

# DIEGO BLAS TEMIÑO

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 Profile SAO/NASA ADS: <https://cern.ch/blads>  
 Profile Google Scholar: <https://cern.ch/blgs>  
 Profile INSPIRE-HEP: <https://cern.ch/blins>

## Current professional status

ICREA Research Professor  
 Institut de Física d'Altes Energies (IFAE)  
 Bellaterra, Spain  
*e-mail:* [dblas@ifae.es](mailto:dblas@ifae.es)

## Personal Information

*Date and Place of Birth:* 10 June 1979, Burgos, Spain.

*Web:* <https://www.icrea.cat/community/icreas/29841/diego-blas-temino/>

## Professional appointments

### Post-PhD:

2021-2023	Beatriz Galindo Senior Disting. Researcher	Universitat Autònoma de Barcelona, Spain
2018-2021	Senior Lecturer (Associate Professor)	Physics Dept., King's College London, UK
2014-2018	Staff Scientist	Theoretical Physics Dept, CERN, Switzerland
2012-2014	Senior Fellow	Theoretical Physics Dept, CERN, Switzerland
2011	Swiss National Science Foundation Visitor	New York University, USA
2008-2011	Postdoctoral fellow	EPFL, Switzerland

### During PhD:

2007-2008	Profesor asociado Tiempo Parcial	Universitat de Barcelona, Spain.
2003-2006	Beuario Formación Personal Universitario	Universitat de Barcelona, Spain.

## Education

2008	PhD Thesis in Theoretical Physics Thesis (PhD Prize & European Mention)	Universidad de Barcelona, Spain Grade: <i>Unanimous Suma Cum Laude</i>
2004	Diploma de Estudios Avanzados	Universidad de Barcelona, Spain
2002	BSc in Physics (3rd Spanish National Prize)	Universidad de Zaragoza,

## Supervision and mentoring

### PhD supervision:

- *On-going (4):* Silvia Gasparotto (UAB Barcelona); Marina de Amicis (University of Copenhagen, co-supervised with Prof. V. Cardoso); Dhruv Pathak (King's College London, co-supervised with Dr. C. McCabe); Joel Barir (Tel Aviv University, co-supervised with Prof. T. Volansky)
- *Finished (3):* Leonardo Badurina (PhD 2023, King's College London, co-supervised with Dr. C. McCabe); Nashwan Sabti (PhD 2022, King's College London); James Alvey (PhD 2021, King's College London; first supervisor: Prof. M. Fairbairn).

**Master thesis supervision:** 3 at Universitat Autònoma de Barcelona from 2022; 1 at Universtitat de Barcelona 2024, 4 at King's College London, 2018-2021; 1 at EPFL, 2010.

**Summer projects and BSc thesis:** 6 IFAE Summer Fellowships students from 2022; 3 BSc Thesis at UAB from 2022; 1 KCL Summer student project 2019; 6 projects at CERN Summer Student Program (2013-2017)

### Mentoring:

From 2022	Postdoctoral Researcher Mentor	Theory Division, IFAE, Spain
From 2022	Mentor	LISA Consortium mentoring program.
From 2022	Mentor	BIST Master Program, Barcelona, Spain.
2020-2021	Postdoctoral Research Tutor	Department of Physics, King's College London

## Research support

### i) Research projects as PI, co-Investigator (leading role) and personal grants<sup>1</sup>

<i>Role</i>	<i>Funding body/Project</i>	<i>Dates</i>	<i>Amount (Total)</i>
PI	ERC-2024-SYG, European Union Proposal: 101167211. Acronym: GravNet	2025-2031	1.6 M€ (10 M€)
co-PI	MICIU/AEI (Spain)/PID2023-146686NB-C31	2024-2027	431k€
co-PI	HORIZON-WIDERA-2023 Proposal: 101159929. Acronym: UNDARK	2024-2027	101 k€ (1.5 M€)
PI	BBVA (Spain)/Becas Leonardo	2024-2026	40 k€
PI	Ministerio de Ciencia, Innovación y Universidades (Spain) CNS2023-143767	2024-2026	200 k€
PI	Generalitat de Catalunya (Spain)/2021 SGR 00649	2022-2024	40 k€
PI	Ministerio de Universidades (Spain) Ayuda Beatriz Galindo Senior BG20/00228	2021-2025 (declined in Dec 2023)	360 k€
co-I	STFC/EPSC (UK)/ QTFP ST/T00679X/1 AION: A UK Atom Interferometer Observatory and Network	2021-2023	258 k£
PI	STFC (UK)/ New Applicant Grant in Astronomy, ST/S000593/1	2019-2020	35.5 k£
PI	SNSF (Swiss National Science Foundation)/ PZ00P2_14812	2013-2017 (declined)	423 kCHF
PI	SNSF, International Visits Program/ IZKOZ2_138892/1	2011	11kCHF

### ii) As member of the research team, including international networks

<i>Funding body/Project</i>	<i>Dates</i>
MICIU/AEI QUANTERA II COFUND 2023 (Spain)/PCI2024-153468	2024-2027
COST Action EU/CA23130. European Network	2024-2028
COST Action EU/CA21106. European Network	2022-2026
MICINN/AEI (Spain)/PID2020-115845GB-I00	2021-2024
STFC (UK)/ST/W000660/1 Consolidated grant (left in 2022 due to move to a new position)	2022-2025
COST Action EU/CA18108. European Network	2019-2023
COST Action EU/CA16104. European Network	2017-2021
SNSF (Switzerland)/182419	2018-2019
SNSF (Switzerland)/126536	2009-2011

### iii) CPU hours in supercomputers (always as team member)

<i>Funding body/Project</i>	<i>Dates</i>	<i>CPU time</i>
Partnership for Advanced Computing in Europe/2016163948	2017-2018	15 M CPU hours
Red Española de Supercomputación (RES/BSC)/AECT-2018-1-0014	2018	600 k CPU hours
RES/BSC/AECT-2017-2-0011/ AECT-2017-3-0009	2017-2018	2.4 M CPU hours

<sup>1</sup>Amount always indicates total costs (including direct and indirect). When the awarded amount is different from the local one, the first one appears in parenthesis after the one awarded to my group. Declined grants are also included and indicated as such.

## International collaborations and leadership

### Leadership of research groups:

- From 2024 Leader of Astroparticle Physics and Cosmology group [Theory Group](#), IFAE, Spain  
 2014-2018 Co-responsible of the Cosmology research area Theoretical Physics Department, CERN, Switzerland.

### Leadership in international collaborations, committees and coordination roles:

- From 2024 Member of Executive Committee of [C-PAN](#) (Centro Nacional de Física de Partículas, Astropartículas y Nuclear)  
 From 2023 Member of the LISA Consortium Constitutional Committee (CCC)  
 2023 Member of the Executive Commission of the Physics Department of UAB  
 2022-2023 Member of the Junta Permanent of the Science Faculty of UAB  
 2022-2023 Coordinator of the UAB/IFAE/ICE master “[Postgraduate Program in High Energy Physics, Astrophysics & Cosmology](#)”  
 From 2022 Member of Scientific Committee, [Benasque Center for Science](#), Spain.  
 From 2021 Coordinator of Working Package (Physics), [AION](#) Collaboration  
 From 2019 Topic Leader (“Dark Matter”), Science Interpretation WG, LISA Consortium  
 2014 CERN-TH representative at APPEC, Astroparticle Physics European Consortium  
 2014-2018 CERN-TH delegate at CERN Knowledge Transfer Group  
 2014-2018 Member of the committee of Summer students program, CERN

### Member of research collaborations and research programs:

- From 08/2023 Member of the Fundamental Physics Program Analysis Group (FunPAG), NASA.  
 From 01/2023 Member of the Einstein Telescope Collaboration  
 From 03/2023 Member of ELGAR (European Laboratory for Gravitation and Atom-interferometric Research) Initiative  
 From 10/2021 Member of [RITCE- Spanish Quantum Information Network](#)  
 From 11/2021 “Full member” of [LISA Consortium](#) (“Associated member” between 08/2019-10/2021)  
 From 01/2021 Founding member of [AION](#) (Atom Interferometer Observatory and Network) collaboration.

## Prizes and other roles in research or education societies

### Prizes:

- 2022. Second Prize “[Buchalter Cosmology Prize](#)”
- 2017. Third Prize “[Buchalter Cosmology Prize](#)”
- 2009. Extraordinary Award for the PhD in Physics. University of Barcelona. Spain.
- 2002. National Award to Third Best Graduation in Physics. Ministerio de Educación, Ciencia y Deporte. Spain.

### Member of research and education societies:

- From 2019. “Fellow” of the [High Education Academy](#). Recognition reference: PR175645.
- From 2019. “Fellow” of Royal Astronomy Society (by nomination).
- From 2013. Member of the FQXi Foundational Questions Institute (by invitation).
- From 2006. Member of the Spanish Society of Relativity (2006-now)

## Commissions of trust

*Editorial roles:* Editor of the collection of articles *LISA: Science with the Laser Interferometer Space Antenna*, published by Springer. <https://link.springer.com/collections/bhdbjdhdhg>.

