



Carlos Sabín

Generated from: Editor CVN de FECYT

Date of document: 28/07/2022

v 1.4.3

727707be2c06b5c2ffbe114dcd73d923

This electronic file (PDF) has embedded CVN technology (CVN-XML). The CVN technology of this file allows you to export and import curricular data from and to any compatible data base. List of adapted databases available at: <http://cvn.fecyt.es/>



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

H-index (Google Scholar): 23. Número de citas (Google Scholar): 1762. 56 artículos publicados en revistas internacionales con revisión por pares. Cerca de 30 congresos internacionales.



Carlos Sabín

Surname(s): **Sabín**
 Name: **Carlos**
 ORCID: **0000-0001-7099-597X**
 ResearcherID: **J-2690-2013**
 Contact aut. region/reg.: **Community of Madrid**
 Email: **c.sabin.les@gmail.com**
 Personal web page: **c-sabin.weebly.com**

Current professional situation

Employing entity: Universidad Autónoma de Madrid **Type of entity:** University
Department: Departamento Física Teórica
Professional category: Investigador Ramón y Cajal
Start date: 01/09/2021

Previous positions and activities

	Employing entity	Professional category	Start date
1	INSTITUTO DE FISICA FUNDAMENTAL	Investigador Junior Leader "la Caixa"	01/09/2018
2	Consejo Superior de Investigaciones Científicas	Investigador ComFuturo	01/09/2015
3	University of Nottingham	Assistant Professor	01/02/2015
4	University of Nottingham	Postdoctoral Researcher	18/06/2012

1 **Employing entity:** INSTITUTO DE FISICA FUNDAMENTAL **Type of entity:** State agency

Professional category: Investigador Junior Leader "la Caixa"

Start-End date: 01/09/2018 - 31/08/2021

Duration: 3 years

2 **Employing entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency

Department: INSTITUTO DE FISICA FUNDAMENTAL

Professional category: Investigador ComFuturo

Start-End date: 01/09/2015 - 31/08/2018

Duration: 3 years

3 **Employing entity:** University of Nottingham **Type of entity:** University

Professional category: Assistant Professor

Start-End date: 01/02/2015 - 31/08/2015

4



Employing entity: University of Nottingham

Type of entity: University

Professional category: Postdoctoral Researcher

Start-End date: 18/06/2012 - 31/01/2015

Duration: 2 years - 7 months



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

1 University degree: Master

Name of qualification: Master en Física Fundamental

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Date of qualification: 30/06/2007

2 University degree: Higher degree

Name of qualification: Licenciado en Física Opción Física Fundamental

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Date of qualification: 15/09/2006

Doctorates

Doctorate programme: Doctor en Física

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Date of degree: 22/11/2011

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English		C1	C1	C1	C1

Teaching experience

General teaching experience

1 Name of the course: Técnicas Experimentales I

University degree: Grado en Física

Start date: 17/11/2021

End date: 27/05/2022

Type of hours/ ECTS credits: Credits

Hours/ECTS credits: 64

Entity: Universidad Autónoma de Madrid

Type of entity: University

Faculty, institute or centre: Facultad de Ciencias



- 2** **Name of the course:** Laboratorio de Física
University degree: Grado en Bioquímica
Start date: 16/11/2021
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 16
Entity: Universidad Autónoma de Madrid
Faculty, institute or centre: Facultad de Ciencias
End date: 17/11/2021
Type of entity: University
- 3** **Type of teaching:** Official teaching
Name of the course: Fundamentos de Física III
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Grado en Física
Course given: 1
Start date: 08/02/2017
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 14
Entity: Universidad Autónoma de Madrid
Faculty, institute or centre: Facultad de Ciencias
Department: Física Teórica
Subject language: Spanish
Type of teaching: Practical work (classroom-problems)
Frequency of the activity: 3
End date: 17/05/2019
Type of entity: University
- 4** **Type of teaching:** Official teaching
Name of the course: Mecánica y Ondas I
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Grado en Física
Course given: 2
Start date: 10/2016
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20
Entity: Universidad Autónoma de Madrid
Faculty, institute or centre: Facultad de Ciencias
Department: Física Teórica
Subject language: Spanish
Type of teaching: Practical work (classroom-problems)
Frequency of the activity: 3
End date: 01/2019
Type of entity: University
- 5** **Name of the course:** Calculus
University degree: Mathematics
Start date: 02/2015
Entity: University of Nottingham
Faculty, institute or centre: School of Mathematical Sciences
End date: 06/2015
Type of entity: University
- 6** **Name of the course:** Linear Mathematics
University degree: Mathematics
Start date: 02/2015
Entity: University of Nottingham
Faculty, institute or centre: School of Mathematical Sciences
End date: 06/2015
Type of entity: University
- 7** **Name of the course:** Quantum Field Theory
University degree: MSc Gravity, particles and fields
Start date: 02/2015
End date: 06/2015



Entity: University of Nottingham

Type of entity: University

Faculty, institute or centre: School of Mathematical Sciences

Experience supervising doctoral thesis and/or final year projects

- 1 Project title:** Entanglement generation and relativistic simulation with cQED parametric oscillators
Type of project: Doctoral thesis
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Andrés Agustí Casado
Obtained qualification: Sobresaliente cum laude
Date of reading: 12/07/2022
- 2 Project title:** Simulación cuántica de teoría cuántica de campos en espaciotiempo curvo
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Adrián Terrones Aragón
Date of reading: 20/09/2021
- 3 Project title:** Detección cuántica de espacio-tiempos curvos (Trabajo Fin de Máster)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Carlos Sanchidrián Vaca
Date of reading: 12/09/2018
- 4 Project title:** Efectos Unruh y Casimir dinámicos para tecnologías cuánticas superconductoras (Trabajo Fin de Máster)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Andrés Agustí Casado
Date of reading: 12/09/2018
- 5 Project title:** Simulación Cuántica de teoría cuántica de campos en espacio-tiempo curvo (Trabajo Fin de Máster)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Gonzalo Martín Vázquez
Date of reading: 12/09/2018
- 6 Project title:** Simulación cuántica de la ecuación de Dirac en espaciotiempos exóticos (Trabajo Fin de Máster)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Javier Faba García
Date of reading: 12/09/2018
- 7 Project title:** Simulación cuántica de transformaciones de coordenadas (Trabajo Fin de Máster)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Javier Almorox
Date of reading: 05/07/2018
- 8 Project title:** Dynamical Casimir Effect for quantum technology (Trabajo fin de master)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Antonio Villalpando Barroso
Date of reading: 09/2017



