide Observatory (Tenerife, Spain), Roque de los Muchachos Observatory (La Palma, Spain),

Calar Alto Observatory (Almeria, Spain), Landessternwarte (Heidelberg, Germany), La Silla Observatory (La Serena, Chile),

Paranal Observatory (Antofagasta, Chile), Mauna Kea (Hawaii, USA).

PROFESSIONAL SERVICE

Consortium member. CHEOPS, TESS Follow-up Observing Program, MuSCAT2, CARMENES, MAROON-X	
Conference chair. Density Matters 2024 at Schloss Ringberg	Feb 2024
Symposium chair. Spanish Astronomical Society Biannual Meeting	Jul 2024
Time Allocation Committee member. Keck (starting 2025), Gemini Observatory, ESO	since Oct 2022
Funding review panel member. NASA XRP, NASA EPRV	since Jun 2022
Scientific Organizing Committee member. Europlanet Science Congress 2022	Sep 2022
Steering Committee, elected member. KESPRINT Consortium	since Feb 2021
Tech support. European Astronomical Society 2020 and 2021 Meetings	
Journal reviewer. Nature, A&A, AJ, ApJ, MNRAS, PSJ	since Jan 2020

CONFERENCES, SEMINARS, AND COLLOQUIA

Invited Talks

Colloquium: <i>Six sub-Neptunes in sync around HD110067</i> Nicolaus Copernicus University	Toruń, Poland Jan 2024
Colloquium: <i>Understanding the origin and nature of sub-Neptunes</i> Instituto de Astrofísica de Andalucía	Granada, Spain Oct 2023
Conference: <i>Understanding the origin and nature of sub-Neptunes</i> ESA's MADRID-Area Exoplanet Science Meeting 2023	Madrid, Spain Oct 2023
Conference: <i>Six sub-Neptunes in sync around HD110067</i> TESS Mission Update Meeting	Cambridge, USA Jun 2023
Seminar: <i>Six sub-Neptunes in sync around HD110067</i> University of Chicago	Chicago, USA May 2023
Seminar: <i>Six sub-Neptunes in sync around HD110067</i> Massachusetts Institute of Technology	Cambridge, USA May 2023
Seminar: <i>The demographics of small exoplanets</i> NASA Jet Propulsion Laboratory	Pasadena, USA Apr 2023
Seminar: <i>The demographics of small exoplanets</i> California Institute of Technology	Pasadena, USA Mar 2023
Colloquium: <i>The demographics of small exoplanets</i> University of Kansas	Kansas, USA Mar 2023
Conference: <i>The demographics of small exoplanets</i> 55th PLANET-ESLAB Symposium	Noordwijk, Netherlands Mar 2023
Press briefing: <i>Are sub-Neptunes rocky or water worlds?</i> Science Society at Clubhouse	Online, USA Jan 2023
Colloquium: <i>The exoplanet revolution</i> Tribhuvan University	Kathmandu, Nepal Oct 2022
Conference: <i>PhD Thesis Prize Talk</i> Spanish Astronomical Society Biannual Meeting	Canary Islands, Spain Sep 2022
Seminar: <i>Are sub-Neptunes rocky or water worlds?</i> University of California Santa Cruz	Santa Cruz, USA Jun 2022
Press briefing: <i>Two rocky worlds transiting a bright M dwarf at 10 parsecs</i> 240th American Astronomical Society Meeting	Pasadena, USA Jun 2022
Seminar: <i>On the nature of small planets orbiting low-mass stars</i> Princeton University	Princeton, USA Jun 2022
Colloquium: <i>On the nature of small planets orbiting low-mass stars</i> University of Chicago	Chicago, USA Mar 2022
Conference: <i>TESS legacy, the brightest, closest transiting planets for atmospheric studies</i> Japan Geoscience Union Meeting	Online, Japan Jun 2021
Colloquium: <i>Fantastic exoplanets and how to find them</i>	Cadiz, Spain Apr 2021



Starlight Festival
Seminar: *Looking for small planets from small islands*
Universidad de Chile

Santiago, Chile | Oct 2019

Contributed Talks and Posters

- Conference:** *Splendidly Synchronized: Six Sub-Neptunes Spinning a Shiny Star*
Bay Area Exoplanet Meeting Santa Cruz, USA | Jul 2023
- Poster:** *MARCOT: A new large aperture telescope concept to feed CARMENES*
Extremely Precise Radial Velocities 5 Santa Barbara, USA | Mar 2023
- Conference:** *An update on MAROON-X*
Europlanet Science Congress 2022 Granada, Spain | Sep 2022
- Conference:** *On the nature of small planets orbiting low-mass stars*
Europlanet Science Congress 2022 Granada, Spain | Sep 2022
- Poster:** *A privately-funded amateur observatory devoted to astronomy outreach*
Spanish Astronomical Society Biannual Meeting Canary Islands, Spain | Sep 2022
- Conference:** *An observational test to planet formation theories around M dwarfs*
Emerging Researchers in Exoplanet Science VII Penn State, USA | Aug 2022
- Conference:** *Formation and composition of small planets orbiting M dwarfs*
European Astronomical Society Annual Meeting Valencia, Spain | Jun 2022
- Conference:** *On the nature of small planets orbiting low-mass stars*
Exoplanet Exploration Program Analysis Group Meeting 26 Pasadena, USA | Jun 2022
- Conference:** *An observational test to planet formation theories around M dwarfs*
Exoplanets IV Las Vegas, USA | May 2022
- Conference:** *The M-dwarf radius valley as seen by TESS*
TESS Science Conference II Online, USA | Aug 2021
- Poster:** *A comprehensive study of the WASP-47 planetary system*
STScI Spring Symposium Online, USA | Apr 2021
- Poster:** *TOI-776, a multi-planetary system around a bright M dwarf optimal for JWST*
237th American Astronomical Society Meeting Online, USA | Jan 2021
- Conference:** *Testing radius valley emergence models in M dwarfs*
PLATO ESP2020 Workshop Online, Germany | Dec 2020
- Conference:** *The obliquity distribution of UHJs, a population-wide view*
Exoplanet Demographics Conference Online, USA | Nov 2020
- Conference:** *A comprehensive study of the WASP-74 planetary system*
Europlanet Science Congress 2020 Online, Spain | Sep 2020
- Conference:** *Precise characterization of small planets around M dwarfs with CARMENES*
Exoplanets III Online, Germany | Jul 2020
- Poster:** *A second Jupiter orbiting in 4:3 resonance in the 7 CMa system*
Sagan Exoplanet Summer Workshop Online, USA | Jul 2020
- Poster:** *An Earth-sized planet optimal for atmospheric characterization in GJ 357*
Planetary Atmospheres and Habitability Congress Okinawa, Japan | Oct 2019
- Conference:** *A second Jupiter orbiting in 4:3 resonance in the 7 CMa system*
Planetary Dynamics 2019 Heidelberg, Germany | Jun 2019

PUBLICITY AND PRESS (FROM FIRST-AUTHOR PAPERS)

- A Star With Six Planets That Orbit Perfectly in Sync**  Nov 2023
Credit: NASA and ESA
Featured by The New York Times, Wall Street Journal, Washington Post, BBC News, Science, El Pais, Der Spiegel, La Repubblica, Le Figaro, and many others incl. more than 1700 news stories.
- Surprise finding suggests 'water worlds' are more common than we thought**  Sep 2022
Credit: University of Chicago, Instituto de Astrofísica de Andalucía and Instituto de Astrofísica de Canarias

Featured by NASA, El Pais, ABC, El Mundo, eldiario.es, Phys.org, Vice.com, Space.com, and many others.

