Dr. Rafael Luque

Exoplanet researcher
5326 S Harper Ave, Chicago, IL 60615, USA

Email : rluque@uchicago.edu
Mobile : +1 (773) 219-9945

EDUCATION

Ph.D. in Astrophysics — Canary Islands, Spain | Jan 2018 - May 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 Palle 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 Astrofisica de Andalucia — Granada, Spain | Jun 2021 – Feb 2022
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 Astrofisica de Canarias — Canary Islands, Spain | Jul 2016 – Sep 2016
Summer internship

Instituto Nacional de Astronomia, Optica y Electronica — Puebla, Mexico | Jun 2013 – Aug 2013
Summer internship

GRANTS AND FUNDING AWARDS

"Margarita Salas" Fellowship for young doctors — Dec 2021
Spanish Ministry of Education. Amount: 121,100.00 EUR.

JSPS International Fellowship for Research in Japan (declined) — Dec 2021
Japan Society for the Promotion of Science. Amount: 8.8M JPY (approx. 60,600.00 EUR).

INPhINIT Fellowship Grant for Doctoral studies — Jan 2018
European Union's Horizon 2020 and "la Caixa" Banking Foundation. Amount: 125,400.00 EUR.

SKILLS

Languages: Spanish, English, Italian, German (basic), Nepali (basic)
Programming: Python, UNIX/MacOS, LaTeX, HTML (basic)
Techniques: Precise radial velocities, space- and ground-based transit photometry, low- and high-resolution transmission spectroscopy

HONORS AND AWARDS

Honorary Mention, 2021 IAU PhD Prize — Jun 2022

Division F Planetary Systems and Bioastronomy, International Astronomical Union.

Best Astronomy PhD Thesis Jun 2022
Spanish Astronomical Society. Amount: 2,000.00 EUR.

Best PhD Thesis in Astrophysics May 2022
University of La Laguna and Santander Bank. Amount: 1,000.00 EUR.

Award "Valores de la Subbetica" (Distinguished Young Citizen) Oct 2021
Grupo de Desarrollo Rural de la Subbetica.

Honorary Citizen of the Year Feb 2020
City council of Priego de Cordoba, Spain.

Starlight Foundation Ambassador Jun 2015
Starlight Foundation.

First Prize of the "IV Contest of University Entrepeneurs" Oct 2014
University of Granada. Amount: 3,000.00 EUR.

MENTORING

Ritvik Basant University of Chicago | 2023 – 202X
PhD thesis co-supervisor

Daniel Revilla Martinez de Albeniz Instituto de Astrofisica de Andalucia | 2023 – 202X
PhD thesis co-supervisor

Jaume Orell Miquel Instituto de Astrofisica de Canarias | 2019 – 2020
MSc thesis supervisor

Sergio Alvarez Universidad Autonoma de Madrid | 2019 – 2020
MSc thesis co-supervisor

PUBLIC OUTREACH

Astrotourism Center "Los Coloraos" Gorafe, Spain | Sep 2019 - present
Director of Scientific Research
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. Oct 2014 - present
Co-Founder
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) Oct 2014 - Oct 2015
Co-Founder and Head of the astronomy department
Visits to scientific facilities, workshops, courses, experiment shows in schools, and public astronomical observations.

PROFESSIONAL SERVICE

Consortium member. ARIEL, CHEOPS, TESS Follow-up Observing Program, MuSCAT2, CARMENES
Time Allocation Committee member. Gemini, ESO — since Oct 2022
Scientific Organizing Committee member. Europlanet Science Congress 2022 — Sep 2022
Local Organizing Committee volunteer. 240th American Astronomical Society Meeting — Jun 2022
Funding review panel member. NASA XRP, NASA EPRV — since Jun 2022
Steering Committee elected member. KESPRINT Consortium — since Feb 2021
Tech support. European Astronomical Society 2020 and 2021 Meetings
Local Organizing Committee member. Spanish Astronomical Society Biannual Meeting — Jul 2020
Journal reviewer. Nature, A&A, AJ, ApJ, MNRAS — since Jan 2020