- 9** **Project title:** Quantum simulation of wormhole spacetimes in Bose-Einstein condensates (Trabajo Fin de Máster)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Jesús Mateos Maroto
Date of reading: 06/2017
- 10** **Project title:** Correlaciones cuánticas en el efecto Casimir dinámico (Trabajo Fin de Master)
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: Nadir Samos Saenz de Buruaga
Date of reading: 15/09/2016
- 11** **Project title:** Cavity entanglement in non-inertial frames
Type of project: Master Thesis
Co-director of thesis: Ivette Fuentes
Entity: School of Mathematical Sciences, University of Nottingham **Type of entity:** University
Student: Bartosz Regula
Date of reading: 01/06/2015

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1** **Name of the project:** Quantum Computing with Microwave Photons
Entity where project took place: INSTITUTO DE FISICA FUNDAMENTAL **Type of entity:** State agency
Name principal investigator (PI, Co-PI...): Carlos Sabín
Nº of researchers: 2
Funding entity or bodies: Obra Social Fundación la Caixa **Type of entity:** Foundation
City funding entity: Barcelona, Catalonia, Spain
Start-End date: 01/09/2018 - 31/08/2021
Total amount: 286.700 €
- 2** **Name of the project:** Tecnologías cuánticas con qubits y campos
Entity where project took place: INSTITUTO DE FISICA FUNDAMENTAL **Type of entity:** State agency
City of entity: Madrid, Community of Madrid, Spain
Name principal investigator (PI, Co-PI...): Juan José García Ripoll
Funding entity or bodies: MINECO
Start-End date: 01/01/2016 - 31/12/2018
Total amount: 101.882 €



- 3** **Name of the project:** Tecnologías cuánticas 3.0
Entity where project took place: INSTITUTO DE FISICA FUNDAMENTAL **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Carlos Sabín
Nº of researchers: 1
Funding entity or bodies: FUNDACION GENERAL CSIC
City funding entity: Spain
Start-End date: 01/09/2015 - 01/09/2018
Total amount: 150.000 €
- 4** **Name of the project:** Levitation based quantum gravimeter
Entity where project took place: University of Nottingham
City of entity: Nottingham, United Kingdom
Name principal investigator (PI, Co-PI....): Ivette Fuentes
Nº of researchers: 6
Funding entity or bodies: EPSRC **Type of entity:** State agency
City funding entity: United Kingdom
Start-End date: 01/07/2014 - 31/12/2015
- 5** **Name of the project:** Quantum Fields and General Relativity in Quantum Information: Foundations and implementations
Name principal investigator (PI, Co-PI....): Juan León
Start-End date: 01/01/2012 - 31/12/2014
- 6** **Name of the project:** Quantum Information and technologies in Madrid, QUITEMAD
Entity where project took place: INSTITUTO DE FISICA FUNDAMENTAL **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Miguel Ángel Martín Delgado; Juan León
Funding entity or bodies: Comunidad Autónoma de Madrid
Start-End date: 01/01/2010 - 31/12/2013
- 7** **Name of the project:** Relativistic quantum thermometry with a Bose-Einstein condensate
Entity where project took place: University of Nottingham **Type of entity:** University
City of entity: Nottingham, United Kingdom
Name principal investigator (PI, Co-PI....): Ivette Fuentes; Lucia Hckermuller
Nº of researchers: 4
Start-End date: 01/10/2012 - 01/04/2013
- 8** **Name of the project:** Entanglement: foundations and protocols in quantum information
Entity where project took place: INSTITUTO DE FISICA FUNDAMENTAL **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Juan León
Start-End date: 01/01/2009 - 31/12/2011



Scientific and technological activities

Scientific production

Publications, scientific and technical documents

- 1** Carlos Sabín. Causality in a Qubit-Based Implementation of a Quantum Switch. Universe. 8, pp. 269. MDPI, 04/05/2022. Available on-line at: <<https://www.mdpi.com/2218-1997/8/5/269>>. ISSN 2218-1997
DOI: 10.3390/universe8050269
Type of production: Scientific paper **Format:** Journal
Impact source: JCR
Impact index in year of publication: 2,813
- 2** Andrés Agustí Casado; Carlos Sabín. Non-Gaussian entanglement swapping between three-mode spontaneous parametric down-conversion and three qubits. Physical Review A. 105, pp. 022401. American Physical Society, 03/02/2022. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.105.022401>>. ISSN 2469-9926
DOI: 10.1103/PhysRevA.105.022401
Type of production: Scientific paper **Format:** Journal
Impact source: JCR
Impact index in year of publication: 2,971
- 3** Adrián Terrones; Carlos Sabín. Towards Quantum Simulation of Black Holes in a dc-SQUID Array. Universe. 7, pp. 499. MDPI, 15/12/2021. Available on-line at: <<https://www.mdpi.com/2218-1997/7/12/499>>. ISSN 2218-1997
DOI: 10.3390/universe7120499
Type of production: Scientific paper **Format:** Journal
Impact source: JCR **Category:** Astronomy and Astrophysics
Impact index in year of publication: 2,813
- 4** Paula Cordero Encinar; Andrés Agustí; Carlos Sabín. Digital quantum simulation of beam splitters and squeezing with IBM quantum computers. Physical Review A. 104, pp. 052609. (United States of America): American Physical Society, 18/11/2021. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.104.052609>>. ISSN 2469-9926
DOI: <https://doi.org/10.1103/PhysRevA.104.052609>
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Impact index in year of publication: 3,140
Position of publication: 10 **No. of journals in the cat.:** 37
- 5** Andrés Agustí; Laura García Álvarez; Enrique Solano; Carlos Sabín. Qubit motion as a microscopic model for the Dynamical Casimir effect. Physical Review A. 103, pp. 062201. (United States of America): American Physical Society, 01/06/2021. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.103.062201>>. ISSN 2469-9926
DOI: <https://doi.org/10.1103/PhysRevA.103.062201>
Type of production: Scientific paper **Format:** Journal



Impact source: ISI

Impact index in year of publication: 3,140

Position of publication: 10

Category: Science Edition - PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