Discovery Alert: Two New, Rocky Planets in the Solar Neighborhood

Jun 2022

Credit: NASA Jet Propulsion Laboratory

Featured by MIT, IAC, IAA-CSIC, ORIGINS Excellence Cluster, Phys.org, Space.com, Unilad.com, and many others

Confirmation of Toasty TESS Planet Leads to Surprising Find of Promising World

Jul 2019

Credit: NASA Goddard Space Flight Center

Featured by USA Today, CBS, NBC, El Pais, RTVE, Youtube (828K views), Scitechdaily.com, Space.com and many others.

Profile Interviews

since 2015

Credit: Subbetica Hoy, ABC, la Caixa Foundation, Informativos Televisión Canaria, Cordopolis, El Dia de Tenerife, Diario Cordoba, Cultura Granada

ACCEPTED OBSERVING PROPOSALS (**) MARKS PI AND (*) LEAD CO-I

** KPF/Keck: Understanding the origin and nature of the small exoplanet population (NASA KSMS)	2024A-2025B 10 nights
* CARMENES/CAHA3.5m: Precise mass measurements of small, temperate TESS planets	2024A 6.5 nights
** JWST: The First Atmospheric Study of a Bona Fide Water World (GO 3263)	2023B-2024A 23 hours
* CARMENES/CAHA3.5m: Mass characterization of the benchmark HD110067	2023B-2024B 23 hours
* HARPS-N/TNG: Mass characterization of the benchmark HD110067	2023B-2024A 18 hours
** HARPS-N/TNG: Completing CHEOPS characterization of long-period low-mass planets	2023B-2024A 15 nights
* HARPS-N/TNG: THIRSTEE: Understanding the nature of small planets across stellar types	2023B-2024A 10 nights
* ESPRESSO/VLT: THIRSTEE: Understanding the nature of small planets across stellar types	2023B 98 hours
MAROON-X/Gemini-N: Measuring the masses of the K2-155 system	2023B 36 hours
* HARPS/ESO3.6m: Accompanying CHEOPS' all-sky characterisation of small exoplanets	2023A 8 nights
* ESPRESSO/VLT: THIRSTEE: Understanding the nature of small planets across stellar types	2023A 40 hours
* HARPS/ESO3.6m: THIRSTEE: Understanding the nature of small planets across stellar types	2023A 3 nights
* HARPS-N/TNG: THIRSTEE: Understanding the nature of small planets across stellar types	2023A 9 nights
* HIRES/Keck: THIRSTEE: Understanding the nature of small planets across stellar types	2023A 2.5 nights
* HARPS-N/TNG: The K2 & TESS Synergy: Precise masses of small planets	2022A-2022B 20 nights
** HARPS-N/TNG: Completing CHEOPS characterization of long-period low-mass planets	2022B-2023A 7 nights
ESPRESSO/VLT: Two Earth-sized Planets in the Habitable Zone of TOI-700	2022B 60 hours
HARPS-N/TNG: Confirming the discovery of a 130 Myr-old baby super-Earth	2022B 1 night
* HARPS/ESO3.6m: PiGS: non-transiting Planets in Giant Stars with TESS	2022A 6 nights
** HARPS-N/TNG: PiGS: non-transiting Planets in Giant Stars with TESS	2022A 2 nights
** SES/STELLA: PiGS: non-transiting Planets in Giant Stars with TESS	2022A 48 hours
* CAFE/CAHA2.2m: PiGS: non-transiting Planets in Giant Stars with TESS	2022A 6 nights
HARPS/ESO3.6m: A search for warm Jupiter companions to test their formation path	2022A 3 nights
CARMENES/CAHA3.5m: Mass determination of the HD63433 young planets	2022A 0.5 nights
* CARMENES/CAHA3.5m: Mass measurements of TESS small, temperate planets	2021A-2023B 90 nights
* HARPS-N/TNG: Follow-up of TESS small planet candidates in the northern hemisphere	2021A-2021B 20 nights
** HERMES/MERCATOR: PiGS: non-transiting Planets in Giant Stars with TESS	2021B 6 nights
** SES/STELLA: PiGS: non-transiting Planets in Giant Stars with TESS	2021B 48 hours
HARPS/ESO3.6m: Red Dots 6: all terrestrial planets orbiting red dwarfs within 5 pc	2021B 3.6 nights
ESPRESSO/VLT: A Slow Dance of Four Exo-Neptunes	2021B 16 hours
CARMENES/CAHA3.5m: Mass determination of the HD63433 young planets	2021B 1.7 nights
** OSIRIS/GTC: Probing the atmosphere of WASP-74b	2021A 9.2 hours
** HERMES/MERCATOR: PiGS: non-transiting Planets in Giant Stars with TESS	2021A 6 nights
* CAFE/CAHA2.2m: PiGS: non-transiting Planets in Giant Stars with TESS	2021A 6 nights
HARPS-N/TNG: Unveiling the obliquity of the HAT-P-57 system	2021A 2 nights
HARPS-N/TNG: Obliquity measurement and atmospheric characterization of 3 UHJs	2021A 6 nights
OSIRIS/GTC: Validation of the transiting exoplanet candidate TOI-2283	2021A 7.2 hours

Continues below.

HARPS/ESO3.6m: Small planets inside and out: TESS follow-up with CHEOPS and HARPS	2020B-2023A 98 nights
HARPS-N/TNG: Mass determination of single-transit warm Jupiters from TESS	2020A-2023B 36 nights
** CARMENES/CAHA3.5m: Follow-up of two key multi-planetary systems	2020B 4 nights
** FIES/NOT: PiGS: non-transiting Planets in Giant Stars with TESS	2020B 5 nights
HARPS/ESO3.6m: Red Dots 5: all terrestrial planets orbiting red dwarfs within 5 pc	2020B 12 nights
HARPS-N/TNG: Distinguishing BDs and giant planets via obliquity measurements	2020B 1 night
CARMENES/CAHA3.5m: Probing the newly-formed atmospheres of the HD63433 planets	2020B 2.5 nights
CARMENES/CAHA3.5m: Mass determination of the HD63433 young planets	2020B 2.7 nights
* HARPS/ESO3.6m: PiGS: non-transiting Planets in Giant Stars with TESS	2020A 5.4 nights
** FIES/NOT: PiGS: non-transiting Planets in Giant Stars with TESS	2020A 8 nights
HARPS/ESO3.6m: Red Dots 4: all terrestrial planets orbiting red dwarfs within 5 pc	2020A 12 nights
HARPS-N/TNG: Atmospheric characterization of exoplanets in TESS north hemisphere fields	2020A 1 night
OSIRIS/GTC: Atmospheric characterization of exoplanets in TESS north hemisphere fields	2020A 3 nights
* HARPS-N/TNG: Follow-up of TESS small planet candidates in the northern hemisphere	2019A-2020B 40 nights
* CARMENES/CAHA3.5m: Follow-up of TESS small planet candidates orbiting FGK dwarfs	2019B-2020A 18 nights
ESPRESSO/VLT: Exploring the upper-atmospheres of two twin exoplanets	2019B 8 hours
** MuSCAT2/TCS: Fishing for transits of RV-detected planets	2018B-2020A 25 nights