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

** **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
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 104 refereed articles. First-author papers in collaboration with more than 140 researchers from 50 different institutions across 15 countries. Publications as the first-to-third author (15): 340+ citations (20.5 average citations per paper), h-index 11. All publications: 2100+ citations (17.9 average citations per refereed paper), h-index 25. Full list: `https://bit.ly/3jogBvj`

First Author (or main co-author)

(**) indicates publication accompanied by international press release

16. ** **Luque, R.**, Osborn, H. P., Leleu, A., et al. (2023). *"A resonant sextuplet of sub-Neptunes around the bright star HD 110067"*, Nature, accepted
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. Palle, 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. Palle, 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

86. Pozuelos, F. J., Timmermans, M., Rackham, B. V., et al. (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
85. Brady, M., Bean, J. L., Seifahrt, A., et al. (2023). *"Measuring the Obliquities of the TRAPPIST-1 Planets with MAROON-X"*, AJ, 165, 129

84. Mallorquín, M., Béjar, V. J. S., Lodieu, N., et al. (2023). "*Dynamical masses of two young transiting sub-Neptunes orbiting HD 63433*", A&A, 671, A163

83. Hirano, T., Dai, F., Livingston, J. H., et al. (2023). "*An Earth-sized Planet around an M5 Dwarf Star at 22 pc*", AJ, 165, 131

82. Knudstrup, E., Albrecht, S. H., Gandolfi, D., et al. (2023). "*A puffy polar planet. The low density, hot Jupiter TOI-640 b is on a polar orbit*", A&A, 671, A164

81. Lam, K. W. F., Cabrera, J., Hooton, M. J., et al. (2023). "*Discovery of TOI-1260d and the characterization of the multiplanet system*", MNRAS, 519, 1437-1451

80. ** Ribas, I., Reiners, A., Zechmeister, M., et al. (2023). "*The CARMENES search for exoplanets around M dwarfs. Guaranteed time observations Data Release 1 (2016-2020)*", A&A, 670, A139

79. Nascimbeni, V., Borsato, L., Zingales, T., et al. (2023). "*A new dynamical modeling of the WASP-47 system with CHEOPS observations*", arXiv e-prints, arXiv:2302.01352

78. Orell-Miquel, J., Nowak, G., Murgas, F., et al. (2023). "*HD 191939 revisited: New and refined planet mass determinations, and a new planet in the habitable zone*", A&A, 669, A40

77. Lillo-Box, J., Gandolfi, D., Armstrong, D. J., et al. (2023). "*TOI-969: a late-K dwarf with a hot mini-Neptune in the desert and an eccentric cold Jupiter*", A&A, 669, A109

76. Palle, E., Orell-Miquel, J., Brady, M., et al. (2023). "*GJ 806 (TOI-4481): A bright nearby multi-planetary system with a transiting hot, low-density super-Earth*", arXiv e-prints, arXiv:2301.06873

75. Murgas, F., Nowak, G., Masseron, T., et al. (2022). "*HD 20329b: An ultra-short-period planet around a solar-type star found by TESS*", A&A, 668, A158

74. Chaturvedi, P., Bluhm, P., Nagel, E., et al. (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

73. Persson, C. M., Georgieva, I. Y., Gandolfi, D., et al. (2022). "*TOI-2196 b: Rare planet in the hot Neptune desert transiting a G-type star*", A&A, 666, A184

72. Kawauchi, K., Murgas, F., Palle, E., et al. (2022). "*Validation and atmospheric exploration of the sub-Neptune TOI-2136b around a nearby M3 dwarf*", A&A, 666, A4

71. Esparza-Borges, E., Parviainen, H., Murgas, F., et al. (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

70. ** Caballero, J. A., González-Álvarez, E., Brady, M., et al. (2022). "*A detailed analysis of the GI 486 planetary system*", A&A, 665, A120

