

UNIVERSITY OF MILAN

Public selection for recruiting No. 1 tenure track researcher(s) (RTT) for competition sector 02/A2 - Theoretical Physics of Fundamental Interactions, (scientific-disciplinary sector FIS/02 - Theoretical Physics, Mathematical Models and Methods) at the Department of Physics "Aldo Pontremoli", (announcement published in Official Gazette No. 49 of 18/06/2024) - Competition code 5577

Víctor Ernesto Bresó Pla

CURRICULUM VITAE

(N.B. CV MUST BE OF UP TO 30 PAGES AND INCLUDE THE DETAILS CANDIDATES CONSIDER USEFUL FOR THE ASSESSMENT.

ALL THE TITLES INSERTED BELOW ARE JUST EXAMPLES THAT CAN BE REPLACED, CHANGED OR COMPLETED)

PERSONAL DATA (DO NOT INCLUDE YOUR PERSONAL ADDRESS AND LANDLINE OR MOBILE PHONE NUMBER)

SURNAME	BRESÓ PLA
NAME	VÍCTOR ERNESTO
DATE OF BIRTH	17/08/1996

QUALIFICATIONS

DEGREE

(Specify full degree name and related score, University, date, thesis title, etc.)

-B.Sc. In Physics, Universitat de València (2014-2018). Average score: 9.1. Thesis: The Coleman-Mandula Theorem and its non-relativistic limit, supervised by Daniel Boër (University of Groningen).

-M.Sc. In Advanced Physics. Universitat de València (2018-2019). Average score: 9.4. Thesis: One-loop effective theory of the vSM mode of dark matter with heavy inflatons, supervised by Jorge Portolés.

DOCTORAL DEGREE OR EQUIVALENT QUALIFICATION EARNED IN ITALY OR ABROAD / MEDICAL SPECIALISATION DIPLOMA OR EQUIVALENT QUALIFICATION, FOR THE RELEVANT SECTORS, EARNED IN ITALY OR ABROAD

(Specify qualification full name and related score, institution, date, thesis title, etc.)

PhD in Theoretical Physics, Universitat de València (2019-2023). Score: Excellent with Cum Laude mention. Thesis: Precision measurements with the LHC and low-energy experiments : a model independent analysis, supervised Martín González-Alonso.

RESEARCH CONTRACTS, RESEARCH FELLOWSHIP CONTRACTS, POSTDOCTORAL SCHOLARSHIPS OR SIMILAR CONTRACTS

(Specify, for each contract, university/institution, starting and termination date, duration in years, etc.)

-FPU PhD grant, with reference FPU18/01340, affiliated with Instituto de Física Corpuscular (mixed centre CSIC-UV). Starting date: 16/10/2019. Termination date: 15/10/2023. Duration: 4 years.

-Employment contract for public service at the state of Baden-Württemberg (TV-L), affiliated with the University of Heidelberg. Starting date: 12/10/2023. Termination date: 11/10/2026. Duration: 3 years.

TEACHING ACTIVITIES AT ITALIAN OR FOREIGN UNIVERSITIES

(Specify academic year, university, degree course, number of hours/CFU, indicate type of activity, start and end date - day, month, year, etc.)

2020-2021 academic year:

-Physics I, Degree in Chemistry, Universitat de València. Number of hours: 15. Teaching Assistant.

-Mathematical Methods II, Double Degree in Physics and Mathematics, Universitat de València. Number of hours: 15. Teaching Assistant.

2021-2022 academic year:

-Mathematical Methods II, Degree in Physics, Universitat de València. Number of hours: 30. Teaching Assistant.

-Mathematical Methods II, Double Degree in Physics and Chemistry, Universitat de València. Number of hours: 15. Teaching Assistant.

2022-2023 academic year:

-Quantum Physics II, Degree in Physics, Universitat de València. Number of hours: 45. Teaching Assistant.

-Quantum Physics II, Double Degree in Physics and Chemistry, Universitat de València. Number of hours: 15. Teaching Assistant.

ATTESTED TRAINING OR RESEARCH ACTIVITIES AT QUALIFIED ITALIAN OR FOREIGN INSTITUTIONS

(Specify academic year, institution, course, period, commitment in terms of hours, indicate type of activity, etc.)

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ATTESTED ACTIVITY IN THE CLINICAL FIELD

(Specify date, duration, role, institution where the aid activity was carried out, etc.)

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IMPLEMENTATION OF PROJECTS

(Specify date, project name, indicate type of activity, any organization in favor of which the activity was carried out etc.)