PUBLICATIONS

SUMMARY: Since 2018, 10 first-author publications and a total of 123 refereed articles. First-author papers in collaboration with more than 150 researchers from 50 different institutions across 15 countries. Publications as first or co-lead author (10+8): 400+ citations (27.1 average citations per paper), h-index 11. All publications (120): 2600+ citations (21.7 average citations per paper), h-index 29. Full list: <https://bit.ly/3jogBvj>

First Author (or lead co-author) (**) indicates publication accompanied by international press release

18. Dreizler, S., **Luque, R.**, Ribas, I., et al. (2023). "Teegarden's star revisited. A nearby planetary system with at least three planets", A&A, under review
17. ** **Luque, R.**, Osborn, H. P., Leleu, A., et al. (2023). "A resonant sextuplet of sub-Neptunes around the bright star HD 110067", Nature, 623, 932–937
16. Parviainen, H., **Luque, R.** & Pallé, E. (2023). "Spright: a probabilistic mass-density-radius relation for small planets", MNRAS, stad3504
15. **Luque, R.**, Nowak, G., Hirano, T., et al. (2022). "Precise mass determination for the keystone sub-Neptune planet transiting the mid-type M dwarf G 9-40", A&A, 666, A154
14. ** **Luque, R.**, & Pallé, E. (2022). "Density, not radius, separates rocky and water-rich small planets orbiting M dwarf stars", Science, 377, 1211-1214
13. ** **Luque, R.**, Fulton, B. J., Kunimoto, M., et al. (2022). "The HD 260655 system: Two rocky worlds transiting a bright M dwarf at 10 pc", A&A, 664, A199
12. Reefe, M. A., **Luque, R.**, Gaidos, E., et al. (2022). "A Close-in Puffy Neptune with Hidden Friends: The Enigma of TOI 620", AJ, 163, 269
11. Pallé, E., **Luque, R.**, Zapatero Osorio, M. R., et al. (2021). "ESPRESSO mass determination of TOI-263b: an extreme inhabitant of the brown dwarf desert", A&A, 650, A55
10. **Luque, R.**, Serrano, L. M., Molaverdikhani, K., et al. (2021). "A planetary system with two transiting mini-Neptunes near the radius valley transition around the bright M dwarf TOI-776", A&A, 645, A41
9. **Luque, R.**, Casasayas-Barris, N., Parviainen, H., et al. (2020). "Obliquity measurement and atmospheric characterisation of the WASP-74 planetary system", A&A, 642, A50
8. Nowak, G., **Luque, R.**, Parviainen, H., et al. (2020). "The CARMENES search for exoplanets around M dwarfs. Two planets on opposite sides of the radius gap transiting the nearby M dwarf LTT 3780", A&A, 642, A173
7. Teske, J., Díaz, M. R., **Luque, R.**, et al. (2020). "TESS Reveals a Short-period Sub-Neptune Sibling (HD 86226c) to a Known Long-period Giant Planet", AJ, 160, 96

6. Bluhm, P., **Luque, R.**, Espinoza, N., et al. (2020). “Precise mass and radius of a transiting super-Earth planet orbiting the M dwarf TOI-1235: a planet in the radius gap?”, A&A, 639, A132
5. **Luque, R.**, Trifonov, T., Reffert, S., et al. (2019). “Precise radial velocities of giant stars. XIII. A second Jupiter orbiting in 4:3 resonance in the 7 CMa system”, A&A, 631, A136
4. ** **Luque, R.**, Pallé, E., Kossakowski, D., et al. (2019). “Planetary system around the nearby M dwarf GJ 357 including a transiting, hot, Earth-sized planet optimal for atmospheric characterization”, A&A, 628, A39
3. **Luque, R.**, Nowak, G., Pallé, E., et al. (2019). “Detection and characterization of an ultra-dense sub-Neptunian planet orbiting the Sun-like star K2-292”, A&A, 623, A114
2. Palte, E., Nowak, G., **Luque, R.**, et al. (2019). “Detection and Doppler monitoring of K2-285 (EPIC 246471491), a system of four transiting planets smaller than Neptune”, A&A, 623, A41
1. **Luque, R.**, Nowak, G., Pallé, E., et al. (2018). “The CARMENES search for exoplanets around M dwarfs. The warm super-Earths in twin orbits around the mid-type M dwarfs Ross 1020 (GJ 3779) and LP 819-052 (GJ 1265)”, A&A, 620, A171

Contributing Author (**) indicates publication accompanied by international press release