No. of journals in the cat.: 37

- 6** Carlos Sabín. Entangling superconducting qubits through an analogue wormhole. Universe. 6, pp. 149. Multidisciplinary Digital Publishing Institute, 09/09/2020. ISSN 2218-1997
DOI: 10.3390/universe6090149
Type of production: Scientific paper **Format:** Journal
- 7** Andrés Agustí; C. W. Sandbo Chang; Fernando Quijandría; Göran Johansson; Christopher M. Wilson; Carlos Sabín. Tripartite genuine non-Gaussian entanglement in three-mode spontaneous parametric downconversion. Physical Review Letters. 125, pp. 020502. American Physical Society, 08/07/2020. ISSN 1079-7114
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 9,227 **Journal in the top 25%:** Yes
Position of publication: 6 **No. of journals in the cat.:** 81
Source of citations: Google Scholar **Citations:** 11
- 8** Carlos Sabín. Digital Quantum Simulation of Linear and Nonlinear Optical Elements. Quantum Reports. 2, pp. 208. MDPI, 04/03/2020. Available on-line at: <<https://www.mdpi.com/2624-960X/2/1/13>>. ISSN 2624-960X
DOI: 10.3390/quantum2010013
Type of production: Scientific paper **Format:** Journal
Source of citations: Google Scholar **Citations:** 7
- 9** Gonzalo Martín-Vázquez; Carlos Sabín. Closed timelike curves and chronology protection in quantum and classical simulators. Classical and Quantum Gravity. 37, pp. 045013. (United Kingdom): Institute of Physics, 27/01/2020. ISSN 0264-9381
DOI: 10.1088/1361-6382/ab5f3f
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 3,487 **Journal in the top 25%:** Yes
Position of publication: 13 **No. of journals in the cat.:** 81
- 10** C.W. Sandbo Chang; Carlos Sabín; P. Forn-Díaz; Fernando Quijandría; A. M. Vadiraj; I. Nsanzineza; G. Johansson; C. M. Wilson. Observation of three-photon spontaneous parametric downconversion in a superconducting parametric cavity. Physical Review X. 10, pp. 011011. (United States of America): American Physical Society, 16/01/2020. Available on-line at: <<https://journals.aps.org/prx/abstract/10.1103/PhysRevX.10.011011>>. ISSN 2160-3308
DOI: 10.1103/PhysRevX.10.011011
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 8
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 12,211 **Journal in the top 25%:** Yes
Position of publication: 5 **No. of journals in the cat.:** 81

Source of citations: Google Scholar

Citations: 50

- 11** Andrés Agustí; Enrique Solano; Carlos Sabín. Entanglement through qubit motion and the dynamical Casimir effect. *Physical Review A*. 99, pp. 052328. American Physical Society, 20/05/2019. ISSN 2469-9926
DOI: 10.1103/PhysRevA.99.052328
Type of production: Scientific paper
Source of citations: Google Scholar
Format: Scientific and technical document or report
Citations: 10
- 12** Javier Faba García; Carlos Sabín. Dirac equation in exotic spacetimes. *Physical Review D*. 99, pp. 025008. American Physical Society, 14/01/2019. Available on-line at: <<https://journals.aps.org/prd/abstract/10.1103/PhysRevD.99.025008>>. ISSN 2470-0010
DOI: 10.1103/PhysRevD.99.025008
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 4,394
Position of publication: 7
Format: Journal
Category: Science Edition - PHYSICS, PARTICLES & FIELDS
Journal in the top 25%: Yes
No. of journals in the cat.: 29
- 13** Carlos Sabín. Light propagation through nanophotonics wormholes. *Universe*. 4, pp. 137. MDPI, 29/11/2018. Available on-line at: <<https://www.mdpi.com/2218-1997/4/12/137/htm>>. ISSN 2218-1997
DOI: 10.3390/universe4120137
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 2,165
Position of publication: 34
Format: Journal
Category: Astronomy and Astrophysics
No. of journals in the cat.: 69
- 14** Carlos Sanchidrián-Vaca; Carlos Sabín. Parameter estimation of wormholes beyond the Heisenberg limit. *Universe*. 4, pp. 115. MDPI, 06/11/2018. Available on-line at: <<https://www.mdpi.com/2218-1997/4/11/115/htm>>. ISSN 2218-1997
DOI: 10.3390/universe4110115
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 2,165
Position of publication: 34
Format: Journal
Category: Astronomy and Astrophysics
No. of journals in the cat.: 69
- 15** C. W. Sandbo Chang; Michael Simoen; José Aumentado; Carlos Sabín; Pol Forn-Díaz; A.M. Vadiraj; Fernando Quijandría; Göran Johansson; Ivette Fuentes; C. M. Wilson. Generating Multimode Entangled Microwaves with a Superconducting Parametric Cavity. *Physical Review Applied*. 10, pp. 044019. (United States of America): American Physical Society, 08/10/2018. Available on-line at: <<https://journals.aps.org/prapplied/abstract/10.1103/PhysRevApplied.10.044019>>. ISSN 2331-7019
DOI: 10.1103/PhysRevApplied.10.044019
Type of production: Scientific paper
Position of signature: 4
Total no. authors: 10
Impact source: ISI
Impact index in year of publication: 4,782
Position of publication: 24
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, APPLIED
Journal in the top 25%: Yes
No. of journals in the cat.: 146
Citations: 43



- 16** Carlos Sabín. Quantum simulation of Rindler transformations. EPJ Quantum Technology. 5, pp. 5. Springer, 18/05/2018. Available on-line at: <<https://link.springer.com/article/10.1140/epjqt/s40507-018-0069-0>>. ISSN 2196-0763
DOI: 10.1140/epjqt/s40507-018-0069-0
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 2,436
Position of publication: 18
Format: Journal
Category: Physics Atomic, Molecular & Chemical
No. of journals in the cat.: 36
- 17** Carlos Sabín. One-dimensional sections of exotic spacetimes with superconducting circuits. New Journal of Physics. 20, pp. 053028. IOP Publishing, 10/05/2018. Available on-line at: <<http://iopscience.iop.org/article/10.1088/1367-2630/aac0db>>. ISSN 1367-2630
DOI: <https://doi.org/10.1088/1367-2630/aac0db>
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 3,579
Position of publication: 11
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 78
Citations: 1
- 18** Borja Peropadre; Joonsuk Huh; Carlos Sabín. Dynamical Casimir Effect for Gaussian boson sampling. Scientific Reports. 8, pp. 3751. Springer Nature, 28/02/2018. Available on-line at: <<https://www.nature.com/articles/s41598-018-22086-2>>. ISSN 2045-2322
DOI: <https://doi.org/10.1038/s41598-018-22086-2>
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 4,259
Position of publication: 10
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - MULTIDISCIPLINARY SCIENCES
Journal in the top 25%: Yes
No. of journals in the cat.: 64
Citations: 13
- 19** Jesús Mateos; Carlos Sabín. Quantum simulation of traversable wormhole spacetimes in a Bose-Einstein condensate. Physical Review D. 97, pp. 044045. American Physical Society, 28/02/2018. Available on-line at: <<https://journals.aps.org/prd/abstract/10.1103/PhysRevD.97.044045>>. ISSN 2470-0010
DOI: 10.1103/PhysRevD.97.044045
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 4,557
Position of publication: 14
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - ASTRONOMY & ASTROPHYSICS
Journal in the top 25%: Yes
No. of journals in the cat.: 63
Citations: 2
- 20** Richard Howl; Carlos Sabín; Lucia Hackermuller; Ivette Fuentes. Quantum decoherence of phonons in Bose-Einstein condensates. Journal of Physics B: Atomic, Molecular and Optical Physics. 51, pp. 015303. Institute of Physics Publishing, 29/11/2017. Available on-line at: <<http://iopscience.iop.org/article/10.1088/1361-6455/aa9622/meta>>. ISSN 0953-4075

