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| Fecha del CVA | 07/01/2022 |
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Parte A. DATOS PERSONALES

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|--|---|---------------------|------------|
| Nombre | Adrian | | |
| Apellidos | Irles Quiles | | |
| Sexo | Hombre | Fecha de Nacimiento | 24/05/1984 |
| DNI/NIE/Pasaporte | 74362757 | | |
| URL Web | https://aitanatop.ific.uv.es/aitanatop/members/adrian-irles-quiles/ | | |
| Dirección Email | adrian.irles@ific.uv.es | | |
| Open Researcher and Contributor ID (ORCID) | 0000-0001-5668-151X | | |

A.1. Situación profesional actual

| | | | |
|-------------------------|--|----------|--|
| Puesto | Doctor | | |
| Fecha inicio | 2021 | | |
| Organismo / Institución | Instituto de Física Corpuscular | | |
| Departamento / Centro | Física experimental en aceleradores / Física Experimental | | |
| País | | Teléfono | |
| Palabras clave | Física hx -- altas energías -- experimento; Física hp -- altas energías -- fenomenología | | |

A.2. Situación profesional anterior (incluye interrupciones en la carrera investigadora - indicar meses totales, según texto convocatoria-)

| Periodo | Puesto / Institución / País |
|-------------|---|
| 2020 - 2020 | Doctor / Consejo Superior de Investigaciones Científicas |
| 2016 - 2020 | Doctor / CNRS |
| 2015 - 2016 | Doctor Fellowship / DESY |
| 2008 - 2015 | Estudiante de Doctorado / Instituto de Física Corpuscular |

A.3. Formación académica

| Grado/Master/Tesis | Universidad / País | Año |
|--|-------------------------|------|
| Doctorado en Física de Partículas | Universitat de València | 2014 |
| Máster en Física de Partículas | Universitat de València | 2009 |
| Licenciado en Física Opción Física de las Partículas | Universitat de València | 2008 |

Parte B. RESUMEN DEL CV

I am currently employed by the CSIC working the IFIC center, thanks to a PlanGenT contract. I do research in the AITANA group (<https://aitanatop.ific.uv.es/aitanatop/>) from IFIC, working on Higgs Factories physics and detector R&D.

-- R&D -- I am member of the CALICE collaboration. I am the IFIC representative member in the CALICE Institutional Board. I play leading and coordinating roles in physics and R&D studies for the SiW-ECAL project. Since 2019 I am the SiW-ECAL of CALICE beam test run and analysis coordinator. I have participated in the AIDA2020 project for detector and experimental facilities R&D and I was one of the task leaders in WP5 (data acquisition systems for beam tests).

-- Higgs Factories -- I am also part of the ILD (International Large Detector for the ILC) collaboration and I am working on detector optimization and heavy flavour physics simulation studies. I am co-coordinating the physics and software studies on heavy-quark physics matters. I am also part of the ECFA and ILC efforts towards the realisation of a Higgs factory in the near future.

-- Top-Quark physics at LHC -- I defended my PhD in December 2014, with a grade of cum laude and a mention as International Doctorate. My PhD lead to the publication of two papers (one theoretical and one ATLAS publication with myself as the only analyser) and to the definition of a novel method to determine the top quark pole mass using LHC (Large Hadron Collider) data in an unambiguous theoretical mass scheme. This work has created a line of research with at least two thesis continuning my work and several articles. I am still active in this area, in collaboration with theoreticians and experimentalists from Berlin and Hamburg (DESY).

Research Activities/Interest:

Higgs and heavy quark (top, bottom, charm) precision physics at LHC and at future lepton colliders. R&D in Particle Flow detectors and high granularity calorimetry for future high energy lepton colliders.

Current Responsibilities:

Future Higgs Factories physics:

- co-convener of the ILD Software and Reconstruction Group
- co-convener of the ILD Physics group (top/heavy quarks physics)
- co-convener of the ILC International Development Team (IDT) WG3 Topical group for top-quark/heavy-quark and QCD physics.
- co-convener of the European Committe for Future Accelerators (ECFA) Higgs Factories WG1-PREC (Precision in theory & experiment) Topical group

Detector R&D:

- I am the IFIC representative in the CALICE institutional board.
- SiW-ECAL CALICE test beam coordinator

Other:

- Member of the ECFA-Early career researchers pannel.

Past Responsibilities:

Task Leader at the AIDA2020-WP5.

Publications:

Information extracted from the SLAC-Spires database (07/01/2022):

Number of publications: 570;

Citations: 94,908 (174 per paper);

H-index: 153

Presentations/talks in conferences/workshops/international seminars >40;

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES

C.1. Publicaciones más importantes en libros y revistas con “peer review” y conferencias

AC: Autor de correspondencia; (n° x / n° y): posición firma solicitante / total autores. Si aplica, indique el número de citas

- 1 Artículo científico.** Kawagoe, K.; others. 2020. Beam test performance of the highly granular SiW-ECAL technological prototype for the ILC Nucl. Instrum. Meth.A950, pp.162969-162969.