105. Bowens-Rubin, R., Akana Murphy, J. M., Hinz, P. M., et al. incl. **Luque, R.**, (2023). “A Wolf 359 in Sheep’s Clothing: Hunting for Substellar Companions in the Fifth-closest System Using Combined High-contrast Imaging and Radial Velocity Analysis”, AJ, 166, 260 — **Indiv. contribution:** Contributed the MAROON-X observations in the paper. Telescope observing, data reduction, and analysis.
104. Bonfanti, A., Brady, M., Wilson, T. G., et al. incl. **Luque, R.**, (2023). “Characterising TOI-732 b and c: new insights on the M-dwarf radius and density valley”, arXiv e-prints, arXiv:2311.12577 — **Indiv. contribution:** Contributed the MAROON-X observations in the paper. Part of the CHEOPS’s working group that proposed and analyzed the observations. Telescope observing, data reduction, analysis, and interpretation.
103. Delrez, L., Leleu, A., Brandeker, A., et al. incl. **Luque, R.**, (2023). “Refining the properties of the TOI-178 system with CHEOPS and TESS”, A&A, 678, A200 — **Indiv. contribution:** Part of the CHEOPS’s working group that proposed and analyzed the observations. Contributed to data analysis and interpretation.
102. Palte, E., Orell-Miquel, J., Brady, M., et al. incl. **Luque, R.**, (2023). “GJ 806 (TOI-4481): A bright nearby multi-planetary system with a transiting hot low-density super-Earth”, A&A, 678, A80 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
101. Prinoth, B., Hoeijmakers, H. J., Pelletier, S., et al. incl. **Luque, R.**, (2023). “Time-resolved transmission spectroscopy of the ultra-hot Jupiter WASP-189 b”, A&A, 678, A182 — **Indiv. contribution:** Contributed the MAROON-X observations in the paper. Telescope observing and data reduction.
100. Osborne, H. L. M., Van Eylen, V., Goffo, E., et al. (2023). incl. **Luque, R.**, “TOI-544 b: a potential water-world inside the radius valley in a two-planet system”, arXiv e-prints, arXiv:2310.14908 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
99. Mallorquín, M., Goffo, E., Pallé, E., et al. (2023). incl. **Luque, R.**, “TOI-1801 b: A temperate mini-Neptune around a young M0.5 dwarf”, arXiv e-prints, arXiv:2310.10244 — **Indiv. contribution:** Co-I of the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
98. Murgas, F., Castro-González, A., Pallé, E., et al. (2023). incl. **Luque, R.**, “Two super-Earths at the edge of the habitable zone of the nearby M dwarf TOI-2095”, A&A, 677, A182 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
97. ** Goffo, E., Gandolfi, D., Egger, J. A., et al. (2023). incl. **Luque, R.**, “Company for the Ultra-high Density, Ultra-short Period Sub-Earth GJ 367 b: Discovery of Two Additional Low-mass Planets at 11.5 and 34 Days”, ApJ, 955, L3 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
96. Deeg, H. J., Georgieva, I. Y., Nowak, G., et al. incl. **Luque, R.**, (2023). “TOI-1416: A system with a super-Earth planet with a 1.07 d period”, A&A, 677, A12 — **Indiv. contribution:** Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.

95. ** Osborn, H. P., Nowak, G., Hébrard, G., et al. incl. **Luque, R.**, (2023). “Two warm Neptunes transiting HIP 9618 revealed by TESS and CHEOPS”, MNRAS, 523, 3069-3089 — **Indiv. contribution:** Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis. Part of the CHEOPS’s working group that proposed and analyzed the observations.
94. Tuson, A., Queloz, D., Osborn, H. P., et al. incl. **Luque, R.**, (2023). “TESS and CHEOPS discover two warm sub-Neptunes transiting the bright K-dwarf HD 15906”, MNRAS, 523, 3090-3118 — **Indiv. contribution:** Part of the CHEOPS’s working group that proposed and analyzed the observations. Contributed to data analysis and interpretation.
93. Cabrera, J., Gandolfi, D., Serrano, L. M., et al. incl. **Luque, R.**, (2023). “The planetary system around HD 190622 (TOI-1054). Measuring the gas content of low-mass planets orbiting F-stars”, A&A, 675, A183 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Part of the CHEOPS’s working group that proposed and analyzed the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
92. Korth, J., Gandolfi, D., Šubjak, J., et al. incl. **Luque, R.**, (2023). “TOI-1130: A photodynamical analysis of a hot Jupiter in resonance with an inner low-mass planet”, A&A, 675, A115 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
91. Georgieva, I. Y., Persson, C. M., Goffo, E., et al. incl. **Luque, R.**, (2023). “TOI-733 b: A planet in the small-planet radius valley orbiting a Sun-like star”, A&A, 674, A117 — **Indiv. contribution:** Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
90. Bello-García, A., Passegger, V. M., Ordieres-Meré, J., et al. incl. **Luque, R.**, (2023). “The CARMENES search for exoplanets around M dwarfs. A deep transfer learning method to determine T_{eff} and $[M/H]$ of target stars”, A&A, 673, A105 — **Indiv. contribution:** CARMENES consortium representative. Manuscript review and interpretation.
89. Nascimbeni, V., Borsato, L., Zingales, T., et al. incl. **Luque, R.**, (2023). “A new dynamical modeling of the WASP-47 system with CHEOPS observations”, A&A, 673, A42 — **Indiv. contribution:** Part of the CHEOPS’s working group that proposed and analyzed the observations. Contributed to data analysis and interpretation.
88. Morello, G., Parviainen, H., Murgas, F., et al. incl. **Luque, R.**, (2023). “TOI-1442 b and TOI-2445 b: Two potentially rocky ultra-short period planets around M dwarfs”, A&A, 673, A32 — **Indiv. contribution:** Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation.
87. ** Pozuelos, F. J., Timmermans, M., Rackham, B. V., et al. incl. **Luque, R.**, (2023). “A super-Earth and a mini-Neptune near the 2:1 MMR straddling the radius valley around the nearby mid-M dwarf TOI-2096”, A&A, 672, A70 — **Indiv. contribution:** Data interpretation and simulations of RV follow-up prospects.
86. Brady, M., Bean, J. L., Seifahrt, A., et al. incl. **Luque, R.**, (2023). “Measuring the Obliquities of the TRAPPIST-1 Planets with MAROON-X”, AJ, 165, 129 — **Indiv. contribution:** Contributed the MAROON-X observations in the paper. Telescope observing, data reduction, analysis, and interpretation.
85. Hirano, T., Dai, F., Livingston, J. H., et al. incl. **Luque, R.**, (2023). “An Earth-sized Planet around an M5 Dwarf Star at 22 pc”, AJ, 165, 131 — **Indiv. contribution:** Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
84. Knudstrup, E., Albrecht, S. H., Gandolfi, D., et al. incl. **Luque, R.**, (2023). “A puffy polar planet. The low density, hot Jupiter TOI-640 b is on a polar orbit”, A&A, 671, A164 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Manuscript review and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
83. Mallorquín, M., Béjar, V. J. S., Lodieu, N., et al. incl. **Luque, R.**, (2023). “Dynamical masses of two young transiting sub-Neptunes orbiting HD 63433”, A&A, 671, A163 — **Indiv. contribution:** Co-I of the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
82. Lam, K. W. F., Cabrera, J., Hooton, M. J., et al. incl. **Luque, R.**, (2023). “Discovery of TOI-1260d and the characterization of the multiplanet system”, MNRAS, 519, 1437-1451 — **Indiv. contribution:** Part of the CHEOPS’s working group that proposed and analyzed the observations. Contributed to data analysis and interpretation.