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ORGANISATION, SUPERVISION AND COORDINATION OF NATIONAL AND INTERNATIONAL RESEARCH GROUPS, OR PARTICIPATION IN THEM

(For each entry, specify year, role, research group, any financing institutions and amount of financing, indicate type of project, etc.)

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HOLDING PATENTS

(For each patent, specify authors' names, title, classification (national or international), patent number, etc.)

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SPEAKING AT NATIONAL AND INTERNATIONAL CONFERENCES AND CONVENTIONS

(Specify conference/convention title, date, duration in days/hours, organizing institution, etc.)

-Higgs and Effective Field Theory - HEFT 2021, Hefei, China (Remote), 14/04/2021-17/04/2021.

Organizing institution: University of Science and Technology of China. Talk: A_{FB} in the SMEFT: the LHC as a Z-physics laboratory.

-32nd Rencontres de Blois, Blois, France, 17/10/2021-22/10/2021. Talk: A_{FB} in the SMEFT: the LHC as a Z-physics laboratory.

-ILC Workshop on Potential Experiments (ILCX2021), Tsukuba, Japan (Remote), 26/10/2021-29/10/2021. Organizing institution: ILC International Development Team (IDT). Talk: Precision Z physics at the LHC in the flavorful SMEFT.

-XIII CPAN Days, Huelva, Spain, 21/03/2022-23/03/2022. Organizing institution: Centro Nacional de Física de Partículas, Astropartículas y Nuclear. Talk: A_{FB} in the SMEFT: the LHC as a Z-physics laboratory.

-International Conference in Particle Physics (ICHEP) 2022, Bologna, Italy, 06/07/2022-13/07/2022. Organizing institution: C11 commission of the International Union of Pure and Applied Physics (IUPAP). Talk: EFT analysis of neutrino oscillation data.

-Magnificent CevNS 2023, Munich, Germany, 22/03/2023-29/03/2023. Organizing institution: Collaborative Research Center "Neutrinos and Dark Matter in Astro- and Particle Physics" (SFB 1258) and the ORIGINS Excellence Cluster. Talk: EFT analysis of neutrino oscillation data.

-ACAT 2024, Stony Brook, Long Island NY, USA, 11/03/2024-15/03/2024. Organizing institution: Stony Brook University. Talk: Fast and Precise Amplitude Surrogates with Bayesian and Symmetry Preserving Networks.

-EuCAIFCon 2024, Amsterdam, Netherlands, 30/04/2024-03/05/2024. Organizing institution: EuCAIF. Talk: Lorentz-Equivariant Geometric Algebra Transformers for High-Energy Physics.

NATIONAL AND INTERNATIONAL AWARDS AND ACCOLADES FOR RESEARCH ACTIVITY

(Specify award and motivation for the award, date, issuing organisation, etc.)

HOLDING A EUROPEAN SPECIALISATION DIPLOMA RECOGNISED BY INTERNATIONAL BOARDS

(For those competition sectors for which it is requested)

(Specify diploma and indicate the area, date, institution that awarded the diploma, etc.)

QUALIFICATIONS UNDER ART.24, PARAGRAPH 3.a AND 3.b, OF LAW No.240/2010 OF 30 DECEMBER 2010

(Specify whether it is a type A or type B contract, University, contract effective date and end date, etc.)

SCIENTIFIC PRODUCTION

SCIENTIFIC PUBLICATIONS

(For each publication, specify the following: authors' names, full title, publisher, date and place of publication, ISBN/ISSN/DOI or equivalent code)

- A_{FB} in the SMEFT: precision Z physics at the LHC, Víctor Bresó-Pla, Adam Falkowski and Martín González-Alonso, *JHEP 08 (2021) 21*, arXiv:2103.12074 [hep-ph]. Publication date: 04/08/2021. DOI: 10.1007/JHEP08(2021)021.

-EFT analysis of New Physics at COHERENT, Víctor Bresó-Pla, Adam Falkowski, Martín González-Alonso and Kevin Monsálvez-Pozo, *JHEP 05 (2023) 074*, arXiv:2301.07036 [hep-ph]. Publication date: 09/05/2021. DOI: 10.1007/JHEP05(2023)074.

-Lorentz-Equivariant Geometric Algebra Transformers for High-Energy Physics, Jonas Spinner, Víctor Bresó-Pla, Pim de Haan, Tilman Plehn and Jesse Thaler; arXiv:2405.14806 [physics.data-an]. Publication date: 23/05/2024. Submitted to NeurIPS 2024.

Date

18/07/2024

Place

Heidelberg, Germany