*Reviewer/Evaluator for Scientific Programs:* I have been evaluator for 14 research programs/calls for the agencies: UNESCO Science (2024), European Space Agency, program “ESA SciSpace AO: Reserve Pool of Science Activities for the Moon” (2022); Chilean FONDECYT-CHILE (2023). Argentinian FONCyT (2022); French Research Agency (ANR) (2021 and 2022); Basque country University, Spain (2022); German Deutsche Forschungsgemeinschaft DFG (2021); Ramón y Cajal program from the Spanish Agencia Estatal de Investigación (2020); Polish National Science Center (2019); Science and Technology Facilities Council,

UK (Stephen Hawking 2019 and Ernest Rutherford fellowships 2019, 2023, 2024); External evaluator ERC-Starting Grants (2018); Intertalentum program, Universidad Autónoma de Madrid/CSIC (2016); Chilean FONDecYT (2016 and 2019)

*Referee for:* Nature Physics, JCAP, JHEP, J. Phys. A, Class. Quant. Gravity, Phys. Rev. Lett., MNRAS, Phys. Rev. D., Proc. Royal Soc. London A, Nucl. Phys. B., Phys. Lett. B, Gen. Relativ. and Gravit., EPJ, Universe, Nuovo Cimento, Quantum.

*Member of 16 thesis panels* at U. Geneva (CH); IAP Paris (France); IFIC/UV (Spain); SISSA (Italy); ITS Lisbon (Portugal); DAMTP Cambridge (UK); Sapienza-ICRANet (Italy); UAM/IFT (Spain); UAB (Spain); SYRTE Paris (France).

## Publications and preprints

### Summary of publications (11/01/2025)

# of publications: 103, Citations: 10635 (source [INSPIRE-HEP](#)); 12106 (source [Google Scholar](#))  
*h-index*: 47 (source [INSPIRE-HEP](#)); 49 (source [Google Scholar](#)).

85 publications in peer-reviewed journals, including 6 PRL and 1 ApJL. 1 *review* article (2 authors, marked as **Rv**), contribution to 5 highly cited roadmaps/whitepapers (marked as **WP**), 1 technical article for LISA Mission (marked as **Tc**), 2 experimental proposals for fundamental physics (marked as **Exp**). Other community papers marked with **Cp**.

### All my publications are openly accessible in my research profiles:

Profile Google Scholar: <https://cern.ch/blgs>, SAO/NASA ADS Citation Summary: <https://cern.ch/blads>  
 Profile INSPIRE-HEP: <https://cern.ch/blins>, SAO/NASA ADS profile: <https://cern.ch/blasads>

### All publications (selected ones marked with title in red and with \*\*)

The order of authors is alphabetical in most publications, as standard in my field of research.

88. D. Blas, J. Carlton, John, C. McCabe.  
*“Massive graviton dark matter searches with long-baseline atom interferometers”*, [arXiv:2412.14282](https://arxiv.org/abs/2412.14282) [[hep-ph](#)].
87. EPTA Collaboration; N. K. Porayko et al. (77 authors, including D. Blas).  
*“Searches for signatures of ultra-light axion dark matter in polarimetry data of the European Pulsar Timing Array”*, [arXiv:2412.02232](https://arxiv.org/abs/2412.02232) [[astro-ph.CO](#)].
86. D. Blas, V. Cardoso, J. M. Ezquiaga.  
*“Can we focus?”*, [arXiv:2410.23347](https://arxiv.org/abs/2410.23347) [[gr-qc](#)].
85. D. Blas, S. Gasparotto, R. Vicente.  
*“Searching for ultra-light dark matter through frequency modulation of gravitational waves”*, [arXiv:2410.07330](https://arxiv.org/abs/2410.07330) [[hep-ph](#)].
84. Reina Valero, José, J. R. Navarro Madrid, D. Blas, Diego, A. Díaz Morcillo, I. G. Irastorza, B. Gimeno, Benito, J. Monzó Cabrera.  
*“High-frequency gravitational waves detection with the BabyIAXO haloscopes”*, Accepted in PRD, [arXiv:2407.20482](https://arxiv.org/abs/2407.20482) [[hep-ex](#)].
83. H. Inchauspé, S. Gasparotto, D. Blas, L. Heisenberg, J. Zosso, S. Tiwari.  
*“Measuring gravitational wave memory with LISA”*, Accepted in PRD, [arXiv:2406.09228](https://arxiv.org/abs/2406.09228) [[gr-qc](#)].
82. L. Zwick, D. Soyuer, Deniz, D. J. D’Orazio, D. O’Neill, David, A. Derdzinski, P. Saha, D. Blas, Diego, A. Jenkins, L. Z. Kelley.  
*“Bridging the micro-Hz gravitational wave gap via Doppler tracking with the Uranus Orbiter and Probe Mission: Massive black hole binaries, early universe signals and ultra-light dark matter”*, [arXiv:2406.02306](https://arxiv.org/abs/2406.02306) [[astro-ph.HE](#)].
81. C. Smarra et al. (18 authors, including D. Blas).  
*“Constraints on conformal ultralight dark matter couplings from the European Pulsar Timing Array”*, Phys.Rev.D 110 (2024) 4, 043033, [arXiv:2405.01633](https://arxiv.org/abs/2405.01633) [[astro-ph.HE](#)].

80. P. Navarro, B. Gimeno, J. Monzó-Cabrera, A. Díaz-Morcillo, D. Blas. “Study of a cubic cavity resonator for gravitational waves detection in the microwave frequency range”, *Phys.Rev.D* 109 (2024) 10, 104048, [arXiv:2312.02270 \[hep-ph\]](https://arxiv.org/abs/2312.02270).
79. A. Berlin, D. Blas, R. T. D’Agnolo, S. A. R. Ellis, R. Harnik, Y. Kahn, J. Schotte-Engel. “Electromagnetic cavities as mechanical bars for gravitational waves”, *Phys.Rev.D* 108 (2023) 8, 084058, [arXiv:2303.01518 \[hep-ph\]](https://arxiv.org/abs/2303.01518).
78. AION Collaboration; B. Stray, et al. (72 authors, including D. Blas). “Centralized design and production of the ultra-high vacuum and laser-stabilization systems for the AION ultra-cold strontium laboratories”, *AVS Quantum Sci.* 6 (2023) 1, 014409, [arXiv:2305.20060 \[physics.atom-ph\]](https://arxiv.org/abs/2305.20060).
77. M. Escudero, C. K. Pooni, M. Fairbairn, D. Blas, X. Du, D. J.E. Marsh. “Axion star explosions: A new source for axion indirect detection”, *Phys.Rev.D* 109 (2024) 4, 043018, [arXiv:2302.10206 \[hep-ph\]](https://arxiv.org/abs/2302.10206).
76. S. Gasparotto, R. Vicente, D. Blas, A. Jenkins, E. Barausse. “Can gravitational-wave memory help constrain binary black-hole parameters? A LISA case study”, *Phys.Rev.D* 107 (2023) 12, 124033, [arXiv:2301.13228 \[gr-qc\]](https://arxiv.org/abs/2301.13228).
75. X. Du, D. J. E. Marsh, M. Escudero, A. Benson, D. Blas, C. K. Poon, M. Fairbairn. “Soliton merger rates and enhanced axion dark matter decay”, *Phys.Rev.D* 109 (2024) 4, 043019, [arXiv:2301.09769 \[astro-ph.CO\]](https://arxiv.org/abs/2301.09769).
74. D. Blas, I. Esteban, M. G. Gonzalez-Garcia, J. Salvado. “On neutrino-mediated potentials in a neutrino background”, *JHEP* 04 (2023) 039, [arXiv:2212.03889 \[hep-ph\]](https://arxiv.org/abs/2212.03889).
73. LISA Collaboration; K.G. Arun et al. (141 authors, including D. Blas) “New Horizons for Fundamental Physics with LISA”, *Living Rev.Rel.* 25 (2022) 1, 4, [arXiv:2205.01597 \[gr-qc\]](https://arxiv.org/abs/2205.01597). **WP**
72. J. J. Givans, A. Font-Ribera, A. Slosar, L. Seeyave, C. Pedersen, K. K. Rogers, M. Garny, D. Blas, V. Irsic. “Non-linearities in the Lyman- $\alpha$  forest and in its cross-correlation with dark matter halos”, *JCAP* 09 (2022) 070, [arXiv:2205.00962 \[astro-ph.CO\]](https://arxiv.org/abs/2205.00962).
71. LISA Cosmology Working Group; P. Auclair et al (180 authors, including D. Blas). “Cosmology with the Laser Interferometer Space Antenna”, *Living Rev.Rel.* 26 (2023) 1, 5. [arXiv:2204.05434 \[astro-ph.CO\]](https://arxiv.org/abs/2204.05434). **WP**
70. A. Berlin et al. (36 authors, including D. Blas). “Searches for New Particles, Dark Matter, and Gravitational Waves with SRF Cavities”, *Contribution to: 2022 Snowmass Summer Study*, [arXiv:2203.12714 \[hep-ph\]](https://arxiv.org/abs/2203.12714). **Cp**
69. I. Alonso et al (249 authors, including D. Blas). “Cold Atoms in Space: Community Workshop Summary and Proposed Road-Map”, [arXiv:2201.07789 \[astro-ph.IM\]](https://arxiv.org/abs/2201.07789). **Cp**
68. A. Castillo, J. Martin-Camalich, J. Terol-Calvo, D. Blas, A. Caputo, R. Tanausu-Genova Santos, L. Sberna, M. Peel, J. A. Rubino-Martín. “Searching for dark-matter waves with PPTA and QUIJOTE pulsar polarimetry”, *JCAP* 06 (2022) 06, 014, [arXiv:2201.03422 \[astro-ph.CO\]](https://arxiv.org/abs/2201.03422).
67. \*\* A. Berlin, D. Blas, R. T. D’Agnolo, S. A. R. Ellis, R. Harnik, Y. Kahn, J. Schotte-Engel. “Detecting high-frequency gravitational waves with microwave cavities”, *Phys.Rev.D* 105 (2022) 11, 116011, [arXiv:2112.11465 \[hep-ph\]](https://arxiv.org/abs/2112.11465).
66. A. Addazi et al (162 authors, including D. Blas). “Quantum gravity phenomenology at the dawn of the multi-messenger era – A review”, *Prog.Part.Nucl.Phys.* 125 (2022) 103948, [arXiv:2111.05659 \[hep-ph\]](https://arxiv.org/abs/2111.05659). **WP**
65. \*\* N. Sabti, J. B. Muñoz, D. Blas. “New Roads to the Small-scale Universe: Measurements of the Clustering of Matter with the High-redshift UV Galaxy Luminosity Function”, *Astrophys.J.Lett.* 928 (2022) 2, L20, [arXiv:2110.13161 \[astro-ph.CO\]](https://arxiv.org/abs/2110.13161).  
Research highlight of AAS Journals: <https://aasnova.org/2022/05/18/a-new-way-to-probe-the-early-universe/>
64. N. Sabti, J. B. Muñoz, D. Blas. “Galaxy luminosity function pipeline for cosmology and astrophysics”, *Phys.Rev.D* 105 (2022) 4, 043518, [arXiv: 2110.13168 \[astro-ph.CO\]](https://arxiv.org/abs/2110.13168).