DOI: <https://doi.org/10.1088/1361-6455/aa9622>

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 4

Impact source: ISI

Impact index in year of publication: 1,792

Position of publication: 43

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - OPTICS

No. of journals in the cat.: 92

Citations: 16

- 21** Carlos Sabín; Borja Peropadre; Lucas Lamata; Enrique Solano. Simulating superluminal physics with superconducting quantum technology. *Physical Review A*. 96, pp. 032121. American Physical Society, 27/09/2017. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.96.032121>>. ISSN 2469-9926

DOI: 10.1103/PhysRevA.96.032121

Type of production: Scientific paper

Position of signature: 1

Total no. authors: 4

Impact source: ISI

Impact index in year of publication: 2,925

Position of publication: 21

Source of citations: Google Scholar

Format: Journal

Corresponding author: Yes

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 12

- 22** Simone Felicetti; Guillermo Romero; Enrique Solano; Carlos Sabín. Quantum Rabi model in a superfluid Bose-Einstein condensate. *Physical Review A*. 96, pp. 033839. American Physical Society, 22/09/2017. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.96.033839>>. ISSN 2469-9926

DOI: 10.1103/PhysRevA.96.033839

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 2,925

Position of publication: 21

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 3

- 23** David Edward Bruschi; Carlos Sabín; Gheorghe Sorin Paraoanu. Entanglement, coherence, and redistribution of quantum resources in double spontaneous downconversion processes. *Physical Review A*. 95, pp. 062324. American Physical Society, 16/06/2017.

DOI: <https://doi.org/10.1103/PhysRevA.95.062324>

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 2,925

Position of publication: 21

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 19

- 24** Laura García-Álvarez; Simone Felicetti; Enrique Rico; Enrique Solano; Carlos Sabín. Entanglement of superconducting qubits via acceleration radiation. *Scientific Reports*. 7, pp. 657. Nature Publishing Group, 06/04/2017.

DOI: 10.1038/s41598-017-00770-z

Type of production: Scientific paper

Impact source: ISI

Format: Journal



Impact index in year of publication: 4,259

Position of publication: 10

Source of citations: Google Scholar

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

No. of journals in the cat.: 64

Citations: 29

25 Carlos Sabín. Quantum detection of wormholes. Scientific Reports. 7, pp. 716. Nature Publishing Group, 06/04/2017. ISSN 2045-2322

DOI: 10.1038/s41598-017-00882-6

Type of production: Scientific paper

Corresponding author: Yes

Impact source: ISI

Format: Journal

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

No. of journals in the cat.: 64

Citations: 12

Impact index in year of publication: 4,259

Position of publication: 10

Source of citations: Google Scholar

26 Daniel Nadir Samos-Saénz de Buruaga; Carlos Sabín. Quantum coherence in the Dynamical Casimir Effect. Physical Review A. 95, pp. 022307. American Physical Society, 06/02/2017.

DOI: 10.1103/PhysRevA.95.022307

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 2,925

Position of publication: 21

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 92

Citations: 18

27 Simone Felicetti; Enrique Rico; Carlos Sabín; Till Ockenfels; Johannes Koch; Martin Leder; Christopher Grossert; Martin Weitz; Enrique Solano. Quantum Rabi model in the Brillouin zone with ultracold atoms. Physical Review A. 95, pp. 013827. American Physical Society, 18/01/2017.

DOI: 10.1103/PhysRevA.95.013827

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 2,765

Position of publication: 17

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 90

Citations: 28

28 Carlos Sabín. Mapping curved spacetimes into Dirac spinors. Scientific Reports. 7, pp. 40346. Nature Publishing Group, 11/01/2017. ISSN 2045-2322

DOI: 10.1038/srep40346

Type of production: Scientific paper

Corresponding author: Yes

Impact source: ISI

Format: Journal

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

No. of journals in the cat.: 63

Citations: 13

Impact index in year of publication: 5,228

Position of publication: 7

Source of citations: Google Scholar



- 29** Carlos Sabín. Quantum simulation of traversable wormhole spacetimes in a dc-SQUID array. *Physical Review D*. 94, pp. 081501. American Physical Society, 04/10/2016. Available on-line at: <<https://journals.aps.org/prd/abstract/10.1103/PhysRevD.94.081501>>. ISSN 2470-0010
DOI: 10.1103/PhysRevD.94.081501
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Impact source: ISI **Category:** Astronomy and Astrophysics
Impact index in year of publication: 4,557 **Journal in the top 25%:** Yes
Position of publication: 14 **No. of journals in the cat.:** 63
Source of citations: Google Scholar **Citations:** 21
- 30** Carlos Sabín; Jan Kohlrus; David Bruschi; Ivette Fuentes. Thermal noise in BEC-phononic gravitational wave detectors. *EPJ Quantum Technology*. 3, pp. 8. Springer, 20/05/2016. Available on-line at: <<https://epjquantumtechnology.springeropen.com/track/pdf/10.1140/epjqt/s40507-016-0046-4?site=epjquantumtechnology.springeropen.com>>. ISSN 2196-0763
DOI: <http://dx.doi.org/10.1140/epjqt/s40507-016-0046-4>
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Source of citations: Google Scholar **Citations:** 19
- 31** David Edward Bruschi; Carlos Sabín; Pieter Kok; Göran Johansson; Per Delsing; Ivette Fuentes. Towards universal quantum computation through relativistic motion. *Scientific Reports*. 6, pp. 18349. Nature Publishing Group, 10/02/2016. ISSN 2045-2322
DOI: 10.1038/srep18349
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Impact source: ISI **Category:** Science Edition - MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 5,228 **Journal in the top 25%:** Yes
Position of publication: 7 **No. of journals in the cat.:** 63
Source of citations: Google Scholar **Citations:** 28
- 32** Antonio Mezzacapo; Enrique Rico; Carlos Sabín; Íñigo Egusquiza; Lucas Lamata; Enrique Solano. Non-abelian lattice gauge theories in superconducting circuits. *Physical Review Letters*. 115, pp. 240502. American Physical Society, 09/12/2015. ISSN 0031-9007
DOI: 10.1103/PhysRevLett.115.240502
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 6
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7,326 **Journal in the top 25%:** Yes
Position of publication: 6 **No. of journals in the cat.:** 79
Source of citations: Google Scholar **Citations:** 81



