

José Luis Bernal

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RESEARCH INTERESTS Cosmology: large-scale structure, line-intensity mapping, cosmic infrared background, dark matter, Hubble constant tension, agnostic modeling and data analysis, neutrino cosmology, primordial non-Gaussianity, blinding methods in cosmology.

PROFESSIONAL CAREER - Institute of Physics of Cantabria (IFCA), Investigador Científico Jun 2025 – present
(tenured)
Consejo Superior de Investigaciones Científicas
- Institute of Physics of Cantabria (IFCA), Ramón y Cajal Fellow Jan 2023 – Jun 2025
University of Cantabria
- Max Planck Institute for Astrophysics, Postdoctoral research fellow Oct 2022 – Dec 2022
- Johns Hopkins University, Davis Postdoctoral Fellowship Oct 2019 – Sept 2022
Department of Physics and Astronomy
- University of Barcelona, FPI fellow PhD Candidate Sept 2015 – Sept 2019
Quantum Physics and Astrophysics Department, Institute of Cosmos Sciences

EDUCATION - Ph.D. in Physics, University of Barcelona Sept 2019
PhD Thesis: *Cosmology on the edge of Λ CDM*, (excellent *Summa Cum Laude*)
Advisor: Licia Verde
- M.Sc. in Theoretical Physics, Universidad Autónoma de Madrid June 2015
Master Thesis: *A consistency test of General Relativity using Expansion History and Growth of Structures*
Advisors: Licia Verde, Antonio J. Cuesta, Alexander Knebe
- Bachelor Degree in Physics with honors, Universidad Autónoma de Madrid June 2014

HONORS & AWARDS - Ramón y Cajal fellowship, Spanish ‘Agencia Estatal de Investigación’ 2022
- Second Prize of the XXV Prize ‘Claustre de Doctors’ of the University of Barcelona 2021
- Doctoral Extraordinary Prize at the University of Barcelona, class 2018-2019 2021
- Spanish Astronomy Society Thesis Prize to the best Doctoral Thesis in A&A 2020
- Allan C. and Dorothy H. Davis Postdoctoral Fellowship, JHU 2019
- FPI Fellowship for the formation of doctors, Spanish MINECO 2015
- Postgraduate Fellowship to study the Master in Theoretical Physics, UAM+CSIC 2014
- Extraordinary Prize for the Best Academic Record of Physics 2014 Class, UAM 2014

GRANTS - Proyectos de Generación de Conocimiento, PID2022-140670NA-I00, *Understanding the Cosmos with Line-Intensity Mapping Experiments*, MCIN/AEI, PI: José Luis Bernal, 01/09/2023-01/09/2026, 155,625.00 €, role: PI.
- Ramón y Cajal Grant, RYC2021-033191-I, MCIN/AEI, 01/01/2023-31/12/2027, 244,350.00 €, role: PI.
- Allan C. and Dorothy H. Davis Fellowship grant 2019, Johns Hopkins University, PI: José Luis Bernal, 01/10/2019 - 30/09/2022, \$224,228.00, role: PI

TEACHING	- Lecturer at University of Cantabria (Master: Particle Physics and Physics of the Cosmos) Cosmology	2023 - present
	- Lecturer at Galileo Galilei Institute (Theoretical Aspects of APCG 2023, PhD school) “Cosmic Tensions”	27-31 March 2023
	- Teaching Assistant at the University of Barcelona Astronomy	Spring 2017
	Ordinary Differential Equations and Vector Calculus	Spring 2017, Spring 2018
PEER	- Editor of Journal of Cosmology and Astroparticle Physics	2025 - current
REVIEW	- Astrophysics and cosmology journals, including: ApJ, JCAP, A&A, MNRAS, PDU, EPJC, Universe, IJMPD	
	- Grant reviewer: Dutch Research Council (NWO) Open Competition Domain Science - M	2023
	Universidad Computense de Madrid’s program ‘Ayudas para la realización de proyectos I+D para jóvenes doctores’	2022
	External reviewer for NASA’s FINESST program	2020, 2021, 2022
MENTORING & SUPERVISION	- Supervision of graduate students: Sefa Pamuk, PhD candidate at UC, May 2024-May 2028	
	- Supervision of 4 undergraduate students:	
PUBLICATION METRICS	45 refereed journal publications (17 first-authored), 3000+ citations, h -index=27 6 additional articles submitted (to PRD, A&A, and JCAP).	
OUTREACH	- Speaker in ‘Expanding Science’ - talks in primary and secondary schools	2024 - present
	- The Universe: a window for discovery - Public talk, Casa de la Ciencia de Sevilla	2024
	- The Universe: a window to fundamental physics - Public talk, Science Center Benasque	2023
	- Round table about dark matter for the “Dark Matter Day”	2018
	- At what speed does the Universe expands? - Invited talk, Sabadell Astronomy Group	2018
	- Unravelling the dark Universe - Exhibition about cosmology, gravity and black holes	2017
	- Physics Experiments - UB (demonstrations for High school students)	2016, 2017, 2018
	- Walk on the Dark Side - Invited talk for Physics bachelor students	2016
PROFESSIONAL ACTIVITIES	- Physics - UB (demonstrations for High school students)	2016
	- SOC member in “Line-Intensity Mapping 2025”	2025
	- SOC member in “Line-Intensity Mapping 2024”	2024
	- LOC member in “Dark Matter 2023: From the Smallest to the Largest Scales”	2023
	- Main organizer, SOC+LOC member of “Present and Future of Line-Intensity Mapping”	2023
	- Postdoc representative in the “Joint JHU/STSci Colloquium Committee”	2021 - 2022
	- Founder and coordinator of “Physics and Astronomy Postdocs and Research Scientists” association at JHU	2020 - 2022
	- Organizer of the “Particle theory seminars” at JHU	2020 - 2022
	- Founder and organizer of the “PhD & Science” meetings at the ICCUB	2018 - 2019
	- LOC member in “Venice Cosmology Workshop 2018: The Island”	2018

REFERENCES

Marc Kamionkowski

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