63. L. Badurina, D. Blas, C. McCabe.  
*“Refined ultralight scalar dark matter searches with compact atom gradiometers”*,  
*Phys.Rev.D* 105 (2022) 2, 023006, [arxiv:2109.10965](https://arxiv.org/abs/2109.10965) [astro-ph.CO].
62. N. Sabti, J. Alvey, M. Escudero, M. Fairbairn, D. Blas.  
*“Addendum: Refined bounds on MeV-scale thermal dark sectors from BBN and the CMB”*,  
*JCAP* 08 (2021) A01, [arxiv:2107.11232](https://arxiv.org/abs/2107.11232) [hep-ph].
61. P. Amaro Seoane et al (41 authors, including D. Blas). *“The effect of mission duration on LISA science objectives”*, *Gen.Rel.Grav.* 54 (2022) 1, 3, [arXiv:2107.09665](https://arxiv.org/abs/2107.09665) [astro-ph.IM]. **Tc**
60. \*\* D. Blas, A. C. Jenkins.  
*“Bridging the  $\mu\text{Hz}$  Gap in the Gravitational-Wave Landscape with Binary Resonances”*,  
*Phys.Rev.Lett.* 128 (2022) 10, 101103, [arXiv:2107.04601](https://arxiv.org/abs/2107.04601) [astro-ph.CO]  
 Selected for APS Focus <https://physics.aps.org/articles/v15/34>
59. D. Blas, A. C. Jenkins.  
*“Detecting stochastic gravitational waves with binary resonance”*,  
*Phys.Rev.D* 105 (2022) 6, 064021, [arXiv:2107.04063](https://arxiv.org/abs/2107.04063) [gr-qc]
58. T. Gupta, M. Herrero-Valea, D. Blas, E. Barausse, N. Cornish, K. Yagi, N. Yunes.  
*“New binary pulsar constraints on Einstein-aether theory after GW170817”*,  
*Class.Quant.Grav.* 38 (2021) 19, 195003, [arXiv:2104.04596](https://arxiv.org/abs/2104.04596) [gr-qc]
57. N. Bar, D. Blas, K. Blum, H. Kim.  
*“Assessing the Fornax globular cluster timing problem in different models of dark matter”*,  
*Phys.Rev.D* 104 (2021) 4, 043021, [arXiv:2102.11522](https://arxiv.org/abs/2102.11522) [astro-ph.GA]
56. A. Caputo, S. J. Witte, D. Blas, P. Pani.  
*“Electromagnetic Signatures of Dark Photon Superradiance”*,  
*Phys.Rev.D* 104 (2021) 4, 043006, [arXiv:2102.11280](https://arxiv.org/abs/2102.11280) [hep-ph]
55. D. Blas, J. Martín Camalich, J. A. Oller.  
*“Unitarization of infinite-range forces: graviton-graviton scattering”*,  
[2010.12459](https://arxiv.org/abs/2010.12459) [hep-th]
54. J. Alvey, N. Sabti, V. Tiki, D. Blas, K. Bondarenko, A. Boyarsky, M. Escudero, M. Fairbairn, M. Orkney, J. I. Read.  
*“New Constraints on the Mass of Fermionic Dark Matter from Dwarf Spheroidal Galaxies”*,  
*Mon.Not.Roy.Astron.Soc.* 501 (2021) 1, [arXiv:2010.03572](https://arxiv.org/abs/2010.03572) [hep-ph]
53. D. Blas, S. J. Witte.  
*“Imprints of Axion Superradiance in the CMB”*,  
*Phys.Rev.D* 102 (2020) 10, 103018 [arXiv:2009.10074](https://arxiv.org/abs/2009.10074) [astro-ph.CO]
52. D. Blas, S. J. Witte.  
*“Quenching Mechanisms of Photon Superradiance”*,  
*Phys.Rev.D* 102 (2020) 123018, [arXiv:2009.10075](https://arxiv.org/abs/2009.10075) [hep-ph]
51. D. Blas, J. Martín Camalich, J. A. Oller.  
*“Scalar resonance in graviton-graviton scattering at high-energies: the graviball”*,  
*Phys.Lett.B* 827 (2022) 136991, [arXiv:2009.07817](https://arxiv.org/abs/2009.07817)[hep-th] .
50. N. Sabti, J. B. Muñoz, D. Blas.  
*“First Constraints on Small-Scale Non-Gaussianity from UV Galaxy Luminosity Functions”*,  
*JCAP* 01 (2021) 010, [arXiv:2009.01245](https://arxiv.org/abs/2009.01245) [astro-ph.CO] .
49. E. Barausse, et al. (322 authors, including D. Blas, LISA Collaboration ).  
*“Prospects for Fundamental Physics with LISA”*,  
*Gen.Rel.Grav.* 52 (2020) 8, 81, [arXiv:2001.09793](https://arxiv.org/abs/2001.09793) [gr-qc] . **WP**
48. \*\* L. Badurina, et al. (41 authors, including D. Blas).  
*“AION: An Atom Interferometer Observatory and Network”*,  
*JCAP* 05 (2020) 011, [1911.11755](https://arxiv.org/abs/1911.11755) [astro-ph.CO] . **Exp**
47. D. Blas, D. López-Nacir, S. Sibiryakov.  
*“Secular effects of Ultralight Dark Matter on Binary Pulsars”*,  
*Phys.Rev.D* 101 (2020) 6, 063016, [arXiv:1910.08544](https://arxiv.org/abs/1910.08544) [gr-qc] .