- 33** Ashley Wilkins; Carlos Sabín. Quantum estimation via parametric amplification in circuit-QED arrays. *Physical Review A*. 92, pp. 062102. American Physical Society, 03/12/2015. ISSN 2469-9926
DOI: 10.1103/PhysRevA.92.062102
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Impact source: ISI **Category:** Science Edition - OPTICS
Impact index in year of publication: 2,765 **Journal in the top 25%:** Yes
Position of publication: 17 **No. of journals in the cat.:** 90
- 34** Carlos Sabín; Pablo Barberis-Blostein; Christopher Hernández; Robert B. Mann; Ivette Fuentes. Effects of three-body collisions in a two-mode Bose-Einstein condensate. *Journal of Mathematical Physics*. 56, pp. 112102. American Institute of Physics, 25/11/2015. Available on-line at: <<http://aip.scitation.org/doi/abs/10.1063/1.4936314>>. ISSN 0022-2488
DOI: <https://doi.org/10.1063/1.4936314>
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Impact source: ISI **Category:** Science Edition - PHYSICS, MATHEMATICAL
Impact index in year of publication: 1,077
Position of publication: 33 **No. of journals in the cat.:** 55
- 35** Carlos Sabín; Gerardo Adesso. Generation of quantum steering and interferometric power in the Dynamical Casimir Effect. *Physical Review A*. 92, pp. 042107. American Physical Society, 12/10/2015. ISSN 2469-9926
DOI: doi.org/10.1103/PhysRevA.92.042107
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
Impact source: ISI **Category:** Science Edition - OPTICS
Impact index in year of publication: 2,765 **Journal in the top 25%:** Yes
Position of publication: 17 **No. of journals in the cat.:** 90
Source of citations: Google Scholar **Citations:** 35
- 36** Simone Felicetti; Carlos Sabín; Ivette Fuentes; Lucas Lamata; Guillermo Romero; Enrique Solano. Relativistic motion with superconducting circuits. *Physical Review B*. 92, pp. 064501. American Physical Society, 03/08/2015. Available on-line at: <<https://journals.aps.org/prb/abstract/10.1103/PhysRevB.92.064501>>. ISSN 2469-9950
DOI: 10.1103/PhysRevB.92.064501
Type of production: Scientific paper **Category:** Science Edition - PHYSICS, CONDENSED MATTER
Impact source: ISI **Journal in the top 25%:** Yes
Impact index in year of publication: 3,513 **No. of journals in the cat.:** 67
Position of publication: 16
Source of citations: Google Scholar **Citations:** 51
- 37** Carlos Sabín; Ivette Fuentes; Göran Johansson. Quantum discord in the Dynamical Casimir Effect. *Physical Review A*. 92, pp. 012314. APS, 22/06/2015. Available on-line at: <<https://journals.aps.org/pra/abstract/10.1103/PhysRevA.92.012314>>. ISSN 2469-9926
DOI: doi.org/10.1103/PhysRevA.92.012314
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes



Impact source: ISI

Impact index in year of publication: 2,765

Position of publication: 17

Source of citations: Google Scholar

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 90

Citations: 25

- 38** Joel Lindkvist; Carlos Sabín; Göran Johansson; Ivette Fuentes. Motion and gravity effects in the precision of quantum clocks. *Scientific Reports*. 5, pp. 10070. Nature Publishing group, 19/05/2015. Available on-line at: <<http://www.nature.com/articles/srep10070>>. ISSN 2045-2322

DOI: 10.1038/srep10070

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 5,228

Position of publication: 7

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

No. of journals in the cat.: 63

Citations: 21

- 39** Tupac Bravo; Carlos Sabín; Ivette Fuentes. Analog quantum simulation of gravitational waves in a Bose-Einstein condensate. *EPJ quantum technology*. 2, pp. 3. Springer, 04/02/2015. Available on-line at: <<https://epjquantumtechnology.springeropen.com/articles/10.1140/epjqt16>>. ISSN 2196-0763

DOI: <https://doi.org/10.1140/epjqt16>

Type of production: Scientific paper

Source of citations: Google Scholar

Format: Journal

Citations: 4

- 40** Joel Lindkvist; Carlos Sabín; Ivette Fuentes; Andrzej Dragan; Ida-Maria Svensson; Per Delsing; Göran Johansson. Twin paradox with macroscopic clocks in superconducting circuits. *Physical Review A*. 90, pp. 052113. American Physical Society, 18/11/2014. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.90.052113>>. ISSN 2469-9926

DOI: 10.1103/PhysRevA.90.052113

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 2,765

Position of publication: 17

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 90

Citations: 45

- 41** Carlos Sabín; Angela White; Lucia Hackermuller; Ivette Fuentes. Impurities as a quantum thermometer for an ultracold Bose-Einstein condensate. *Scientific Reports*. 4, pp. 6436. Nature Publishing Group, 28/08/2014. Available on-line at: <<http://www.nature.com/articles/srep06436>>. ISSN 2045-2322

DOI: 10.1038/srep06436

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 5,228

Position of publication: 7

Source of citations: Google Scholar

Format: Journal

Category: Science Edition - MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