- 2 **Artículo científico.** Ahlburg, P.; others. 2020. EUDAQ-a data acquisition software framework for common beam telescopes JINST. 15-01, pp.P01038-P01038.
- 3 **Artículo científico.** Abramowicz, Halina; others. 2020. International Large Detector: Interim Design Report
- 4 **Artículo científico.** Durieux, Gauthier; Irlles, Adrian; Miralles, Víctor; Peñuelas, Ana; Pöschl, Roman; Perelló, Martín; Vos, Marcel. 2019. The electro-weak couplings of the top and bottom quarks -- global fit and future prospects JHEP12,098(2019). JHEP.
- 5 **Artículo científico.** Aad, Georges; others. 2019. {Measurement of the top-quark mass in $t\bar{t}+1$ -jet events collected with the ATLAS detector in $\sqrt{s}=8$ TeV} JHEP. 11, pp.150-150.
- 6 **Artículo científico.** Fuster, J.; Irlles, A.; Melini, D.; Uwer, P.; Vos, M.2017. {Extracting the top-quark running mass using $t\bar{t} + 1$ -jet} events produced at the Large Hadron Collider} Eur. Phys. J.C77-11, pp.794-794.
- 7 **Artículo científico.** Aad, Georges; others. 2015. {Determination of the top-quark pole mass using $t\bar{t} + 1$ -jet events collected with the ATLAS experiment in 7 TeV pp collisions} JHEP. 10, pp.121-121.
- 8 **Artículo científico.** Alioli, Simone; Fernandez, Patricia; Fuster, Juan; Irlles, Adrian; Moch, Sven-Olaf; Uwer, Peter; Vos, Marcel. 2013. A new observable to measure the top-quark mass at hadron colliders Eur. Phys. J.C73, pp.2438-2438.

C.2. Congresos

- 1 ILD: status, concrete R&D and long-term wishes (Plenary Talk). ILCX2021. 2021.
- 2 Quark Pair Production at Lepton Colliders: Experimental challenges (invited talk). SUSY2021. 2021.
- 3 Implementation of large imaging calorimeters. EPS-HEP2021. 2021.
- 4 ILD, a Detector for the International Linear Collider. TIPP 2021. 2021. Canadá.
- 5 Adrian Irlles; Juan Fuster; German Rodrigo; Seidai Tairafune; Marcel Vos; Hitoshi Yamamoto; Ryo Yonamine. Prospects for the measurement of the b -quark mass at the ILC. International Workshop on Future Linear Colliders (LCWS2021). 2021.
- 6 Top, flavour, and electroweak at a linear collider. (Plenary Talk). LCWS2021. 2021.
- 7 Status of PFA Calorimeter R&D (Plenary Talk). IAS Program on High Energy Physics (HEP 2021). 2021. Hong Kong.
- 8 Adrian Irlles. CALICE SiW ECAL - Development and test of the chip-on-board PCB solution. 3rd Conference on Calorimetry for the High Energy Frontier (CHEF 2019). 2019. Japón.
- 9 Y. Okugawa; A. Irlles; V. Lohezic; S. Amjad; R. Yonamine; F. Richard; H. Yamamoto; R. Pöschl. Production and electroweak couplings of 3rd generation quarks at the ILC. 29th International Conference on Lepton and Photon Interactions (LP2019). 2019. Canadá.
- 10 Adrián Irlles. Latest developments on the highly granular Silicon-Tungsten Electromagnetic Calorimeter technological prototype for the International Large Detector. 2017 IEEE Nuclear Science Symposium and Medical Imaging Conference and 24th international Symposium on Room-Temperature Semiconductor X-Ray & Gamma-Ray Detectors (NSS/MIC 2017). 2017.
- 11 S. Alioli; P. Fernandez; J. Fuster; A. Irlles; S. Moch; P. Uwer; M. Vos. Top-quark mass measurements using jet rates at LHC. 1st Large Hadron Collider Physics Conference (LHCP 2013):. 2013. España.
- 12 S. Alioli; P. Fernández; J. Fuster; A. Irlles; S. Moch; P. Uwer; M. Vos. Top-quark mass measurements at LHC: a new approach. 5th International Workshop on Top Quark Physics (TOP2012). 2012. Reino Unido.
- 13 Simone Alioli; Juan Fuster; Adrian Irlles; Sven Moch; Peter Uwer; Marcel Vos. A new observable to measure the top quark mass at hadron colliders. 25th International Symposium on Lepton Photon Interactions at High Energy (LP11). 2011. India.

C.3. Proyectos o líneas de investigación

- 1 **Proyecto.** SUBVENCIONES PARA LA CONTRATACIÓN DE DOCTORES Y DOCTORAS DE EXCELENCIA (CIDEGENT 2020) EN LA COMUNITAT VALENCIANA. Adrian Irlles Quiles. (Instituto de Física Corpuscular). 01/01/2021-31/12/2024. 409.999,85 €.

- 2 **Proyecto.** SUBVENCIONES PARA LA CONTRATACIÓN DE DOCTORES Y DOCTORAS CON EXPERIENCIA INTERNACIONAL (CDEGIGENT 2019) EN LA COMUNITAT VALENCIANA. Adrian Irlles Quiles. (Instituto de Física Corpuscular). 01/07/2020-30/06/2024. 252.250 €.
- 3 **Proyecto.** ILINK2020: "The third-generation quarks and new physics: from the LHC to a Higgs factory". Juan Fuster. (Instituto de Física Corpuscular). 01/01/2021-31/12/2022. 24.000 €.
- 4 **Proyecto.** Marie Curie & Prestige fellowship PRESTIGE-2017-1-0030. (CNRS). 01/08/2017-21/08/2019. 30.000 €.
- 5 **Proyecto.** Beca contrato JAE Predoctoral (ref JAEPRe_2008_00016). Adrian Irlles Quiles. (Instituto de Física Corpuscular). 01/10/2008-30/09/2012.