46. D. Blas, M. Ivanov, A. Caputo, L. Sberna.  
“No chiral light bending by clumps of axion-like particles”,  
*Phys.Dark Univ.* 27 (2020) 100428, [arxiv:1910.06128 \[hep-ph\]](#).
45. N. Sabti, J. Alvey, M. Escudero, M. Fairbairn, D. Blas.  
“Refined Bounds on MeV-scale Thermal Dark Sectors from BBN and the CMB”,  
*JCAP* 01 (2020) 004, [arxiv:1910.01649 \[hep-ph\]](#).
44. Y. A. El-Neaj, et al. (132 authors, including D. Blas),  
“AEDGE: Atomic Experiment for Dark Matter and Gravity Exploration in Space”,  
*EPJ Quant.Technol.* 7 (2020) 6 [arXiv:1908.00802 \[gr-qc\]](#). **Exp**
43. A. Caputo, L. Sberna, M. Frias, D. Blas, P. Pani, L. Shao, W. Yan  
“Constraints on millicharged dark matter and axion-like particles from timing of radio waves”,  
*Phys.Rev. D100* (2019) 063515, [arxiv:1902.02695 \[astro-ph.CO\]](#).
42. R. Alonso, D. Blas, P. Wolf  
“Scattering of light dark matter in atomic clocks”  
*Phys.Rev. D99* (2019) 095019, [arXiv:1810.01632 \[quant-ph\]](#).
41. R. Alonso, D. Blas, P. Wolf.  
“Exploring the ultra-light to sub-MeV dark matter window with atomic clocks and co-magnetometers”,  
*JHEP* 1907 (2019) 069 [arXiv:1810.00889 \[hep-ph\]](#).
40. L. Annulli, L. Bernard, D. Blas, V. Cardoso.  
“Scattering of scalar, electromagnetic and gravitational waves from binary systems”,  
*Phys.Rev. D98* (2018) no.8, 084001, [arXiv:1809.05108 \[gr-qc\]](#).
39. L. Barack, et al. (203 authors, including D. Blas). Convener of the Dark Matter Section  
“Black holes, gravitational waves and fundamental physics: a roadmap”,  
*Class.Quant.Grav.* 36 (2019) no.14, 143001, [arXiv:1806.05195 \[gr-qc\]](#). **WP**
38. \*\* N. Bar, D. Blas, K. Blum, S. Sibiryakov.  
“Galactic Rotation Curves vs. Ultra-Light Dark Matter: Implications of the Soliton – Host Halo Relation”,  
*Phys.Rev. D98* (2018) no.8, 083027, [arXiv:1805.00122 \[astro-ph.CO\]](#).
37. A. Caputo, J. Zavala, D. Blas.  
“Binary pulsars as probes of a Galactic dark matter disk”,  
*Phys.Dark Univ.* 19 (2018) 1-11, [arXiv:1709.03991 \[astro-ph.HE\]](#).
36. N. Cornish, D. Blas, G. Nardini.  
“Bounding the speed of gravity with gravitational wave observations”,  
*Phys.Rev.Lett.* 119 (2017) no.16, 161102, [arXiv:1707.06101 \[gr-qc\]](#).
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28. D. Blas, M. M. Ivanov, I. Sawicki, S. Sibiryakov.  
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14. D. Blas, M. M. Ivanov and S. Sibiryakov.  
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12. D. Blas and H. Sanctuary.  
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*Phys. Rev. D* 84 (2011) 064004. [arXiv:1105.5149 \[gr-qc\]](#).
11. D. Blas, M. Shaposhnikov and D. Zenhausern.  
“Scale-invariant alternatives to general relativity”,  
*Phys.Rev. D*84 (2011) 044001. [arXiv:1104.1392 \[hep-th\]](#).
10. \*\* D. Blas, J. Lesgourgues and T. Tram.  
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*JCAP* 1107 (2011) 034. [arXiv:1104.2933 \[astro-ph.CO\]](#).
9. D. Blas and S. Sibiryakov.  
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*JCAP* 1107 (2011) 026. [arXiv:1104.3579 \[hep-th\]](#).
8. D. Blas, O. Pujolàs and S.Sibiryakov.  
“Models of non-relativistic quantum gravity: the good, the bad and the healthy”,  
*JHEP* 1104:018,2011. [arXiv:1007.3503 \[hep-th\]](#).
7. D. Blas, O. Pujolàs and S.Sibiryakov.  
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5. D. Blas, O. Pujolàs and S.Sibiryakov.  
“On the extra mode and inconsistency of Hořava gravity”,  
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4. D. Blas, D. Comelli, F. Nesti and L. Pilo.  
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3. D. Blas, C. Deffayet and J. Garriga.  
“Bigravity and Lorentz-violating Massive Gravity”,  
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2. E. Álvarez, D. Blas, J. Garriga and E. Verdaguer.  
“Transverse Fierz-Pauli Symmetry”,  
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1. D. Blas, C. Deffayet and J. Garriga.  
“Global Structure of of Bigravity Solutions”,  
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## Conference proceedings

15. A. Abdalla et al. (including D. Blas). “Terrestrial Very-Long-Baseline Atom Interferometry: Summary of the Second Workshop”, *Workshop on Terrestrial Very-Long-Baseline Atom Interferometry*, March 2024. [arXiv:2412.14960 \[hep-ex\]](#).
14. D. Blas. “Probing ultralight and degenerate dark matter with galactic dynamics”, *COSMICWISPer*, September 2023. [arXiv:2312.04978 \[hep-ph\]](#).
13. D. Blas. “Quantum technologies for fundamental (HE) physics”, *EPS-HEP2023*, August 2023. [arXiv:2311.1018 \[hep-ph\]](#).
12. S. Abend et al. (including D. Blas). “Terrestrial Very-Long-Baseline Atom Interferometry: Workshop Summary”, *Workshop on Terrestrial Very-Long-Baseline Atom Interferometry*, March 2023. [arXiv:2310.08183 \[hep-ex\]](#).
11. D. Blas. “Black hole superradiance to search for new particles”, *33rd Rencontres de Blois: Exploring the Dark Universe*, May 2022. [arXiv:2211.02067 \[hep-ph\]](#).
10. D. Blas. “Dark matter properties from the Fornax globular cluster timing: dynamical friction and cored profiles”, *16th Marcel Grossmann Meeting*, July 2021. [arXiv:2205.00289 \[hep-ph\]](#).

9. D. Blas. “New orbitals probes of ultra-light dark matter”  
*Proceedings of SEENET-MTP Workshop BW2018*, June 2018  
[Int.J.Mod.Phys. A33 \(2018\) no.34, 1845018](#).
8. D. Blas. “Theoretical aspects of antimatter and gravity”  
*Antiproton physics in the ELENA era*, Sep 2017.  
[Phil.Trans.Roy.Soc.Lond. A376 \(2018\) no.2116, 20170277](#).
7. D. Blas. “Hořava gravity: motivation and status”  
*Lorentz and CPT Symmetry in Field Theory*, July 2017  
[J.Phys.Conf.Ser. 952 \(2018\) no.1, 012002](#).
6. D. Blas. “Modified gravity and binary pulsars: the Lorentz violating case”  
*14th Marcel Grossmann Meeting* , [arXiv:1601.04653 \[gr-qc\]](#).
5. D. Blas. “Lorentz violation in gravity”  
*Moriond, Gravitation: 100 years after GR*, [arXiv:1507.07687 \[gr-qc\]](#).
4. D. Blas. “Transverse Symmetry and Spin-3/2 Fields”.  
*Class.Quant.Grav.*25:154009 (2008). [arXiv:0803.4497 \[hep-th\]](#).
3. D. Blas. “Some Global and Local Aspects of Bigravity”.  
Proceedings of X Peyresq Rancontres en Cosmologie.  
[Int. J. Theor. Phys. 46 N9: 2258-2273 \(2007\)](#).
2. D. Blas. “Gauge Symmetry and Consistent Spin-Two Theories”.  
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1. D. Blas. “Bigravity and Massive Gravity”.  
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## Presentations in conferences, workshops and seminars

*Summary:* Total of 115 talks at workshops and conferences most of them plenary or invited. 105 invited talks in research institutions, including 9 colloquia.

### Presentations in workshops/conferences (some links may be obsolete).

115. *Nov 2024*. Lorentz Violations in Gravity: Part II, Benasque Spain [\[link\]](#).
114. *Nov 2024*. Dark World to Swampland 2024: the 9th IBS-IFT Workshop, IBS, Daejeon, South Korea. [\[link\]](#).
113. *Oct 2024*. 23rd International Workshop on Laser Ranging, Kunming, China. [\[link\]](#).
112. *Oct 2024*. LISA Spain Meeting 2024, IEC, Cerdanyola del Vallès, Spain. [\[link\]](#).
111. *Oct 2024*. Kick-off meeting UNDARK, Instituto de Astrofísica de Canarias, La Laguna, Spain. [\[link\]](#).
110. *Sep 2024*. Precision Atomic Physics Experiments to Probe for New Physics. 817. WE-Heraeus-Seminar, Wilhelm und Else Heraeus-Stiftung, Bad Honnef, Germany. [\[link\]](#).
109. *Jul 2024*. New horizons for Psi, Lisbon, Portugal. [\[link\]](#).
108. *Jun 2024*. SynCRETism 2024. Particle physicists dining with Astrophysicists, Rethymno, Greece. [\[link\]](#).
107. *Jun 2024*. SUSY24: The 31st International Conference on Supersymmetry and Unification of Fundamental Interactions, Madrid, Spain. [\[link\]](#).
106. *Apr 2024*. ALPS-DM, Obergurgl, Austria. [\[link\]](#).
105. *Mar 2024*. Dark Matter Beyond the Weak Scale II, Durham, UK. [\[link\]](#).
104. *Feb 2024*. Bottom-Up Cross-Cutting Workshop “JENAS Initiative: Gravitational Wave Probes of Fundamental Physics”, Rome, Italy. [\[link\]](#).
103. *Jan 2024*. FunPAG Virtual Science Workshop, NASA, Virtual.
102. *Dec 2023*. Saturnalia 2023, Zaragoza, Spain. [\[link\]](#).
101. *Nov 2023*. Workshop: ELGAR, a future European Laboratory for Gravitation and Atom-interferometric Research, Talence, France. [\[link\]](#).