No. of journals in the cat.: 63

Citations: 73

- 42** Carlos Sabín; David Edward Bruschi; Mehdi Ahmadi; Ivette Fuentes. Phonon creation by gravitational waves. *New Journal of Physics*. 16, pp. 085003. Institute of Physics, 07/08/2014. Available on-line at: <<http://iopscience.iop.org/article/10.1088/1367-2630/16/8/085003/meta>>. ISSN 1367-2630
DOI: <https://doi.org/10.1088/1367-2630/16/8/085003>
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 3,558
Position of publication: 10
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 78
Citations: 91
- 43** Mehdi Ahmadi; David Edward Bruschi; Carlos Sabín; Gerardo Adesso; Ivette Fuentes. Relativistic quantum metrology: exploiting relativity to improve quantum measurement technologies. *Scientific Reports*. 4, pp. 4996. Nature Publishing Group, 22/05/2014. Available on-line at: <<https://www.nature.com/articles/srep04996>>. ISSN 2045-2322
DOI: 10.1038/srep04996
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 5,228
Position of publication: 7
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - MULTIDISCIPLINARY SCIENCES
Journal in the top 25%: Yes
No. of journals in the cat.: 63
Citations: 94
- 44** David Edward Bruschi; Carlos Sabín; Angela White; Valentina Baccetti; Daniel K. L. Oi; Ivette Fuentes. Testing the effects of gravity and motion on quantum entanglement in space-based experiments. *New Journal of Physics*. 16, pp. 053041. Institute of Physics, 21/05/2014. Available on-line at: <<http://iopscience.iop.org/article/10.1088/1367-2630/16/5/053041>>. ISSN 1367-2630
DOI: <https://doi.org/10.1088/1367-2630/16/5/053041>
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 3,558
Position of publication: 10
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 78
Citations: 59
- 45** Nicolai Friis; Antony Lee; Kevin Truong; Carlos Sabín; Enrique Solano; Göran Johansson; Ivette Fuentes. Relativistic quantum teleportation with superconducting circuits. *Physical Review Letters*. 110, pp. 113602. American Physical Society, 12/03/2013. Available on-line at: <<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.110.113602>>. ISSN 0031-9007
DOI: 10.1103/PhysRevLett.110.113602
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 7,645
Position of publication: 6
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 79
Citations: 110

- 46** Massimo Borrelli; Carlos Sabín; Gerardo Adesso; Francesco Plastina; Sabrina Maniscalco. Dynamics of atom-atom correlations in the Fermi problem. *New Journal of Physics*. 14, pp. 103010. Institute of Physics, 03/10/2012. Available on-line at: <<http://iopscience.iop.org/article/10.1088/1367-2630/14/10/103010>>. ISSN 1367-2630
DOI: <https://doi.org/10.1088/1367-2630/14/10/103010>
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 4,063
Position of publication: 9
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 83
Citations: 9
- 47** Carlos Sabín; Borja Peropadre; Marco del Rey; Eduardo Martín-Martínez. Extracting past-future vacuum correlations using circuit QED. *Physical Review Letters*. 109, pp. 033602. American Physical Society, 17/07/2012. Available on-line at: <<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.109.033602>>. ISSN 0031-9007
DOI: [10.1103/PhysRevLett.109.033602](https://doi.org/10.1103/PhysRevLett.109.033602)
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 7,645
Position of publication: 6
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 79
Citations: 68
- 48** Carlos Sabín; Jorge Casanova; Juan José Garcia-Ripoll; Lucas Lamata; Enrique Solano; Juan León. Encoding relativistic potential dynamics into free evolution. *Physical Review A*. 85, pp. 052301. American Physical Society, 02/05/2012. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.85.052301>>. ISSN 2469-9926
DOI: [10.1103/PhysRevA.85.052301](https://doi.org/10.1103/PhysRevA.85.052301)
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 2,765
Position of publication: 17
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 90
Citations: 5
- 49** Marco del Rey; Carlos Sabín; Juan León. Short-time quantum detection: probing quantum fluctuations. *Physical Review A*. 85, pp. 045802. American Physical Society, 09/04/2012. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.85.045802>>. ISSN 2469-9926
DOI: [10.1103/PhysRevA.85.045802](https://doi.org/10.1103/PhysRevA.85.045802)
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 2,765
Position of publication: 17
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 90
Citations: 8

- 50** Jorge Casanova; Carlos Sabín; Juan León; Íñigo Luis Egusquiza; Rene Gerritsma; Cristian F. Roos; Juan José García-Ripoll; Enrique Solano. Quantum simulation of the Majorana equation and unphysical operations. *Physical Review X*. 1, pp. 021018. American Physical Society, 09/12/2011. Available on-line at: <<https://journals.aps.org/prx/abstract/10.1103/PhysRevX.1.021018>>. ISSN 2160-3308
DOI: 10.1103/PhysRevX.1.021018
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 8,701
Position of publication: 5
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 79
Citations: 87
- 51** Carlos Sabín; Marco del Rey; Juan León. Fermi problem with artificial atoms in circuit QED. *Physical Review Letters*. 107, pp. 150402. American Physical Society, 06/10/2011. Available on-line at: <<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.107.150402>>. ISSN 0031-9007
DOI: 10.1103/PhysRevLett.107.150402
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 7,645
Position of publication: 6
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 79
Citations: 32
- 52** Carlos Sabín; Juan León; Juan José García-Ripoll. Detecting ground-state qubit self-excitations: slow quantum anti-Zeno effect. *Physical Review B*. 84, pp. 024516. American Physical Society, 14/07/2011. Available on-line at: <<https://journals.aps.org/prb/abstract/10.1103/PhysRevB.84.024516>>. ISSN 2469-9950
DOI: 10.1103/PhysRevB.84.024516
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 3,513
Position of publication: 16
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, CONDENSED MATTER
Journal in the top 25%: Yes
No. of journals in the cat.: 67
Citations: 4
- 53** Carlos Sabín; Juan José García-Ripoll; Enrique Solano; Juan León. Dynamics of entanglement via propagating microwave photons. *Physical Review B*. 81, pp. 184501. American Physical Society, 04/05/2010. Available on-line at: <<https://journals.aps.org/prb/abstract/10.1103/PhysRevB.81.184501>>. ISSN 2469-9950
DOI: 10.1103/PhysRevB.81.184501
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 3,513
Position of publication: 16
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, CONDENSED MATTER
Journal in the top 25%: Yes
No. of journals in the cat.: 67
Citations: 33