69. Barragán, O., Armstrong, D. J., Gandolfi, D., et al. (2022). "*The young HD 73583 (TOI-560) planetary system: two 10-$M_{\oplus}$ mini-Neptunes transiting a 500-Myr-old, bright, and active K dwarf*", MNRAS, 514, 1606-1627

68. Kabáth, P., Chaturvedi, P., MacQueen, P. J., et al. (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

67. Šubjak, J., Endl, M., Chaturvedi, P., et al. (2022). "*TOI-1268b: The youngest hot Saturn-mass transiting exoplanet*", A&A, 662, A107

66. Stangret, M., Casasayas-Barris, N., Pallé, E., et al. (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

65. Turtelboom, E. V., Weiss, L. M., Dressing, C. D., et al. (2022). "*The TESS-Keck Survey. XI. Mass Measurements for Four Transiting Sub-Neptunes Orbiting K Dwarf TOI-1246*", AJ, 163, 293

64. Tran, Q. H., Bowler, B. P., Endl, M., et al. (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

63. Hatzes, A. P., Gandolfi, D., Korth, J., et al. (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

62. ** Serrano, L. M., Gandolfi, D., Mustill, A. J., et al. (2022). *"A low-eccentricity migration pathway for a 13-h-period Earth analogue in a four-planet system"*, Nature Astronomy, 6, 736-750

61. Kemmer, J., Dreizler, S., Kossakowski, D., et al. (2022). "*Discovery and mass measurement of the hot, transiting, Earth-sized planet, GJ 3929 b*", A&A, 659, A17

60. Jordán, A., Hartman, J. D., Bayliss, D., et al. (2022). "*HATS-74Ab, HATS-75b, HATS-76b, and HATS-77b: Four Transiting Giant Planets Around K and M Dwarfs*", AJ, 163, 125

59. Wilson, T. G., Goffo, E., Alibert, Y., et al. (2022). *"A pair of sub-Neptunes transiting the bright K-dwarf TOI-1064 characterized with CHEOPS"*, MNRAS, 511, 1043-1071

58. Espinoza, N., Pallé, E., Kemmer, J., et al. (2022). *"A Transiting, Temperate Mini-Neptune Orbiting the M Dwarf TOI-1759 Unveiled by TESS"*, AJ, 163, 133

57. Orell-Miquel, J., Murgas, F., Pallé, E., et al. (2022). *"A tentative detection of He I in the atmosphere of GJ 1214 b"*, A&A, 659, A55

56. Smith, A. M. S., Breton, S. N., Csizmadia, S., et al. (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

55. Heidari, N., Boisse, I., Orell-Miquel, J., et al. (2022). *"HD 207897 b: A dense sub-Neptune transiting a nearby and bright K-type star"*, A&A, 658, A176

54. ** Fukui, A., Kimura, T., Hirano, T., et al. (2022). *"TOI-2285b: A 1.7 Earth-radius planet near the habitable zone around a nearby M dwarf"*, PASJ, 74, L1-L8

53. González-Álvarez, E., Zapatero Osorio, M. R., Sanz-Forcada, J., et al. (2022). *"A multi-planetary system orbiting the early-M dwarf TOI-1238"*, A&A, 658, A138

52. Kossakowski, D., Kemmer, J., Bluhm, P., et al. (2021). *"TOI-1201 b: A mini-Neptune transiting a bright and moderately young M dwarf"*, A&A, 656, A124

51. Polanski, A. S., Crossfield, I. J. M., Burt, J. A., et al. (2021). *"Wolf 503 b: Characterization of a Sub-Neptune Orbiting a Metal-poor K Dwarf"*, AJ, 162, 238

50. Garai, Z., Pribulla, T., Parviainen, H., et al. (2021). *"Is the orbit of the exoplanet WASP-43b really decaying? TESS and MuSCAT2 observations confirm no detection"*, MNRAS, 508, 5514-5523

49. ** Suárez Mascareño, A., Damasso, M., Lodieu, N., et al. (2021). *"Rapid contraction of giant planets orbiting the 20-million-year-old star V1298 Tau"*, Nature Astronomy, 6, 232-240