100. *Nov 2023*. 1st Lunar Laser Ranging Meeting, Grasse, France [\[link\]](#).
99. *Sep 2023*. Particle Avenues in the Dark Universe Arena (PADUA): Light Dark Sectors, Padova, Italy [\[link\]](#).
98. *Sep 2023*. 1st General Meeting of COST Action COSMIC WISPerS (CA21106), Bari, Italy [\[link\]](#).
97. *Aug 2023*. European Physical Society Conference on High Energy Physics (EPS-HEP), Hamburg, Germany [\[link\]](#)
96. *Aug 2023*. Pulsar Timing Arrays: A Star-Way to New Physics, Mainz, Germany, Mainz, Germany [\[link\]](#).
95. *Jun 2023*. Illuminating Dark Matter (2023), Schloss Elmau Resort and Hideaway, Krün, Germany. [\[link\]](#).
94. *Jul 2023*. Lorentz Violations in Gravity, Trieste, Italy. [\[link\]](#).
93. *Jun 2023*. Les Houches Workshop Series == Physics at TeV Colliders and Beyond the Standard Model, Les Houches, France. [\[link\]](#).
92. *May 2023*. AION Days @ King's College London, London, UK.
91. *Mar 2023*. 57th Rencontres de Moriond -Gravitation, La Thuile, Italy. [\[link\]](#).
90. *Mar 2023*. Terrestrial Very-Long-Baseline Atom Interferometry Workshop, CERN, Meyrin, Switzerland. [\[link\]](#).
89. *Feb 2023*. Quantum Fields and Gravity, Universitat de Barcelona, Barcelona, Spain. [\[link\]](#).
88. *Dec 2022*. Saturnalia 2022, Zaragoza, Spain. [\[link\]](#).
87. *Nov 2022*. XXXIII Canary Islands Winter School of Astrophysics. Overlaps at the Frontiers of Astrophysics, Cosmology and Particle Physics, IAC, La Laguna, Spain. [\[link\]](#)
86. *Nov 2022*. International Conference on Quantum Technologies for High-Energy Physics (QT4HEP22), CERN, Geneva, Switzerland. [\[link\]](#)
85. *Oct 2022*. Beyond the Standard Models: Particle Physics meets Cosmology, IFT UAM-CSIC, Madrid, Spain. [\[link\]](#)
84. *Sep 2022*. Spanish Relativity Meeting, Salamanca, Spain. [\[link\]](#)
83. *Jun 2022*. 25th Peyresq Meeting, Peyresq, France.
82. *May 2022*. 33rd Rencontres de Blois (*Focus Talk*) Blois, France. [\[link\]](#)
81. *Apr 2022*. Cosmological Frontiers in Fundamental Physics 2022 Workshop, Brussels, Belgium. [\[link\]](#)
80. *Feb 2022*. Physics Opportunities at 100-500 MHz Haloscopes (virtual), CERN, Switzerland. [\[link\]](#)
79. *Dec 2021*. Saturnalia 2021, Universidad de Zaragoza, Spain. [\[link\]](#)
78. *Dec 2021*. Synergies@Prague. Winter workshop: multimessengers and the large-scale structure, Prague, Czech Republic. [\[link\]](#)
77. *Nov 2021*. AION Days in Oxford, Oxford, UK. [\[link\]](#)
76. *Oct 2021*. Ultra-High-Frequency GWs: A Theory and Technology Roadmap (Virtual). [\[link\]](#)
75. *Oct 2021*. New Physics from The Sky. GGI, Florence, Italy. [\[link\]](#)
74. *Sept 2021*. Global meeting of the GWVerse COST action., Lisbon, Portugal. [\[link\]](#)
73. *Aug 2021*. COSMO' 21, U. Illinois (remote). [\[link\]](#)
72. *Jul 2021*. Marcel Grossman 16 (remote). [\[link\]](#)
71. *Jul 2021*. Cosmology from Home 2021 (remote). [\[link\]](#)
70. *Dec 2020*. Progress on Old and New Themes in cosmology PONT (remote). [\[link\]](#)
69. *May 2020*. "Newton 1665" seminar (remote). [\[link\]](#)
68. *Feb 2020*. Axions: Experimental, Cosmological and Theoretical Aspects, Padova, Italy. [\[link\]](#)
67. *Dec 2019* Multimessengers, compact objects and fundamental physics, Prague, Czech Republic. [\[link\]](#)
66. *Oct 2019*. From quantum gravity to string theory and back, Madrid, Spain. [\[link\]](#)
65. *Sep 2019*. The non-Gaussian Universe, Cambridge, UK. [\[link\]](#)
64. *Apr 2019*. Iberian Cosmology Meeting, Bilbao, Spain. [\[link\]](#)
63. *Mar 2019*. First AION Workshop, Imperial College London, UK. [\[link\]](#)
62. *Jan 2019*. ZPW2019 - A New Look at Dark Matter, Zurich, Switzerland. [\[link\]](#)
61. *Oct 2018*. Quantum Sensors for Fundamental Physics. Oxford, UK. [\[link\]](#)
60. *Jul 2018*. From Dark Energy to Bright Synergies, Sexten, Italy. [\[link\]](#)

59. *Jun 2018*. SEENET-MTP Workshop BW2018, Nič, Serbia. [\[link\]](#)
58. *Jun 2018*. Numerical Relativity beyond General Relativity, Benasque, Spain. [\[link\]](#)
57. *May 2018*. Gravitational waves in modified gravity, ITS-ETH, Z<sup>'</sup>urich, Switzerland. [\[link\]](#)
56. *May 2018* London Dark Matter Forum, Imperial College, London, UK.
55. *Nov 2017*. 27th Workshop on General Relativity and Gravitation in Japan, Hiroshima, Japan. [\[link\]](#)
54. *Sep 2017*. Antiproton physics in the ELENA Era, Buckinghamshire, UK. [\[link\]](#)
53. *Jul 2017*. International workshop CPT and Lorentz Symmetry in Field Theory, Faro, Portugal. [\[link\]](#)
52. *Feb 2017*. Swiss Cosmo Days, Z<sup>'</sup>urich, Switzerland.
51. *Jul 2016*. Theoretical challenges for precision galaxy clustering, Sexten, Italy. [\[link\]](#)
50. *Jun 2016*. Quarks 2016, Pushkin, Russia. [\[link\]](#)
49. *May 2016*. Nonlinear Large Scale Structure: Theory Meets Expectations, Paris, France. [\[link\]](#)
48. *Apr 2016*. GGI Theoretical Cosmology in the Era of Large Surveys (2 talks), Florence, Italy. [\[link\]](#)
47. *Mar 2016*. Moriond Cosmology. La Thuile, Italy. [\[link\]](#)
46. *Dec 2015*. 28th Texas Symposium on Relativistic Astrophysics, Geneva, Switzerland. [\[link\]](#)
45. *Sep 2015*. 2nd workshop of the eLISA Cosmology Working Group, Stavanger, Norway. [\[link\]](#)
44. *Aug 2015*. Gravity @ all scales, Nottingham, UK. [\[link\]](#)
43. *Jul 2015*. Marcel Grossmann 14, Rome, Italy. [\[link\]](#)
42. *Jun 2015*. New directions in theoretical cosmology, Pisa, Italy. [\[link\]](#)
41. *Feb 2015*. Extracting Information from Weak Lensing, Leiden, Netherlands. [\[link\]](#)
40. *Mar 2015*. 50th Rencontres de Moriond and GRAM Colloquium, La Thuile, Italy. [\[link\]](#)
39. *Mar 2015*. Extended theories of gravity, Nordita, Sweden. [\[link\]](#)
38. *Feb 2015*. Swiss Cosmo Days, Geneva, Switzerland.
37. *Aug 2014*. Modern Cosmology: Early Universe, CMB and LSS . Benasque, Spain. [\[link\]](#)
36. *Jul 2014*. Non-Linear Structure in the Modified Universe, Leiden, Netherlands. [\[link\]](#)
35. *Jun 2014*. Meeting on Fundamental Cosmology, Fuerteventura, Spain. [\[link\]](#)
34. *Jan 2014*. FQXi Meeting, Vieques, Puerto Rico. [\[link\]](#)
33. *Dec 2013*. Trobada de Nadal, Barcelona, Spain. [\[link\]](#)
32. *Oct 2013*. Fundamental Physics, CMB & LSS in the light of Planck and DES, Madrid, Spain. [\[link\]](#)
31. *Sep 2013*. Spanish Relativity Meeting, Benasque, Spain. [\[link\]](#)
30. *Jun 2013*. Cosmology and Fundamental Physics with Planck @ CERN , CERN, Switzerland. [\[link\]](#)
29. *June 2013*. Cosmo Renata, Valencia, Spain. [\[link\]](#)
28. *May 2013*. PTChat Workshop, Cargèse, France.
27. *Mar 2013*. First Maranhao International Meeting on QFT, Maranhao, Brasil.
26. *Feb 2013*. Focus week on Gravity and Lorentz violations, IPMU, Japan. [\[link\]](#)
25. *Feb 2013*. Swiss cosmology day, Bern, Switzerland. [\[link\]](#)
24. *Dec 2012*. 12th Xmas Meeting on Theoretical Physics at the UB. Universitat de Barcelona, Spain.
23. *Sep 2012*. COSMO 2012, Beijing, China.
22. *Jun 2012*. Quarks 2012, Yaroslavl, Russia. [\[link\]](#)
21. *Oct 2011*. Gravity and Lorentz Violations, DAMTP, Cambridge University, UK.
20. *Sep 2011*. Workshop on Infrared Modifications of Gravity, ICTP, Trieste, Italy. [\[link\]](#)
19. *Aug 2011*. Workshop on String Theory, Gravity and Fields, Buenos Aires, Argentina. [\[link\]](#)
18. *Jul 2011*. GLOVeS: Gravity, Lorentz Violation & Superluminality, Moscow, Russia. [\[link\]](#)
17. *Jun 2011*. XVI Rencontre de Cosmologie de Peyresq, Peyresq, France. [\[link\]](#)
16. *Jun 2011*. SPS Joint Annual Meeting 2011, Lausanne, Switzerland. [\[link\]](#)
15. *Jun 2010*. XV Rencontre de Cosmologie de Peyresq, Peyresq, France.
14. *May 2010*. Hot Topics in Modern Cosmology, Cargèse, France. [\[link\]](#)
13. *Dic 2009*. 9th Xmas Meeting on Theoretical Physics at the UB. Universitat de Barcelona, Spain.
12. *Nov 2009*. Gravity at a Lifshitz Point Conference, Perimeter Institute, Canada. [\[link\]](#)
11. *Jun 2009*. XIV Rencontre de Cosmologie de Peyresq. Peyresq, France. [\[link\]](#)
10. *May 2009*. Hot Topics in Modern Cosmology, Cargèse, France. [\[link\]](#)