- 54** Juan León; Carlos Sabín. Atom-atom entanglement generated at early times by two-photon emission. *Physica Scripta*. T135, pp. 014034. 31/07/2009. Available on-line at: <<http://iopscience.iop.org/article/10.1088/0031-8949/2009/T135/014034>>. ISSN 0031-8949
DOI: <https://doi.org/10.1088/0031-8949/2009/T135/014034>
Type of production: Scientific paper
Impact source: ISI
Impact index in year of publication: 1,088
Position of publication: 35
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
No. of journals in the cat.: 71
Citations: 1
- 55** Juan León; Carlos Sabín. A case of entanglement generation between causally disconnected atoms. *International Journal of Quantum Information*. 7, pp. 187. World Scientific, 01/07/2009. Available on-line at: <<http://www.worldscientific.com/doi/abs/10.1142/S0219749909004773>>. ISSN 0219-7499
DOI: <https://doi.org/10.1142/S0219749909004773>
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 0,632
Position of publication: 41
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - PHYSICS, MATHEMATICAL
No. of journals in the cat.: 47
Citations: 5
- 56** Juan León; Carlos Sabín. Generation of atom-atom correlations inside and outside the mutual light cone. *Physical Review A*. 79, pp. 012304. American Physical Society, 08/01/2009. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.79.012304>>. ISSN 2469-9926
DOI: 10.1103/PhysRevA.79.012304
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 2,765
Position of publication: 17
Source of citations: Google Scholar
Format: Journal
Category: Optics
Journal in the top 25%: Yes
No. of journals in the cat.: 90
Citations: 23
- 57** Juan León; Carlos Sabín. Photon exchange and correlation transfer in atom-atom entanglement dynamics. *Physical Review A*. 79, pp. 012301. American Physical Society, 06/01/2009. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.79.012304>>. ISSN 2469-9926
DOI: 10.1103/PhysRevA.79.012301
Type of production: Scientific paper
Corresponding author: Yes
Impact source: ISI
Impact index in year of publication: 2,765
Position of publication: 17
Source of citations: Google Scholar
Format: Journal
Category: Science Edition - OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 90
Citations: 29
- 58** Juan León; Carlos Sabín. Entanglement swapping between spacelike-separated atoms. *Physical Review A*. 78, pp. 052314. American Physical Society, 10/11/2008. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.78.052314>>. ISSN 2469-9926

**DOI:** 10.1103/PhysRevA.78.052314**Type of production:** Scientific paper**Corresponding author:** Yes**Impact source:** ISI**Impact index in year of publication:** 2,765**Position of publication:** 17**Source of citations:** Google Scholar**Format:** Journal**Category:** Science Edition - OPTICS**Journal in the top 25%:** Yes**No. of journals in the cat.:** 90**Citations:** 16

- 59** Carlos Sabín; Guillermo García-Alcaine. A classification of entanglement in three-qubit systems. The European Physical Journal D. 48, pp. 435. Springer, 06/06/2008. Available on-line at: <<https://link.springer.com/article/10.1140/epjd/e2008-00112-5>>. ISSN 1434-6060

DOI: 10.1140/epjd/e2008-00112-5**Type of production:** Scientific paper**Impact source:** ISI**Impact index in year of publication:** 1,397**Position of publication:** 19**Source of citations:** Google Scholar**Format:** Journal**Category:** Science Edition - PHYSICS, ATOMIC, MOLECULAR & CHEMICAL**No. of journals in the cat.:** 31**Citations:** 174

- 60** Carlos Sabín. Una nueva técnica para detectar ondas gravitacionales. Investigación y Ciencia. 462, Prensa Científica S.A., 01/03/2015.

Type of production: Popular science article**Format:** Journal

- 61** To test the effect of gravity on quantum entanglement we need to go to space. The Conversation. 17/06/2014.

Type of production: Popular science article**Format:** Journal

- 62** Carlos Sabín. How to test the twin paradox without using a spaceship. The Conversation. 16/04/2014.

Type of production: Popular science article**Format:** Journal

- 63** Carlos Sabín. The next big deal: detecting gravitational waves at your desk. The Conversation. 21/03/2014.

Type of production: Popular science article**Format:** Journal

- 64** Carlos Sabín. Información desde el vacío. Investigación y Ciencia. 441, pp. 14. Prensa Científica S. A., 01/06/2013.

Type of production: Popular science article**Format:** Journal

- 65** Carlos Sabín. Mucha gente entiende la mecánica cuántica. Cañones de wolframio y otros textos científicos. Jot Down Books, 26/03/2019. ISBN 978-84-948084-7-0

Type of production: Book chapter**Format:** Book

- 66** Verdades y mentiras de la física cuántica. Catarata, 02/03/2020. ISBN 978-84-9097-923-5

Type of production: Popular science book**Format:** Book

- 67** Carlos Sabín. Divulgación de autor. Investigación y Ciencia. 531, pp. 92 - 93. Prensa Científica, 01/12/2020. Available on-line at: <<https://www.investigacionyciencia.es/revistas/investigacion-y-ciencia/visitantes-interstelares-815/divulgacin-de-autor-19269>>. ISSN 0210-136X

Type of production: Review**Format:** Journal



- 68** Carlos Sabín. Filosofías alternativas. Investigación y Ciencia. 518, pp. 94. Prensa Científica, 01/11/2019. Available on-line at: <<https://www.investigacionyciencia.es/revistas/investigacion-y-ciencia/verdades-mentiras-e-incertidumbres-782/filosofas-alternativas-17969>>. ISSN 0210-136X
Type of production: Review **Format:** Journal
- 69** Carlos Sabín. Confusión cuántica. Investigación y Ciencia. 509, pp. 93. Prensa Científica, 01/02/2019. Available on-line at: <<https://www.investigacionyciencia.es/revistas/investigacion-y-ciencia/el-test-cuntico-definitivo-759/confusin-cuntica-17171>>. ISSN 0210-136X
Type of production: Review **Format:** Journal
- 70** Carlos Sabín. Trampas bohmanas. Investigación y Ciencia. 501, pp. 92. Prensa Científica, 01/06/2018.
Type of production: Review **Format:** Journal
- 71** Carlos Sabín. Cuantos completos. SciLogs (Investigación y Ciencia). Prensa Científica, 14/07/2015. Available on-line at: <<https://www.investigacionyciencia.es/blogs/fisica-y-quimica/85/posts>>.
Type of production: Blog de divulgación científica **Format:** Scientific and technical document or report

Works submitted to national or international conferences

- 1** **Title of the work:** Pairs and triplets of entangled microwave photons
Name of the conference: IFF-IQOQI Workshop 2019
City of event: Madrid, Community of Madrid, Spain
Date of event: 06/11/2019
End date: 08/11/2019
Organising entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
City organizing entity: Madrid, Community of Madrid, Spain
Carlos Sabín.
- 2** **Title of the work:** Entanglement generation and simultaneity with superconducting qubits
Name of the conference: Quantum Information and measurement (QIM) V: Quantum technologies
Type of event: Conference **Geographical area:** Non EU International
Type of participation: 'Participatory - poster
City of event: Roma, Italy
Date of event: 04/04/2019
End date: 06/04/2019
Organising entity: The Optical Society
Carlos Sabín.
- 3** **Title of the work:** Dynamical Casimir Effect and Quantum Computing
Name of the conference: Quantum Technology International Conference 2018
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: París, France
Date of event: 05/09/2018
End date: 07/09/2018
Organising entity: Laboratoire Kastler Brossel
With external admission assessment committee: Yes
Carlos Sabín.