81. ** Ribas, I., Reiners, A., Zechmeister, M., et al. incl. **Luque, R.**, (2023). “*The CARMENES search for exoplanets around M dwarfs. Guaranteed time observations Data Release 1 (2016-2020)*”, A&A, 670, A139 — **Indiv. contribution**: Summary paper of the GTO observations of CARMENES, of which I am a consortium member since 2015. Telescope observing, data reduction, analysis, and interpretation.
80. Orell-Miquel, J., Nowak, G., Murgas, F., et al. incl. **Luque, R.**, (2023). “*HD 191939 revisited: New and refined planet mass determinations, and a new planet in the habitable zone*”, A&A, 669, A40 — **Indiv. contribution**: Paper led by supervised MSc student. PI of the CARMENES proposal that collected the observations. Supervision, data reduction, analysis, and interpretation.
79. Lillo-Box, J., Gandolfi, D., Armstrong, D. J., et al. incl. **Luque, R.**, (2023). “*TOI-969: a late-K dwarf with a hot mini-Neptune in the desert and an eccentric cold Jupiter*”, A&A, 669, A109 — **Indiv. contribution**: Co-I of the HARPS proposal that collected the observations. Contributed to data analysis and interpretation.
78. Murgas, F., Nowak, G., Masseron, T., et al. incl. **Luque, R.**, (2022). “*HD 20329b: An ultra-short-period planet around a solar-type star found by TESS*”, A&A, 668, A158 — **Indiv. contribution**: Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
77. Persson, C. M., Georgieva, I. Y., Gandolfi, D., et al. incl. **Luque, R.**, (2022). “*TOI-2196 b: Rare planet in the hot Neptune desert transiting a G-type star*”, A&A, 666, A184 — **Indiv. contribution**: Co-I of the HARPS proposal that collected the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
76. Esparza-Borges, E., Parviainen, H., Murgas, F., et al. incl. **Luque, R.**, (2022). “*A hot sub-Neptune in the desert and a temperate super-Earth around faint M dwarfs. Color validation of TOI-4479b and TOI-2081b*”, A&A, 666, A10 — **Indiv. contribution**: Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation.
75. Chaturvedi, P., Bluhm, P., Nagel, E., et al. incl. **Luque, R.**, (2022). “*TOI-1468: A system of two transiting planets, a super-Earth and a mini-Neptune, on opposite sides of the radius valley*”, A&A, 666, A155 — **Indiv. contribution**: Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
74. Kawauchi, K., Murgas, F., Pale, E., et al. incl. **Luque, R.**, (2022). “*Validation and atmospheric exploration of the sub-Neptune TOI-2136b around a nearby M3 dwarf*”, A&A, 666, A4 — **Indiv. contribution**: Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation.
73. ** Caballero, J. A., González-Álvarez, E., Brady, M., et al. incl. **Luque, R.**, (2022). “*A detailed analysis of the Gl 486 planetary system*”, A&A, 665, A120 — **Indiv. contribution**: Contributed to both CARMENES and MAROON-X observations in the paper.
72. Barragán, O., Armstrong, D. J., Gandolfi, D., et al. incl. **Luque, R.**, (2022). “*The young HD 73583 (TOI-560) planetary system: two 10-M_J mini-Neptunes transiting a 500-Myr-old, bright, and active K dwarf*”, MNRAS, 514, 1606-1627 — **Indiv. contribution**: Co-I of the HARPS proposal that collected the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
71. Roth, M. M., Aceituno, J., Ortiz, J. L., et al. incl. **Luque, R.**, (2022). “*MARCOT Pathfinder at Calar Alto progress report*”, Proc. SPIE, 12182, 121820M — **Indiv. contribution**: SPIE Proceeding reporting of a new large aperture telescope concept for Calar Alto observatory. Contributed the exoplanet science cases that the new facility could pursue.
70. Kabáth, P., Chaturvedi, P., MacQueen, P. J., et al. incl. **Luque, R.**, (2022). “*TOI-2046b, TOI-1181b, and TOI-1516b, three new hot Jupiters from TESS: planets orbiting a young star, a subgiant, and a normal star*”, MNRAS, 513, 5955-5972 — **Indiv. contribution**: Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
69. Stangret, M., Casasayas-Barris, N., Pallé, E., et al. incl. **Luque, R.**, (2022). “*High-resolution transmission spectroscopy study of ultra-hot Jupiters HAT-P-57b, KELT-17b, KELT-21b, KELT-7b, MASCARA-1b, and WASP-189b*”, A&A, 662, A101 — **Indiv. contribution**: Co-I of the HARPS-N proposals that collected the observations. Telescope observing, data reduction, and analysis.

68. Šubjak, J., Endl, M., Chaturvedi, P., et al. incl. **Luque, R.**, (2022). “TOI-1268b: The youngest hot Saturn-mass transiting exoplanet”, A&A, 662, A107 — **Indiv. contribution:** Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
67. Turtelboom, E. V., Weiss, L. M., Dressing, C. D., et al. incl. **Luque, R.**, (2022). “The TESS-Keck Survey. XI. Mass Measurements for Four Transiting Sub-Neptunes Orbiting K Dwarf TOI-1246”, AJ, 163, 293 — **Indiv. contribution:** Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis.
66. Tran, Q. H., Bowler, B. P., Endl, M., et al. incl. **Luque, R.**, (2022). “TOI-1670 b and c: An Inner Sub-Neptune with an Outer Warm Jupiter Unlikely to Have Originated from High-eccentricity Migration”, AJ, 163, 225 — **Indiv. contribution:** Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
65. Hatzes, A. P., Gandolfi, D., Korth, J., et al. incl. **Luque, R.**, (2022). “A Radial Velocity Study of the Planetary System of π Mensae: Improved Planet Parameters for π Mensae c and a Third Planet on a 125 Day Orbit”, AJ, 163, 223 — **Indiv. contribution:** Co-I of the HARPS proposals that collected the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
64. ** Serrano, L. M., Gandolfi, D., Mustill, A. J., et al. incl. **Luque, R.**, (2022). “A low-eccentricity migration pathway for a 13-h-period Earth analogue in a four-planet system”, Nature Astronomy, 6, 736-750 — **Indiv. contribution:** Co-I of the HARPS proposals that collected the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
63. Jordán, A., Hartman, J. D., Bayliss, D., et al. incl. **Luque, R.**, (2022). “HATS-74Ab, HATS-75b, HATS-76b, and HATS-77b: Four Transiting Giant Planets Around K and M Dwarfs”, AJ, 163, 125 — **Indiv. contribution:** Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation.
62. Smith, A. M. S., Breton, S. N., Csizmadia, S., et al. incl. **Luque, R.**, (2022). “K2-99 revisited: a non-inflated warm Jupiter, and a temperate giant planet on a 522-d orbit around a subgiant”, MNRAS, 510, 5035-5049 — **Indiv. contribution:** Co-I of the HARPS and HARPS-N proposals that collected the observations. Telescope observing, data reduction, analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
61. Orell-Miquel, J., Murgas, F., Pallé, E., et al. incl. **Luque, R.**, (2022). “A tentative detection of He I in the atmosphere of GJ 1214 b”, A&A, 659, A55 — **Indiv. contribution:** Co-I in the CARMENES proposal that collected the observations. Data reduction and interpretation.
60. Espinoza, N., Pallé, E., Kemmer, J., et al. incl. **Luque, R.**, (2022). “A Transiting, Temperate Mini-Neptune Orbiting the M Dwarf TOI-1759 Unveiled by TESS”, AJ, 163, 133 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
59. Kemmer, J., Dreizler, S., Kossakowski, D., et al. incl. **Luque, R.**, (2022). “Discovery and mass measurement of the hot, transiting, Earth-sized planet, GJ 3929 b”, A&A, 659, A17 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
58. Wilson, T. G., Goffo, E., Alibert, Y., et al. incl. **Luque, R.**, (2022). “A pair of sub-Neptunes transiting the bright K-dwarf TOI-1064 characterized with CHEOPS”, MNRAS, 511, 1043-1071 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction and analysis. Part of the CHEOPS’s working group that proposed and analyzed the observations. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
57. ** Fukui, A., Kimura, T., Hirano, T., et al. incl. **Luque, R.**, (2022). “TOI-2285b: A 1.7 Earth-radius planet near the habitable zone around a nearby M dwarf”, PASJ, 74, L1-L8 — **Indiv. contribution:** Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation.
56. González-Álvarez, E., Zapatero Osorio, M. R., Sanz-Forcada, J., et al. incl. **Luque, R.**, (2022). “A multi-planetary system orbiting the early-M dwarf TOI-1238”, A&A, 658, A138 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
55. Heidari, N., Boisse, I., Orell-Miquel, J., et al. incl. **Luque, R.**, (2022). “HD 207897 b: A dense sub-Neptune transiting a nearby and bright K-type star”, A&A, 658, A176 — **Indiv. contribution:** Paper co-led by supervised MSc student. Supervision, data reduction, analysis, and interpretation.