48. Addison, B. C., Knudstrup, E., Wong, I., et al. (2021). *"TOI-1431b/MASCARA-5b: A Highly Irradiated Ultrahot Jupiter Orbiting One of the Hottest and Brightest Known Exoplanet Host Stars"*, AJ, 162, 292

47. ** Lam, K. W. F., Csizmadia, S., Astudillo-Defru, N., et al. (2021). *"GJ 367b: A dense, ultrashort-period sub-Earth planet transiting a nearby red dwarf star"*, Science, 374, 1271-1275

46. de Leon, J. P., Livingston, J., Endl, M., et al. (2021). *"37 new validated planets in overlapping K2 campaigns"*, MNRAS, 508, 195-218

45. Scarsdale, N., Murphy, J. M. A., Batalha, N. M., et al. (2021). *"TESS-Keck Survey. V. Twin Sub-Neptunes Transiting the Nearby G Star HD 63935"*, AJ, 162, 215

44. Fukui, A., Korth, J., Livingston, J. H., et al. (2021). *"TOI-1749: an M dwarf with a Trio of Planets including a Near-resonant Pair"*, AJ, 162, 167

43. Stangret, M., Pallé, E., Casasayas-Barris, N., et al. (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

42. Casasayas-Barris, N., Orell-Miquel, J., Stangret, M., et al. (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

41. ** Van Eylen, V., Astudillo-Defru, N., Bonfils, X., et al. (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

40. Hoyer, S., Gandolfi, D., Armstrong, D. J., et al. (2021). "*TOI-220 b: a warm sub-Neptune discovered by TESS*", MNRAS, 505, 3361-3379

39. Georgieva, I. Y., Persson, C. M., Barragán, O., et al. (2021). "*Hot planets around cool stars - two short-period mini-Neptunes transiting the late K-dwarf TOI-1260*", MNRAS, 505, 4684-4701

38. Johnson, E. N., Czesla, S., Fuhrmeister, B., et al. (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

37. Bluhm, P., Pallé, E., Molaverdikhani, K., et al. (2021). "*An ultra-short-period transiting super-Earth orbiting the M3 dwarf TOI-1685*", A&A, 650, A78

36. ** Trifonov, T., Caballero, J. A., Morales, J. C., et al. (2021). "*A nearby transiting rocky exoplanet that is suitable for atmospheric investigation*", Science, 371, 1038-1041

35. Parviainen, H., Palle, E., Zapatero-Osorio, M. R., et al. (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

34. Chen, G., Pallé, E., Parviainen, H., et al. (2021). "*An enhanced slope in the transmission spectrum of the hot Jupiter WASP-104b*", MNRAS, 500, 5420-5435

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Books, Proceedings and other Work

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CONFERENCES, SEMINARS, AND COLLOQUIA

Invited Talks

Conference: *Six sub-Neptunes in sync around HD110067* — Cambridge, USA | Jun 2023
TESS Mission Update Meeting

Seminar: *Six sub-Neptunes in sync around HD110067* — Chicago, USA | May 2023
University of Chicago

Seminar: *Six sub-Neptunes in sync around HD110067* — Cambridge, USA | May 2023
Massachusetts Institute of Technology

Seminar: *The demographics of small exoplanets* — Pasadena, USA | Apr 2023
NASA Jet Propulsion Laboratory

Seminar: *The demographics of small exoplanets* — Pasadena, USA | Mar 2023
California Institute of Technology

Colloquium: *The demographics of small exoplanets* — Kansas, USA | Mar 2023
University of Kansas

Conference: *The demographics of small exoplanets* — Noordwijk, Netherlands | Mar 2023
55th PLANET-ESLAB Symposium

Press briefing: *Are sub-Neptunes rocky or water worlds?* — Online, USA | Jan 2023
Science Society at Clubhouse

Colloquium: *The exoplanet revolution* — Kathmandu, Nepal | Oct 2022
Tribhuvan University

