Jorge Alda Gallo
Ph.D. in Theoretical Physics

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Jorge-Alda
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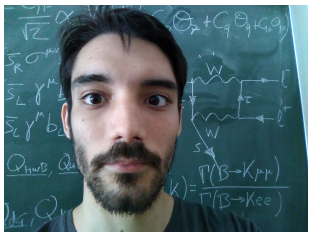

Research interests

- New physics beyond the Standard Model.
- Flavour Physics.
- B-meson anomalies.
- Effective Field Theories.
- Axions and Axion-like particles.

Education

B.Sc. in Physics, Universidad de Zaragoza 2011-2015

Average grade: 9.20/10. 13 Honours.
B.Ss. Project: *"Cálculo numérico en teoría cuántica de campos de la materia condensada"*. Under the supervision of David Zueco Láinez. Qualification: 9.5/10.

M.Sc. in Theoretical Physics, Universidad Complutense de Madrid 2015-2016

Average grade: 9.34/10.
M.Sc. Project: *New Applications of the Coleman-Weinberg Model*. Under the supervision of J. A. Ruiz Cembranos. Qualification: 9.0/10.

Ph.D. School 2018

Taller de Altas Energías. Benasque (Huesca, Spain).

Ph.D. in Physics, Universidad de Zaragoza 2016-present

Under the supervision of Siannah Peñaranda Rivas.

Grants

Grant JAE-Intro CSIC 2014

Project *"Caos semiclásico en sistemas de bosones con interacción"*, supervised by David Zueco Láinez.
CSIC-ICMA (Spanish National Research Council and Instituto de Ciencia de Materiales de Aragón).

PreDoc Grant, Diputación General de Aragón 2017-2022

Programa Ibercaja-CAI de Estancias de Investigación 2021

Grant No. CB 5/21.

Memberships

CAPA 2019-present

Centro de Astropartículas y Física de Altas Energías. Zaragoza, Spain.
`capa.unizar.es`

Invited Positions

Università degli Studi di Padova/INFN Summer 2021

Scientific Production

J. Alda, J. Guasch and S. Peñaranda: ***Some results on Lepton Flavour Universality Violation***
Eur.Phys. J. C, 79 7 (2019) 588
doi:10.1140/epjc/s10052-019-7092-x
arXiv:1805.03636 [hep-ph]

J. Alda, J. Guasch and S. Peñaranda: ***Anomalies in B decays: A phenomenological approach***
arXiv:2012.14799 [hep-ph]

J. Alda, J. Guasch and S. Peñaranda: ***Anomalies in B decays: Present status and future collider prospects***
arXiv:2105.05095 [hep-ph]
SLAC eConf C21-03-15.1

J. Alda, J. Guasch and S. Peñaranda: ***Using Machine Learning techniques in phenomenological studies in flavour physics***
arXiv:2109.07405 [he-ph]

J. Alda, J. Guasch and S. Peñaranda: ***Exploring B-physics anomalies at colliders***
arXiv:2110.12240 [hep-ph]
PoS(EPS-HEP2021)494

J. Alda, A. W. M Guerrera, S. Peñaranda and S. Rigolin: ***Leptonic Meson Decays into Invisible ALP***
arXiv:2111.02536 [hep-ph]

Talks and conferences

2nd Red LHC Workshop. Madrid, Spain. 9-11 May 2018
Talk "Some Results on Lepton Flavour Violation".

Taller de Altas Energías. Benasque (Huesca, Spain) 2-15 September 2018
Talk "Some Results on Lepton Flavour Violation".

X CPAN Days. Salamanca, Spain. 29-31 October 2018
Talk "Complex Wilson coefficients in the analysis of B-anomalies".

I Jornadas de Jóvenes Investigadores CAPA. Zaragoza, Spain. 7 May 2019
Talk "Effective Theories for B-meson anomalies".

I Jornadas del Programa de Doctorado de Física. Zaragoza, Spain. 20 June 2019
Talk "Effective Theories for B-meson anomalies".

XXXVII Bienal de Física de la Real Sociedad Española de Física. Zaragoza, Spain. 15-19 de July 2019
Talk "Some Results on Lepton Flavour Universality Violation".

International Workshop on Future Linear Colliders - LCWS2021. Online. 15-18 March 2021
Talk "Anomalies in B mesons decays: Present status and future collider prospects".

European Physical Society Conference on High Energy Physics 2021 (EPS-HEP2021). Online. 26-30 July 2021
Poster "Exploring B-physics anomalies at colliders ".

Seminars of the Department of Theoretical Physics. Zaragoza, Spain. 18 November 2021
Talk "Leptonic Mesons Decays into invisible ALP".

II Jornadas del Programa de Doctorado de Física. Zaragoza, Spain. 3 December 2021
Talk "Leptonic Mesons Decays into invisible ALP".

Contributions to public repositories

flavio

1 pull request merged: `https://github.com/flav-io/flavio/pull/160`

smelli

1 pull request: `https://github.com/smelli/smelli/pull/45`

Teaching

September 2019

Ph.D. School "Taller de Altas Energías de Benasque" (Huesca, Spain).
Associate teacher.

2019-2020

Differential Equations
Problem-solving sessions, 38 teaching hours.
Second year course, Bachelor Degree in Physics, Universidad de Zaragoza.

General Physics
Laboratory sessions, 10 teaching hours.
First year course, Bachelor Degree in Mathematics, Universidad de Zaragoza.

2020-2021

Differential Equations
Problem-solving sessions, 38 teaching hours.
Second year course, Bachelor Degree in Physics, Universidad de Zaragoza.

General Physics
Laboratory sessions, 10 teaching hours.
First year course, Bachelor Degree in Mathematics, Universidad de Zaragoza.

2021-2022

Differential Equations
Problem-solving sessions, 38 teaching hours.
Second year course, Bachelor Degree in Physics, Universidad de Zaragoza.

Co-direction of B.Sc. Project
10 teaching hours. Fourth year course, Bachelor Degree in Physics, Universidad de Zaragoza.

General Physics
Laboratory sessions, 10 teaching hours.
First year course, Bachelor Degree in Mathematics, Universidad de Zaragoza.

Languages

Spanish	■■■■■
English	■■■■■
Italian	■■■□□
German	■■■□□
French	■■□□□

Coding languages

TEX/LATEX	■■■■■
Python	■■■■■
C/C++	■■■□□
Mathematica	■■■□□

Awards

XXII Spanish Physics Olympiad 2011

Silver Medal (Rank 15).
Second position in the regional Aragonese phase.

20th International Mathematics Competition 2013

Bronze Medal (rank 177).