54. Kossakowski, D., Kemmer, J., Bluhm, P., et al. incl. **Luque, R.**, (2021). “TOI-1201 b: A mini-Neptune transiting a bright and moderately young M dwarf”, A&A, 656, A124 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
53. Polanski, A. S., Crossfield, I. J. M., Burt, J. A., et al. incl. **Luque, R.**, (2021). “Wolf 503 b: Characterization of a Sub-Neptune Orbiting a Metal-poor K Dwarf”, AJ, 162, 238 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
52. ** Suárez Mascareño, A., Damasso, M., Lodieu, N., et al. incl. **Luque, R.**, (2021). “Rapid contraction of giant planets orbiting the 20-million-year-old star V1298 Tau”, Nature Astronomy, 6, 232-240 — **Indiv. contribution:** Co-I of the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
51. Garai, Z., Pribulla, T., Parviainen, H., et al. incl. **Luque, R.**, (2021). “Is the orbit of the exoplanet WASP-43b really decaying? TESS and MuSCAT2 observations confirm no detection”, MNRAS, 508, 5514-5523 — **Indiv. contribution:** Contributed the MuSCAT2 observations. Telescope observing, data analysis and interpretation.
50. Addison, B. C., Knudstrup, E., Wong, I., et al. incl. **Luque, R.**, (2021). “TOI-1431b/MASCARA-5b: A Highly Irradiated Ultrahot Jupiter Orbiting One of the Hottest and Brightest Known Exoplanet Host Stars”, AJ, 162, 292 — **Indiv. contribution:** Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis.
49. ** Lam, K. W. F., Csizmadia, S., Astudillo-Defru, N., et al. incl. **Luque, R.**, (2021). “GJ 367b: A dense, ultrashort-period sub-Earth planet transiting a nearby red dwarf star”, Science, 374, 1271-1275 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Contributed to data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
48. de Leon, J. P., Livingston, J., Endl, M., et al. incl. **Luque, R.**, (2021). “37 new validated planets in overlapping K2 campaigns”, MNRAS, 508, 195-218 — **Indiv. contribution:** Contributed the MuSCAT2 observations. Telescope observing, data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
47. Scarsdale, N., Murphy, J. M. A., Batalha, N. M., et al. incl. **Luque, R.**, (2021). “TESS-Keck Survey. V. Twin Sub-Neptunes Transiting the Nearby G Star HD 63935”, AJ, 162, 215 — **Indiv. contribution:** Contributed the MuSCAT2 observations. Telescope observing, data analysis and interpretation.
46. Stangret, M., Pallé, E., Casasayas-Barris, N., et al. incl. **Luque, R.**, (2021). “The obliquity and atmosphere of the ultra-hot Jupiter TOI-1431b (MASCARA-5b): A misaligned orbit and no signs of atomic or molecular absorptions”, A&A, 654, A73 — **Indiv. contribution:** Co-I of the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis.
45. Casasayas-Barris, N., Orell-Miquel, J., Stangret, M., et al. incl. **Luque, R.**, (2021). “CARMENES detection of the Ca II infrared triplet and possible evidence of He I in the atmosphere of WASP-76b”, A&A, 654, A163 — **Indiv. contribution:** Co-I of the CARMENES proposal that collected the observations. Telescope observing, data reduction, and analysis.
44. ** Van Eylen, V., Astudillo-Defru, N., Bonfils, X., et al. incl. **Luque, R.**, (2021). “Masses and compositions of three small planets orbiting the nearby M dwarf L231-32 (TOI-270) and the M dwarf radius valley”, MNRAS, 507, 2154-2173 — **Indiv. contribution:** Co-I of the HARPS and ESPRESSO proposals that collected the observations. Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
43. Fukui, A., Korth, J., Livingston, J. H., et al. incl. **Luque, R.**, (2021). “TOI-1749: an M dwarf with a Trio of Planets including a Near-resonant Pair”, AJ, 162, 167 — **Indiv. contribution:** Contributed the MuSCAT2 observations. Telescope observing, data analysis and interpretation.
42. Hoyer, S., Gandolfi, D., Armstrong, D. J., et al. incl. **Luque, R.**, (2021). “TOI-220 b: a warm sub-Neptune discovered by TESS”, MNRAS, 505, 3361-3379 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
41. Georgieva, I. Y., Persson, C. M., Barragán, O., et al. incl. **Luque, R.**, (2021). “Hot planets around cool stars - two short-period mini-Neptunes transiting the late K-dwarf TOI-1260”, MNRAS, 505, 4684-4701 — **Indiv. contribution:** Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.