Conference: *PhD Thesis Prize Talk* — Canary Islands, Spain | Sep 2022
Spanish Astronomical Society Biannual Meeting

Seminar: *Are sub-Neptunes rocky or water worlds?* — Santa Cruz, USA | Jun 2022
University of Califonia Santa Cruz

Press briefing: *Two rocky worlds transiting a bright M dwarf at 10 parcsecs* — Pasadena, USA | Jun 2022
240th American Astronomical Society Meeting

Seminar: *On the nature of small planets orbiting low-mass stars* — Princeton, USA | Jun 2022
Princeton University

Colloquium: *On the nature of small planets orbiting low-mass stars* — Chicago, USA | Mar 2022
University of Chicago

Conference: *TESS legacy, the brightest, closest transiting planets for atmospheric studies* — Online, Japan | Jun 2021
Japan Geoscience Union Meeting

Colloquium: *Fantastic exoplanets and how to find them* — Cadiz, Spain | Apr 2021
Starlight Festival

Seminar: *Looking for small planets from small islands* — Santiago, Chile | Oct 2019
Universidad de Chile

Contributed Talks and Posters

Conference: *Splendidly Synchronized: Six Sub-Neptunes Spinning a Shiny Star* — Santa Cruz, USA | Jul 2023
Bay Area Exoplanet Meeting

Poster: *MARCOT: A new large aperture telescope concept to feed CARMENES* — Santa Barbara, USA | Mar 2023
Extremely Precise Radial Velocities 5

Conference: *An update on MAROON-X* — Granada, Spain | Sep 2022
Europlanet Science Congress 2022

Conference: *On the nature of small planets orbiting low-mass stars* — Granada, Spain | Sep 2022
Europlanet Science Congress 2022

Poster: *A privately-funded amateur observatory devoted to astronomy outreach* — Canary Islands, Spain | Sep 2022
Spanish Astronomical Society Biannual Meeting

Conference: *An observational test to planet formation theories around M dwarfs* — Penn State, USA | Aug 2022

Emerging Researchers in Exoplanet Science VII

Conference: *Formation and composition of small planets orbiting M dwarfs* — Valencia, Spain | Jun 2022
European Astronomical Society Annual Meeting

Conference: *On the nature of small planets orbiting low-mass stars* — Pasadena, USA | Jun 2022
Exoplanet Exploration Program Analysis Group Meeting 26

Conference: *An observational test to planet formation theories around M dwarfs* — Las Vegas, USA | May 2022
Exoplanets IV

Conference: *The M-dwarf radius valley as seen by TESS* — Online, USA | Aug 2021
TESS Science Conference II

Poster: *A comprehensive study of the WASP-47 planetary system* — Online, USA | Apr 2021
STScI Spring Symposium

Poster: *TOI-776, a multi-planetary system around a bright M dwarf optimal for JWST* — Online, USA | Jan 2021
237th American Astronomical Society Meeting

Conference: *Testing radius valley emergence models in M dwarfs* — Online, Germany | Dec 2020
PLATO ESP2020 Workshop

Conference: *The obliquity distribution of UHJs, a poulation-wide view* — Online, USA | Nov 2020
Exoplanet Demographics Conference

Conference: *A comprehensive study of the WASP-74 planetary system* — Online, Spain | Sep 2020
Europlanet Science Congress 2020

Conference: *Precise characterization of small planets around M dwarfs with CARMENES* — Online, Germany | Jul 2020
Exoplanets III

Poster: *A second Jupiter orbiting in 4:3 resonance in the 7 CMa system* — Online, USA | Jul 2020
Sagan Exoplanet Summer Workshop

Poster: *An Earth-sized planet optimal for atmospheric characterization in GJ 357* — Okinawa, Japan | Oct 2019
Planetary Atmospheres and Habitability Congress

Conference: *A second Jupiter orbiting in 4:3 resonance in the 7 CMa system* — Heidelberg, Germany | Jun 2019
Planetary Dynamics 2019

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