

# José Luis Bernal

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RESEARCH INTERESTS      Cosmology: large-scale structure, line-intensity mapping, 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), Ramón y Cajal Fellow      Jan 2023 – present  
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  $\Lambda$ CDM*, (excellent *Summa Cum Laude*)  
Advisor: Licia Verde

M.Sc. in Theoretical Physics, Universidad Autónoma de Madrid      Jun 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

TEACHING      Lecturer at the University of Cantabria (Master: Particle Physics and Physics of the Cosmos)  
Cosmology      Spring 2023  
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 REVIEW      Astrophysics and cosmology journals, including:  
ApJ, JCAP, A&A, MNRAS, PDU, EPJC, Universe, IJMPD  
External reviewer:

	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	Graduate students: Gabriela Sato-Polito (4 publications), Hector A. Cruz; current graduate students at JHU Katie Short (2 publication); former graduate student at ICC-UB	
PUBLICATION METRICS	34 refereed journal publications (15 first-authored), 1900+ citations, $h$ -index=19 4 additional articles submitted (2 to PRL, 1 to MNRAS, and 1 to JCAP).	
OUTREACH	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
	Physis - UB (demonstrations for High school students)	2016
COLLABORATION	Member of the MeerKLASS collaboration	2023 - present
MEMBERSHIP	Member of the HETDEX collaboration	2022 - present
	Member of the SKA Cosmology group and Graviational Waves group	2018 - present
	Member of the Australian SKA Pathfinder (ASKAP) Cosmology group	2018 - present
PROFESSIONAL ACTIVITIES	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
VISITING RESEARCH	Department of Physics and Astronomy, JHU (funded by María de Maeztu)	April 2018
	Institute for Astronomy, University of Edinburgh (funded by ICCUB)	October 2017
	Radcliffe Institute of Advanced Study, Harvard (funded by FPI fellowship)	April - June 2016
REFERENCES	<u>Marc Kamionkowski</u> Johns Hopkins University (+1) 410-516-0373 <a href="mailto:kamion@jhu.edu">kamion@jhu.edu</a>	<u>Licia Verde</u> Institute of Cosmos Sciences (ICC-UB) (+34) 934031328 <a href="mailto:liciaverde@icc.ub.edu">liciaverde@icc.ub.edu</a>
	<u>Ely D. Kovetz</u> Ben-Gurion University (+972) 545-953349 <a href="mailto:kovetz@bgu.ac.il">kovetz@bgu.ac.il</a>	<u>Alvise Raccanelli</u> University of Padova (+39) 0498277113 <a href="mailto:alvise.raccanelli.1@unipd.it">alvise.raccanelli.1@unipd.it</a>