40. Johnson, E. N., Czesla, S., Fuhrmeister, B., et al. incl. **Luque, R.**, (2021). “*Simultaneous photometric and CARMENES spectroscopic monitoring of fast-rotating M dwarf GJ 3270. Discovery of a post-flare corotating feature*”, A&A, 651, A105 — **Indiv. contribution:** Contributed the MuSCAT2 observations. Telescope observing, data analysis and interpretation.
39. Bluhm, P., Pallé, E., Molaverdikhani, K., et al. incl. **Luque, R.**, (2021). “*An ultra-short-period transiting super-Earth orbiting the M3 dwarf TOI-1685*”, A&A, 650, A78 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
38. ** Trifonov, T., Caballero, J. A., Morales, J. C., et al. incl. **Luque, R.**, (2021). “*A nearby transiting rocky exoplanet that is suitable for atmospheric investigation*”, Science, 371, 1038-1041 — **Indiv. contribution:** Contributed the CARMENES observations. Data analysis, internal structure modeling, and interpretation.
37. Parviainen, H., Palle, E., Zapatero-Osorio, M. R., et al. incl. **Luque, R.**, (2021). “*TOI-519 b: A short-period substellar object around an M dwarf validated using multicolour photometry and phase curve analysis*”, A&A, 645, A16 — **Indiv. contribution:** Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation.
36. Chen, G., Pallé, E., Parviainen, H., et al. incl. **Luque, R.**, (2021). “*An enhanced slope in the transmission spectrum of the hot Jupiter WASP-104b*”, MNRAS, 500, 5420-5435 — **Indiv. contribution:** Contributed the MuSCAT2 observations. Telescope observing, data analysis and interpretation.
35. Dreizler, S., Crossfield, I. J. M., Kossakowski, D., et al. incl. **Luque, R.**, (2020). “*The CARMENES search for exoplanets around M dwarfs. LP 714-47 b (TOI 442.01): populating the Neptune desert*”, A&A, 644, A127 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
34. Quirrenbach, A., CARMENES Consortium, Amado, P. J., et al. incl. **Luque, R.**, (2020). “*The CARMENES M-dwarf planet survey*”, Proc. SPIE, 11447, 114473C — **Indiv. contribution:** Status report of CARMENES performance and science results. Telescope observing, data reduction, analysis, and interpretation.
33. Fridlund, M., Livingston, J., Gandolfi, D., et al. incl. **Luque, R.**, (2020). “*The TOI-763 system: sub-Neptunes orbiting a Sun-like star*”, MNRAS, 498, 4503-4517 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Manuscript review and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
32. Palle, E., Oshagh, M., Casasayas-Barris, N., et al. incl. **Luque, R.**, (2020). “*Transmission spectroscopy and Rossiter-McLaughlin measurements of the young Neptune orbiting AU Mic*”, A&A, 643, A25 — **Indiv. contribution:** Co-I of the ESPRESSO proposal that collected the observations. Telescope observing, data reduction, and analysis.
31. Nowak, G., Palle, E., Gandolfi, D., et al. incl. **Luque, R.**, (2020). “*K2-280 b - a low density warm sub-Saturn around a mildly evolved star*”, MNRAS, 497, 4423-4435 — **Indiv. contribution:** Co-lead the HARPS-N and co-I of the HARPS proposals that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
30. Kemmer, J., Stock, S., Kossakowski, D., et al. incl. **Luque, R.**, (2020). “*Discovery of a hot, transiting, Earth-sized planet and a second temperate, non-transiting planet around the M4 dwarf GJ 3473 (TOI-488)*”, A&A, 642, A236 — **Indiv. contribution:** Co-lead the CARMENES proposal that collected the observations. Data reduction, analysis, and interpretation.
29. Chen, G., Casasayas-Barris, N., Pallé, E., et al. incl. **Luque, R.**, (2020). “*Detection of Na in WASP-21b’s lower and upper atmosphere*”, A&A, 642, A54 — **Indiv. contribution:** Co-I the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis.
28. Carleo, I., Gandolfi, D., Barragán, O., et al. incl. **Luque, R.**, (2020). “*The Multiplanet System TOI-421*”, AJ, 160, 114 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
27. ** Jeffers, S. V., Dreizler, S., Barnes, J. R., et al. incl. **Luque, R.**, (2020). “*A multiplanet system of super-Earths orbiting the brightest red dwarf star GJ 887*”, Science, 368, 1477-1481 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation.

26. Gan, T., Shporer, A., Livingston, J. H., et al. incl. **Luque, R.**, (2020). “*LHS 1815b: The First Thick-disk Planet Detected by TESS*”, *AJ*, 159, 160 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation.
25. Hidalgo, D., Pallé, E., Alonso, R., et al. incl. **Luque, R.**, (2020). “*Three planets transiting the evolved star EPIC 249893012: a hot 8.8-M_J super-Earth and two warm 14.7 and 10.2-M_J sub-Neptunes*”, *A&A*, 636, A89 — **Indiv. contribution:** Co-lead the CARMENES and HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
24. Šubjak, J., Sharma, R., Carmichael, T. W., et al. incl. **Luque, R.**, (2020). “*TOI-503: The First Known Brown-dwarf Am-star Binary from the TESS Mission*”, *AJ*, 159, 151 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
23. ** Casasayas-Barris, N., Pallé, E., Yan, F., et al. incl. **Luque, R.**, (2020). “*Is there Na I in the atmosphere of HD 209458b? Effect of the centre-to-limb variation and Rossiter-McLaughlin effect in transmission spectroscopy studies*”, *A&A*, 635, A206 — **Indiv. contribution:** Co-I the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis.
22. Lam, K. W. F., Korth, J., Masuda, K., et al. incl. **Luque, R.**, (2020). “*It Takes Two Planets in Resonance to Tango around K2-146*”, *AJ*, 159, 120 — **Indiv. contribution:** Data analysis and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
21. Nielsen, L. D., Gandolfi, D., Armstrong, D. J., et al. incl. **Luque, R.**, (2020). “*Mass determinations of the three mini-Neptunes transiting TOI-125*”, *MNRAS*, 492, 5399-5412 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
20. Parviainen, H., Pallé, E., Zapatero-Osorio, M. R., et al. incl. **Luque, R.**, (2020). “*MuSCAT2 multicolour validation of TESS candidates: an ultra-short-period substellar object around an M dwarf*”, *A&A*, 633, A28 — **Indiv. contribution:** Led the MuSCAT2 project that collected the observations during PhD. Telescope observing, data analysis and interpretation.
19. Fukui, A., Suzuki, D., Koshimoto, N., et al. incl. **Luque, R.**, (2019). “*Kojima-1Lb Is a Mildly Cold Neptune around the Brightest Microlensing Host Star*”, *AJ*, 158, 206 — **Indiv. contribution:** Contributed the MuSCAT2 observations. Telescope observing and data reduction.
18. Barragán, O., Aigrain, S., Kubyshkina, D., et al. incl. **Luque, R.**, (2019). “*Radial velocity confirmation of K2-100b: a young, highly irradiated, and low-density transiting hot Neptune*”, *MNRAS*, 490, 698-708 — **Indiv. contribution:** Co-lead the HARPS-N proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
17. Parviainen, H., Tingley, B., Deeg, H. J., et al. incl. **Luque, R.**, (2019). “*Multicolour photometry for exoplanet candidate validation*”, *A&A*, 630, A89 — **Indiv. contribution:** Theoretical paper presenting new concept for exoplanet validation. Provided real data for simulations and proof-of-concept analyses.
16. Kaltenegger, L., Madden, J., Lin, Z., et al. incl. **Luque, R.**, (2019). “*The Habitability of GJ 357D: Possible Climate and Observability*”, *ApJ*, 883, L40 — **Indiv. contribution:** Planetary system discovery and internal composition analysis. Data interpretation.
15. ** Morales, J. C., Mustill, A. J., Ribas, I., et al. incl. **Luque, R.**, (2019). “*A giant exoplanet orbiting a very-low-mass star challenges planet formation models*”, *Science*, 365, 1441-1445 — **Indiv. contribution:** Contributed to CARMENES observations. Data reduction, analysis, and interpretation.
14. Persson, C. M., Csizmadia, S., Mustill, A. J., et al. incl. **Luque, R.**, (2019). “*Greening of the brown-dwarf desert. EPIC 212036875b: a 51 M_J object in a 5-day orbit around an F7 V star*”, *A&A*, 628, A64 — **Indiv. contribution:** Co-lead the FIES proposal that collected the observations. Telescope observing, data reduction, and analysis. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
13. ** Zechmeister, M., Dreizler, S., Ribas, I., et al. incl. **Luque, R.**, (2019). “*The CARMENES search for exoplanets around M dwarfs. Two temperate Earth-mass planet candidates around Teegarden’s Star*”, *A&A*, 627, A49 — **Indiv. contribution:** Contributed to CARMENES observations. Data reduction, analysis, and interpretation.