9. *Dec 2008*. Trobada de Nadal, Universitat de Barcelona, Spain.
8. *Oct 2008*. 13th Summer Institute at Gran Sasso National Laboratory, L'Aquila, Italy.
7. *May 2008*. Hot Topics in Modern Cosmology, Cargèse, France. [\[link\]](#)
6. *Jun 2007*. XII Rencontre de Cosmologie de Peyresq, Peyresq, France. [\[link\]](#)
5. *Apr 2007*. Bilbao Encounter on New Standard Cosmology, Bilbao, Spain.
4. *Jul 2006*. 2nd International Conference on Quantum Theories and Renormalization Group in Gravity and Cosmology, Barcelona, Spain. [\[link\]](#)
3. *Jun 2006*. XI Rencontre de Cosmologie de Peyresq, Peyresq, France. [\[link\]](#)
2. *Feb 2006*. Gravity, Strings and Gauge Theories, Santiago de Compostela, Spain.
1. *Sep 2005*. XXVIII Spanish Relativity Meeting, Oviedo, Spain. [\[link\]](#)
0. *Jun 2005*. X Rencontre de Cosmologie. Peyresq, France. [\[link\]](#)

### Invited seminars and colloquia (marked as Col)

104. *Oct 2024*. Pulsar SGW SKA meeting, Virtual.
103. *Sep 2024*. Advanced Concepts Team, European Space Agency, Virtual.
102. *Aug 2024*. QIT-TH Forum, CERN. Switzerland. [\[link\]](#)
101. *Jul 2024*. Budker Group Meeting, Mainz, Virtual.
100. *Jun 2024*. Science Coffee, Advanced Concepts Team, European Space Agency, Virtual. [\[link\]](#)
99. *May 2024*. Instituto de Astrofísica de Canarias, La Laguna, Spain. [\[link\]](#).
98. *Apr 2024*. Institut de Ciències Fotòniques, Castelldefels, Spain. [\[link\]](#)
97. *Mar 2024*. IAXO Collaboration Meeting, Virtual.
96. *Feb 2024*. INFN Pisa, Pisa, Italy. [\[link\]](#)
95. *Jan 2024*. Madrid Polygonal Gravity Seminars, Complutense University, Madrid, Spain. [\[link\]](#).
94. *Jan 2024*. Niels Bohr Institut, Copenhagen, Denmark. [\[link\]](#)
93. *Oct 2023*. GNOME Collaboration Weekly Seminar (Remote talk).
92. *Jun 2023*. KEK, Ibaraki, Japan (Remote talk). [\[link\]](#)
91. *Apr 2023*. GAIA Seminar, Universitat de Barcelona, Barcelona, Spain.
90. *Jan 2023*. High Energy Physics Seminar, Caltech, USA. [\[link\]](#)
89. *Jan 2023*. Scientific Series, Perimeter Institute, Canada. [\[link\]](#)
88. *Dec 2022*. TTK Seminars , Aachen University, Germany. [\[link\]](#)
87. *Jul 2022*. TH BSM Forum, CERN, Switzerland. [\[link\]](#)
86. *May 2022*. Physics Department, University of Athens, Greece. [\[link\]](#)
85. *Apr 2022*. ICE Pizza Seminar, Barcelona, Spain. [\[link\]](#)
84. *Apr 2022* Copernicus Webinar and Colloquium Series. [\[link\]](#).
83. **Col.** *Apr 2022*. Colloquium at Albert-Einstein-Institut Hannover, Germany. [\[link\]](#)
82. *Mar 2022*. ICCUB Seminar, Barcelona, Spain. [\[link\]](#)
81. *Feb 2022*. Quantum & Gravity Seminar, Radboud University, Netherlands [\[link\]](#)
80. *Dec 2021*. 3PAC seminar, Imperial College London, UK. [\[link\]](#)
79. *Sep 2021*. ICC-UB Seminar (virtual). UB, Spain. [\[link\]](#)
78. *Aug 2021*. CERN TH Cosmo Coffee. CERN, Switzerland. [\[link\]](#)
77. *Jun 2021*. Quantum Glue meetings (virtual), UPV/EHU and DIPC, Spain. [\[link\]](#)
76. *May 2021*. APC (virtual), Paris, France. [\[link\]](#)
75. *May 2021*. Munich Cosmology Seminar (virtual). [\[link\]](#)
74. *May 2021*. Instituto de Astrofísica de Canaria, La Laguna, Spain. [\[link\]](#)
73. *Feb 2021*. IFIC, Valencia, Spain. [\[link\]](#)
72. **Col.** *Apr 2021*. Portsmouth Institute of Cosmology and Gravitation (virtual). [\[link\]](#)
71. *Dec 2020*. CERN Cosmology Seminar. (remote), CERN, Switzerland. [\[link\]](#)
70. *Nov 2020*. SISSA (remote), Trieste, Italy. [\[link\]](#)
69. *Apr 2020* Joint Particle Physics in Paris (remote). [\[link\]](#)

68. *Mar 2020*. University of Oxford, Oxford, UK.
67. *Feb 2020*. Universitat de Barcelona, Barcelona, Spain. [\[link\]](#)
66. **Col.** *Jan 2020*. IPPP Colloquium, University of Durham, UK. [\[link\]](#)
65. *Jun 2019*. Portsmouth Institute of Cosmology and Gravitation, Portsmouth, UK. [\[link\]](#)
64. *May 2019*. SISSA, Trieste, Italy.
63. *May 2019*. Bristol University, Bristol UK.
62. *Jan 2019*. 3PAC. Imperial College London, London UK.
61. *Dec 2018*. University of Manchester, Manchester, UK.
60. *Dec 2018*. DESY Hamburg, Germany. [\[link\]](#)
59. *Nov 2018*. University College London, London UK.
58. *Nov 2018*. University of Nottingham. Nov 2018, Nottingham, UK. [\[link\]](#)
57. **Col.** *Nov 2018*. DAMTP Colloquium, University of Cambridge, UK. [\[link\]](#)
56. *Oct 2018*. Quantum Tuesdays. Universidad de Zaragoza, Zaragoza, Spain. [\[link\]](#)
55. *May 2018*. DAMTP, Cambridge, UK. [\[link\]](#)
54. *May 2018*. Central European Institute of Cosmology, Prague, Czech Republic. [\[link\]](#)
53. *Oct 2017*. IFT, Madrid, Spain. [\[link\]](#)
52. *May 2017*. Department d'Astrophysique CEA-Saclay, Saclay, France. [\[link\]](#)
51. *Apr 2017*. Max Planck Institute for Gravitation, Berlin, Germany. [\[link\]](#)
50. *Apr 2017*. University of Amsterdam, Amsterdam, Netherlands. [\[link\]](#)
49. *Feb 2017*. Niels Bohr Institute, Copenhagen, Denmark. [\[link\]](#)
48. *Dec 2016*. CITA, Toronto, Canada. [\[link\]](#)
47. *Nov 2016* IFAE, Barcelona, Spain.
46. *Nov 2016*. Universitat de Barcelona, Barcelona, Spain. [\[link\]](#)
45. **Col.** *Oct 2016* /Max Planck Institute for Radioastronomy, B'onn, Germany. [\[link\]](#)
44. *Sep 2016*. University of Oxford, Oxford, UK.
43. **Col.** *Jun 2016*. RWTH-AACHEN Colloquium, Aachen, Germany. [\[link\]](#)
42. *Mar 2016*. Instituto Tecnico Superior, Lisbon, Portugal. [\[link\]](#)
41. *Nov 2015* IAP, Paris, France.
40. *May 2015*. Technion, Haifa, Israel.
39. *Dec 2014*. SISSA, Trieste, Italy. [\[link\]](#)
38. **Col.** *Dec 2014*. Astronomy Colloquium, ETHZ, Z'urich, Switzerland.
37. *Nov 2014*. IFAE, Barcelona, Spain. [\[link\]](#)
36. *Sep 2014*. IAP, Paris, France. [\[link\]](#)
35. *May 2014*,. University of Nottingham, Nottingham, UK. [\[link\]](#)
34. *May 2014*. CP3, Louvain-la-Neuve, Belgium. [\[link\]](#)
33. *Apr 2014*. EPFL, Lausanne, Switzerland.
32. *Dec 2013*. THC@NL, Leiden, Netherlands.
31. *Nov 2013*. University of California Berkeley, Berkeley, USA.
30. *Nov 2013*. CASE Western University, Cleveland, USA. [\[link\]](#)
29. **Col.** *Oct 2013*. CERN-TH. CERN, Switzerland. [\[link\]](#)
28. *Sep 2013*. CEFCA, Teruel, Spain.
27. *May 2013*. String theory journal club, CERN, Switzerland. [\[link\]](#)
26. *May 2013*. CP3 Institute, Odense, Denmark.
25. *May 2013*. SISSA, Trieste, Italy. [\[link\]](#)
24. *Apr 2013*. University of Geneva, Geneva, Switzerland. [\[link\]](#)
23. *Apr 2013*. Scuola Normale Superiore Pisa, Pisa, Italy.
22. *Jan 2013*. King's College London, London, UK.
21. *Nov 2012*. DESY, Germany. [\[link\]](#)
20. *Sep 2012*. CosmoCoffee CERN, CERN, Switzerland. [\[link\]](#)
19. *Jul 2012*. Institut de Ciènces de l'Espai, Barcelona, Spain.