12. Gandolfi, D., Fossati, L., Livingston, J. H., et al. incl. **Luque, R.**, (2019). “*The Transiting Multi-planet System HD15337: Two Nearly Equal-mass Planets Straddling the Radius Gap*”, *ApJ*, 876, L24 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
11. Hjorth, M., Justesen, A. B., Hirano, T., et al. incl. **Luque, R.**, (2019). “*K2-290: a warm Jupiter and a mini-Neptune in a triple-star system*”, *MNRAS*, 484, 3522-3536 — **Indiv. contribution:** Co-I of the HARPS and co-lead of the HARPS-N and FIES proposals that collected the observations. Telescope observing, data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
10. Esposito, M., Armstrong, D. J., Gandolfi, D., et al. incl. **Luque, R.**, (2019). “*HD 219666 b: a hot-Neptune from TESS Sector 1*”, *A&A*, 623, A165 — **Indiv. contribution:** Co-I of the HARPS proposal that collected the observations. Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
9. Narita, N., Fukui, A., Kusakabe, N., et al. incl. **Luque, R.**, (2019). “*MuSCAT2: four-color simultaneous camera for the 1.52-m Telescopio Carlos Sánchez*”, *Journal of Astronomical Telescopes, Instruments, and Systems*, 5, 015001 — **Indiv. contribution:** Status report of MuSCAT-2 performance and first science results. Telescope observing, data reduction, analysis, and interpretation.
8. ** Gandolfi, D., Barragán, O., Livingston, J. H., et al. incl. **Luque, R.**, (2018). “*TESS’s first planet. A super-Earth transiting the naked-eye star π Mensae*”, *A&A*, 619, L10 — **Indiv. contribution:** Data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
7. Prieto-Arranz, J., Palles, E., Gandolfi, D., et al. incl. **Luque, R.**, (2018). “*Mass determination of the 1:3:5 near-resonant planets transiting GJ 9827 (K2-135)*”, *A&A*, 618, A116 — **Indiv. contribution:** Co-lead of the HARPS-N and CARMENES proposals that collected the observations. Telescope observing, data reduction, analysis, and interpretation. Paper from KESPRINT consortium of which I am an elected member of the Steering Committee.
6. Kaminski, A., Trifonov, T., Caballero, J. A., et al. incl. **Luque, R.**, (2018). “*The CARMENES search for exoplanets around M dwarfs. A Neptune-mass planet traversing the habitable zone around HD 180617*”, *A&A*, 618, A115 — **Indiv. contribution:** Contributed to CARMENES observations. Data reduction, analysis, and interpretation.
5. Quirrenbach, A., Amado, P. J., Ribas, I., et al. incl. **Luque, R.**, (2018). “*CARMENES: high-resolution spectra and precise radial velocities in the red and infrared*”, *Proc. SPIE*, 10702, 107020W — **Indiv. contribution:** Status report of CARMENES performance and first science results. Telescope observing, data reduction, analysis, and interpretation.
4. ** Reiners, A., Zechmeister, M., Caballero, J. A., et al. incl. **Luque, R.**, (2018). “*The CARMENES search for exoplanets around M dwarfs. High-resolution optical and near-infrared spectroscopy of 324 survey stars*”, *A&A*, 612, A49 — **Indiv. contribution:** Contributed to CARMENES observations. Data reduction, analysis, and interpretation.
3. Trifonov, T., Kürster, M., Zechmeister, M., et al. incl. **Luque, R.**, (2018). “*The CARMENES search for exoplanets around M dwarfs. First visual-channel radial-velocity measurements and orbital parameter updates of seven M-dwarf planetary systems*”, *A&A*, 609, A117 — **Indiv. contribution:** Contributed to CARMENES observations. Data reduction, analysis, and interpretation.
2. Reiners, A., Ribas, I., Zechmeister, M., et al. incl. **Luque, R.**, (2018). “*The CARMENES search for exoplanets around M dwarfs. HD147379 b: A nearby Neptune in the temperate zone of an early-M dwarf*”, *A&A*, 609, L5 — **Indiv. contribution:** Contributed to CARMENES observations. Data reduction, analysis, and interpretation.
1. Rodríguez-Ardila, A., Prieto, M. A., Mazzalay, X., et al. incl. **Luque, R.**, (2017). “*Powerful outflows in the central parsecs of the low-luminosity active galactic nucleus NGC 1386*”, *MNRAS*, 470, 2845-2860 — **Indiv. contribution:** Paper resulting from B.Sc. thesis work and summer internship at IAC. Reduced and analyzed SINFONI and NaCo observations. Manuscript review and results interpretation.

Books, Proceedings and other Work

4. **Luque, R.** (2024). “*Planets around Low-Mass Stars*”, *Handbook of Exoplanets*, Springer, Cham. In press. — **Indiv. contribution:** State-of-the-art reference book that includes over 15 sections dealing with all aspects of exoplanets and exobiology research, including historic aspects. It is currently the major work of reference in the field. Chapter to be included in section “Exoplanet Catalogues, Abundances and Statistics”. To be published in early 2024 as part of the second edition.

3. Roth, M. M., Aceituno, J., Ortiz, J. L., et al. incl. **Luque, R.**, (2022). “*MARCOT Pathfinder at Calar Alto progress report*”, Proc. SPIE, 12182, 121820M — **Indiv. contribution:** SPIE Proceeding reporting of a new large aperture telescope concept for Calar Alto observatory. Contributed the exoplanet science cases that the new facility could pursue.
2. Quirrenbach, A., CARMENES Consortium, et al. incl. **Luque, R.**, (2020). “*The CARMENES M-dwarf planet survey*”, Proc. SPIE, 11447, 114473C — **Indiv. contribution:** Status report of CARMENES performance and science results. Telescope observing, data reduction, analysis, and interpretation.
1. Quirrenbach, A., Amado, P. J., Ribas, I., et al. incl. **Luque, R.**, (2018). “*CARMENES: high-resolution spectra and precise radial velocities in the red and infrared*”, Proc. SPIE, 10702, 107020W — **Indiv. contribution:** Status report of CARMENES performance and first science results. Telescope observing, data reduction, analysis, and interpretation.