18. *Feb 2012*. University of Heidelberg, Germany.
17. *Febr 2012*. CEA Saclay, France. [\[link\]](#)
16. *Jan 2012*. CERN-TH, CERN Switzerland. [\[link\]](#)
15. *Nov 2011*. University of Connecticut, Storrs, USA. [\[link\]](#)
14. **Col.** *May 2011*. University of Helsinki. Helsinki, Finland. [\[link\]](#)
13. *Jan 2011*. Institute for Nuclear Research, INR, Moscow, Russia.
12. *Jan 2011*. Sternberg Astronomical Institute, Moscow, Russia.
11. *Nov 2010*. DAMTP, University of Cambridge. Cambridge, UK. [\[link\]](#)
10. *Oct 2010*. Columbia University, NY, USA.
9. *Oct 2010*. New York University/CCPP, USA. [\[link\]](#)
8. *Oct 2010*. University of Maryland, Maryland, USA. [\[link\]](#)
7. *Oct 2010*. Tufts University, MA, USA.
6. *Sep 2010*. Geneva University. Geneva, Switzerland.
5. *Apr 2010*. SISSA. Trieste, Italy.
4. *Nov 2009*. Bern University. Bern, Switzerland.
3. *Nov 2009*. Universidad de Zaragoza, Zaragoza, Spain.
2. *Jun 2008*. Laboratorio Nazionale de Gran Sasso, Gran Sasso, Italy.
1. *Nov 2006*. University of Amherst. Amherst, USA.

**Moderator of sessions and discussion leader** at EPS-HEP2021 conference (online [\[link\]](#), Jul 2021); 4th LISA Cosmology Working Group Workshop (Mainz, Germany [\[link\]](#), Oct 2017); Heart of Darkness: Dark Energy and Modified Gravity (Paris, France [\[link\]](#), Jun 2012).

## Organization of conferences and schools

*Summary*: 22 international conferences organized and 3 PhD schools. *To highlight*: Chair of LOC at TeVPA 2016, one of the main conferences of Particle Astrophysics (292 participants that year. See below).

- *Lorentz Violations in Gravity: Part II* 2024, Dec 9 - Sep 13. Benasque, Spain. [\[link\]](#)
- *Kick-off meeting UNDARK* (member of SOC) 2024, Oct 8 - Oct 11. La Laguna, Spain. [\[link\]](#)
- *LI - International Meeting on Fundamental Physics* 2024, Sep 9 - Sep 14. Benasque, Spain. [\[link\]](#)
- *New Frontiers in Strong Gravity* 2024, July 7 - July 19. Benasque, Spain. [\[link\]](#)
- *Barcelona Initiative for Gravitation (BIG)* On-going series from 2023. Barcelona, Spain. [\[link\]](#)
- *Understanding Cosmological Observations* 2023, July 23 - Aug 05. Benasque, Spain. [\[link\]](#)
- *Taller de altas energías* 2022, 2022, Sep 4- Sep 17. Benasque, Spain (**PhD School**). [\[link\]](#)
- *New frontiers in strong gravity* 2022, July 3 - July 16. Benasque, Spain. [\[link\]](#)
- *Quantum Sensors for Fundamental Physics School*, 2020, 6-10 January. Durham, UK. [\[link\]](#)
- *Understanding cosmological observations*, 29th July-9th August 2019. Benasque, Spain. [\[link\]](#)
- *Emergent Symmetries in Particle Physics, Cosmology and Condensed Matter Systems* 20th-22nd June 2018. Niels Bohr Institute, Copenhagen, Denmark. [\[link\]](#)
- *Probing fundamental physics with CMB spectral distortions* 12th-16th March 2018. CERN TH-Institute, CERN, Switzerland. [\[link\]](#)
- *Swiss Cosmology days*, 5th-6th Feb 2018. CERN, Switzerland. [\[link\]](#)
- *Probing the dark sector and general relativity at all scales* 14th-25th Aug 2017. CERN TH-Institute, CERN, Switzerland. [\[link\]](#)
- *Understanding cosmological observations*, 30th July-11th Aug 2017. Benasque, Spain. [\[link\]](#)
- *Cosmology and gravitational waves: probing cosmology with gravitational wave detection School* of the eLISA cosmology working group, 27th May-10th June 2017. Benasque, Spain. [\[link\]](#)
- *From quarks to gravitational waves: Neutron stars as a laboratory for fundamental physics*, 5th-9th Dec 2016. CERN TH-Institute, CERN, Switzerland. [\[link\]](#)

- *TeV Particle Astrophysics* (Chair of LOC), 12-16th Sep 2016. CERN, Switzerland. [\[link\]](#)
- *The big bang and the little bangs - Non-equilibrium phenomena in cosmology and heavy ion collisions*, 15th-26th Aug 2016. CERN TH-Institute, CERN, Switzerland. [\[link\]](#)
- *Emergent properties of space-time*, 20th Jun-1st Jul 2016. CERN TH-Institute, CERN, Switzerland. [\[link\]](#)
- *Towards a next space probe for CMB observations and cosmic origins exploration* 17th - 20th May 2016. CERN, Switzerland. [\[link\]](#)
- *Windows on Quantum Gravity. Session 2*, 28th - 30th Oct 2015. ITP, Madrid, Spain. [\[link\]](#)
- *Workshop of the Cosmology Working Group of eLISA*, 14th - 17th April 2015. CERN, Switzerland. [\[link\]](#)
- *Understanding the early Universe*, 6th-16th Jan 2015. CERN TH-Institute. CERN, Switzerland. [\[link\]](#)
- *GLOVeS: Gravity, Lorentz Violation & Superluminality*. 11th to 15th Jul 2011. Institute for Nuclear Research, Moscow, Russia. [\[link\]](#)

**Organization of other events:** Co-organizer of Cosmology Meeting EPFL/CERN/Unige. 2012-2018; Co-organizer of Cosmology Journal Clubs at CERN (2012-2018) and at Universitat de Barcelona (2007-2008).

Member of the committee of Summer students program, CERN, from 06/2014 to 02/2018.

## Invited lectures at post-graduate courses, PhD schools and master classes

- *Sep 2024*. Lecturer at *Taller de Altas Energías (TAE) 2024*, Benasque, Spain [\[link\]](#)
- *Sep 2023*. Lecturer at *Gran Sasso Hands-on 2023 - PhD autumn school on experimental astroparticle physics*, Assergi, Italy. [\[link\]](#)
- *Nov 2022*. Closing lecture of *XXXIII Canary Islands Winter School of Astrophysics*, Instituto de Astrofísica de Canarias, La Laguna, Spain. [\[link\]](#)
- *May 2022/Feb 2023/Feb 2024*. Master class at *Máster Universitario en Física del Universo: Cosmología, Astrofísica, Partículas y Astropartículas*, Universidad de Zaragoza. Spain. [\[link\]](#) .
- *Jul 2021*. Lecturer, *Virtual school Theory of Gravitation and Variation in Cosmology (2<sup>nd</sup> ed)* CNRS. [\[link\]](#)
- *Sep 2018/ Sep 2019/Feb 2021*. Lecturer, *STFC Summer School in Particle Physics*, UK. [\[link\]](#)
- *Jun 2018*. Master class, *Máster Internacional en Empresa y Políticas Públicas*, École des Ponts ParisTech + UIMP + CICCIP, Spain.
- *Sep 2017*. Lecturer, *Cosmology School in the Canary Islands*. Fuerteventura, Spain. [\[link\]](#)
- *Jan 2017*. Post-graduate course. Universidad de Santiago de Chile, Chile.
- *Jul 2016*. Lecturer, *Petnica Summer School for PhD Students*. Petnica, Serbia. [\[link\]](#)
- *Dec 2015*. Lecturer, *9th TRR33 Winter School*. Passo del Tonale, Italy. [\[link\]](#)
- *Sep 2010*. Tutor of problem class *Taller de altas energías TAE 2010*. [\[link\]](#).

## Regular teaching experience

- *From academic year 2023-24:*.  
*Undergraduate:* 1 BSc Thesis supervised, 1 BSc Thesis ongoing.  
*Master level:* 10 hours of “Cosmology” and 8 hours on “Gravitational waves” at HEPAC master <https://mastercosmosbcn.cat/>. 2 Master thesis supervised, 1 Master Thesis on-going.
- *Academic years 2021-23:* Departament de Física, Universitat Autònoma de Barcelona. Spain.  
*Undergraduate:* Yearly in charge of the modules “General Relativity and Cosmology” (6 ECTS credits, 4th year of undergraduate studies) and 2 groups of “Càlcul II” (6 ECTS credits each group, 1st year of undergraduate studies). 2 BSc Thesis supervised.  
*Master level:* Yearly in charge of 10 hours of “Cosmology” and in 2022-2023, 4 hours on “Gravitational waves” at HEPAC master <https://mastercosmosbcn.cat/>. 2 Master Thesis supervised.
- *Academic years 2018-21,* Department of Physics, King’s College London. UK.  
*Undergraduate:* Yearly in charge of the modules “General Relativity and Cosmology” (7.5 ECTS credits per year; 3rd year of BSc) and “Literature review module” (7.5 ECTS per year; 3rd year of BSc). Academic tutor of 1st year students (yearly). 4 MSc Thesis supervised.



- *Academic years 2008-2011.* École Polytechnique Fédérale de Lausanne. Teaching assistant. 1 MSc Thesis supervised in year 2009-2010.
- *Academic year 2007-2008.* Universidad de Barcelona. Assistant Professor at partial time.

## Other merits

### Accreditations and visiting researcher appointments

- “Recerca Avançada” accreditation (certification allowing the holder to be Full Professor in Catalan Universities), Agència per a la Qualitat del Sistema Universitari de Catalunya, AQU Catalunya. Since 10/2021.
- Visiting Senior Lecturer at Physics Department of King’s College London, 01/07/2021-31/12/2022.
- Visiting Scientist at European Organization for Nuclear Research (CERN) from 01/02/2018 - now.
- External collaborator of the Centro de Astropartículas y Física de Altas Energías, Zaragoza, Spain. <https://capa.unizar.es/>, from 02/2022 - now.
- Associate researcher of the Severo Ochoa IFT Associates program. IFT-CSIC, Madrid, 2022-2023, <https://www.ift.uam-csic.es/severoochoa/en/associate-researchers/>.

### Invited stays at research institutions longer than two weeks (last 6 years)

- *Center:* Department of Theoretical Physics, CERN. *Location:* Ginebra, Switzerland. *Year and duration:* 2024, 4 weeks. *Purpose:* Visiting Scientist
- *Center:* Department of Theoretical Physics, CERN. *Location:* Ginebra, Switzerland. *Year and duration:* 2023, 4 weeks. *Purpose:* Visiting Scientist
- *Center:* Department of Theoretical Physics, CERN. *Location:* Ginebra, Switzerland. *Year and duration:* 2022, 4 weeks. *Purpose:* Visiting Scientist
- *Center:* Department of Theoretical Physics, CERN. *Location:* Ginebra, Switzerland. *Year and duration:* 2021, 3 weeks. *Purpose:* Visiting Scientist
- *Center:* Universidad de Zaragoza. *Location:* Zaragoza, Spain. *Year and duration:* 2021, 1 month. *Purpose:* Visiting Scientist CAPA.
- *Center:* Instituto de Astrofísica de Canarias. *Location:* San Cristóbal de La Laguna, Spain. *Year and duration:* 2021, 2 months. *Purpose:* Distinguished visitor Fundación Jesús Serra
- *Center:* LUTH, Observatoire de Paris. *Location:* Meudon, France. *Year and duration:* 2017, 1 month. *Purpose:* Visiting Scientist

### Outreach, press and Art & Science

- *Outreach articles & web material*
  - Jul 2023. Video for Divulga UAB. [\[link\]](#)
  - Jun 2023. Participation in podcast “La veu còsmica”. [\[link\]](#)
  - Feb 2023. Càpsula Amics UAB. [\[link\]](#)
  - Dec 2022. <https://birthofidea.tecnico.ulisboa.pt/>
  - Apr 2022. Article in “Divulga UAB”, [\[link\]](#)
  - Jun 2022. <https://www.adelantosdigital.com/web/entre-la-tierra-y-la-luna-en-busca-del-mensaje-invisible/>, “Adelantos”.
  - Nov 2014. Google Hangout on Gravitational Waves. [\[link\]](#)
  - Feb 2005. Article “Una mirada al mundo cuántico”. Electronic Publication Acapulco66.
- *Art&Science*
  - Nov 2024. Participation in round table. Sky Readings II, Tabita Rezaire. Calabash Nebula Public Program. TBA21, Madrid, Spain, [\[link\]](#).
  - Oct 2024. Round table “Los límites de la ciencia ” with Javier Argüello, Finestres Bookshop, Barcelona, Spain. [\[link\]](#).
  - Feb 2024. Collaborator of Lydia Ourahmane. 108 Días, MACBA, Barcelona, Spain, [\[link\]](#).

- Jan 2024. Panelist of *Panel III: Scientific Imaginations*, at the *Unveiling the Universe: Art and Science Summit & 70 years of discoveries at CERN*, CERN, Geneva, Switzerland. [\[link\]](#)
  - May - Jun 2023. Scientific partner of Andy Gracie during his internship at IFAE. [\[link\]](#)
  - 2023. Dark Matters Expert Advisory, Dark Matters Exhibition, Melbourne Science Gallery, Melbourne, Australia [\[link\]](#).
  - Sep 2022. Webinar in conversation with dancer Wenchi-Su, Taipei Performing Arts Center, Taiwan. <https://bleedonline.net/program/thank-you-movie-god/>
  - 2014 - 2018. Scientific Partner of Art@CERN program to promote Art&Science. CERN. [\[link\]](#)
  - 2022. Scientific partner of the following works artists and projects (links when available): Andy Gracie, *EoE Triptych*; 2020. Black Quantum Futurism, Collide Award, *Project: CPT Symmetry and Violations* [\[link\]](#); 2018. Suzanne Trestier, (“*The Escapist BHST (Black Hole Spacetime)*”) [\[link\]](#).
  - 2020. Scientific advisor of dance work <https://www.suwenchi.com/work-in-progress>
  - 2016. Scientific advisor of sound installation “Horizons Irrésolus”, <https://vimeo.com/161191937>. Electron Festival, Geneva, Switzerland.
  - Nov 2020. Panelist/speaker at 3 Art&Science events: <https://www.transmeet2020.org>, Art & Science festival, Tel-Aviv, Israel; Nov 2016. *Art&Science Simposium Arts SantaMonica*, Barcelona Spain; Oct 2015. *Innocence: A Symposium*, Institut Kunst, Basel, Switzerland.
  - 2016. Jury at Accelerate@CERN UAE 2016 (Prize for Art & Science).
- *Outreach talks*
    - Oct 2024. Pizza seminar for the RSEF students of UAB, Barcelona, Spain, [\[link\]](#).
    - May 2024. PINT OF SCIENCE, Barcelona, Spain, [\[link\]](#).
    - May 2024. Seminario Permanente de Ciencias y Humanidades ‘Blas Cabrera-Felipe’, La Laguna, Spain, [\[link\]](#).
    - Dec 2023. The 108th ICREA Colloquium, Barcelona, Spain, [\[link\]](#).
    - Nov 2023. Round table about the 20th anniversary of the SEGRE, UCM, Madrid, Spain.
    - Nov 2023/Feb 2024/Mar 2024/Apr 2024. Program Biblio Steam [\[link\]](#).
    - Jun 2023. Talk for the Astrojornades UAB, astro@UAB Collective, Barcelona, Spain.
    - Mar 2023. Dissabtes de la Física, UAB, Barcelona, Spain.
    - Mar 2023. Bojos per la Física”, IFAE, Barcelona, Spain.
    - Feb 2023. *Jornada commemorativa del centenari de la visita d’Einstein*, Barcelona, Spain. [\[link\]](#)
    - Ma 2022. 4th Physics Colloquium del Departament de Física de la UAB, Barcelona, Spain.
    - Mar 2022/Feb 2020/Apr 2017/Mar 2014. *Ciclo de charlas Rafaela María*. Zaragoza. Spain.
    - Nov 2021. Panelist at “Dark Matter Day”, Universitat de Barcelona, Spain. [\[link\]](#)
    - Aug 2019/Jun 2017. Benasque Center for Science, Benasque, Spain.
    - Apr 2018. Web-Talk en Indian Institute of Technology Kharagpur.
    - Apr 2017. EN Seminars, CERN. Geneva, Switzerland.
    - Nov 2015. Fundación Caja de Burgos. Burgos, Spain.
    - Oct 2014. Collide@CERN Geneva Music, Geneva, Switzerland.
    - Sep 2013. SEGRE Public Lecture at Spanish Relativity Meeting, Benasque, Spain.
  - *Press and media*
    - My article from 2022, *Phys.Rev.Lett.* 128 (2022) 10, 101103, ref 61 in [page 6](#), had a strong impact in international media. I was interviewed by several international news portals, included some of the most relevant journals in Spain (*La Razón* or *El Periodico*). A summary of this impact can be found in <https://aps.altmetric.com/details/109269532>. In particular, it is the 85th most mediatic article in the recent history of this journal, and the 3rd in the last year. *Press release*: [\[link\]](#)
    - My interviews with the artist Vincent H<sup>’</sup>anni have been published in the **book** “*Dialogues avec les physiciens*” <https://www.georg.ch/dialogues-avec-les-physiciens>
    - I have been interviewed for radio and press articles several times, e.g. in Spanish National Radio RNE 2015 [\[link\]](#), Severo Ochoa program of IAC 2021 [\[link\]](#) or Scientific American [\[link\]](#).
  - *Other outreach activities*
    - June 2023. Talk at school “Nuestra María del Carmen”, Zaragoza, Spain.
    - June 2017. Talk for primary school students at the Benasque Primary School, Benasque, Spain.
    - Nov 2014. Jury del FQXi video contest “Show me the Physics”.

- 2011 to 2015. Module on Cosmology for high school teachers visiting CERN, Switzerland (5 times)  
<https://teacher-programmes.web.cern.ch/spanish-teacher-programme>

Barcelona, 4th of January of 2025

Diego Blas Temiño.