- 4** **Title of the work:** Analogue quantum simulation of wormholes and exotic spacetimes
Name of the conference: Journées de la Matière Condensée 2018 (16ème édition)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Grenoble, France
Date of event: 28/08/2018
End date: 30/08/2018
Organising entity: Société Française de Physique
With external admission assessment committee: Yes
Carlos Sabín.
- 5** **Title of the work:** Quantum physics and traversable wormholes
Name of the conference: Workshop on Quantum Science and Quantum Technologies
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Trieste, Italy
Date of event: 11/09/2017
End date: 15/09/2017
Organising entity: Abdus Salam International Center of Theoretical Physics
With external admission assessment committee: Yes
Carlos Sabín.
- 6** **Title of the work:** Relativistic physics and beyond with superconducting circuits
Name of the conference: XXXVI Reunión Bienal de la Real Sociedad Española de Física
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Santiago de Compostela, Spain
Date of event: 17/07/2017
End date: 21/07/2017
Organising entity: REAL SOCIEDAD ESPAÑOLA DE FISICA
With external admission assessment committee: Yes
Carlos Sabín.
- 7** **Title of the work:** Dynamical Casimir Effect as a resource for boson sampling architectures
Name of the conference: ICE-4 Conference on Quantum Information in Spain
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Madrid, Community of Madrid, Spain
Date of event: 13/07/2017
Organising entity: Centro de Ciencias de Benasque Pedro Pascual
With external admission assessment committee: Yes
Carlos Sabín.
- 8** **Title of the work:** Wormhole spacetimes with SQUID arrays
Name of the conference: ICE-3 Conference on Quantum Information in Spain
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Palma de Mallorca, Balearic Islands, Spain
Date of event: 13/04/2016
End date: 15/04/2016



Organising entity: Universidad de las Islas Baleares **Type of entity:** University
City organizing entity: Palma de Mallorca, Balearic Islands, Spain
With external admission assessment committee: Yes
Carlos Sabín.

9 **Title of the work:** Quantum simulation of relativistic motion with superconducting circuits
Name of the conference: 8th Madrid Meeting on Ultracold atoms
Type of event: Workshop **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Madrid, Community of Madrid, Spain
Date of event: 11/01/2016
End date: 11/01/2016
Organising entity: Universidad Complutense de Madrid **Type of entity:** University
City organizing entity: Madrid, Community of Madrid, Spain
Carlos Sabín.

10 **Title of the work:** Relativistic physics with superconducting circuits
Name of the conference: Quantum simulation: theory meets experiment
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - invited/keynote talk
City of event: Oxford, United Kingdom
Date of event: 30/10/2015
End date: 31/10/2015
Organising entity: Universidad de Oxford **Type of entity:** University
City organizing entity: Oxford, United Kingdom
With external admission assessment committee: Yes
Carlos Sabín.

11 **Title of the work:** Quantum simulation of gravitational waves
Name of the conference: International Workshop on Quantum Simulations
City of event: Bensque, Spain
Date of event: 23/02/2015
End date: 26/02/2015

12 **Title of the work:** Gravitational wave detection with Bose-Einstein condensates
Name of the conference: 7th Madrid Meeting on Ultracold Atoms
City of event: Madrid, Community of Madrid, Spain
Date of event: 17/10/2014
Organising entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Carlos Sabín.

13 **Title of the work:** Relativistic Quantum Information and Computation with superconducting circuits
Name of the conference: International Workshop on Quantum Simulations
City of event: Benasque, Aragon, Spain
Date of event: 29/09/2014
End date: 03/10/2014
Carlos Sabín.



- 14** **Title of the work:** Gravitational wave detection with relativistic quantum metrology
Name of the conference: 7th International Workshop DICE
City of event: Castiglioncello, Italy
Date of event: 15/09/2014
End date: 19/09/2014
Carlos Sabín.
- 15** **Title of the work:** On-chip teleportation in motion
Name of the conference: Topical Research Meetings on Physics: Quantum technologies: taking concepts through implementations
City of event: Londres, United Kingdom
Date of event: 17/12/2012
End date: 18/12/2012
Carlos Sabín.
- 16** **Title of the work:** Testing quantum foundations with circuit QED
Name of the conference: International Workshop on Quantum Simulations
City of event: Bilbao, Basque Country, Spain
Date of event: 22/10/2012
End date: 25/10/2012
Organising entity: Universidad del País Vasco **Type of entity:** University
Carlos Sabín.
- 17** **Title of the work:** On-chip extraction of quantum correlations from the vacuum
Name of the conference: International Workshop on Relativistic Quantum Information-North
City of event: Waterloo, Canada
Date of event: 25/06/2012
End date: 28/06/2012
Organising entity: Perimeter Institute
Carlos Sabín.
- 18** **Title of the work:** Short-time quantum detection: probing quantum fluctuations
Name of the conference: Quantum Malta 2012: fundamental problems in quantum physics
City of event: Valetta, Malta
Date of event: 24/04/2012
End date: 27/04/2012
Carlos Sabín.
- 19** **Title of the work:** From Zeno to Fermi: probing Quantum Field Theory with quantum circuits
Name of the conference: International Workshop on Relativistic Quantum Information-North
City of event: Madrid, Spain
Date of event: 06/09/2011
End date: 08/09/2011
Organising entity: Consejo Superior de **Type of entity:** State agency
Investigaciones Científicas
Carlos Sabín.
- 20** **Title of the work:** The Fermi problem with quantum circuits
Name of the conference: XVIII Central European Workshop on Quantum Optics
City of event: Madrid, Spain
Date of event: 30/05/2011



End date: 03/06/2011

Carlos Sabín.

- 21 Title of the work:** The Fermi problem with quantum circuits
Name of the conference: Quantum Science and Technologies
City of event: Rovereto, Italy
Date of event: 09/05/2011
End date: 12/05/2011
Carlos Sabín.
- 22 Title of the work:** Majorana Hamiltonians
Name of the conference: Quantum Simulations
City of event: Benasque, Aragon, Spain
Date of event: 28/02/2011
End date: 05/03/2011
Carlos Sabín.
- 23 Title of the work:** Detecting vacuum self excitations: slow quantum anti- Zeno effect
Name of the conference: Circuit QED for Quantum Information
City of event: Bilbao, Spain
Date of event: 16/11/2010
End date: 17/11/2010
Carlos Sabín.
- 24 Title of the work:** Atom-Photon interactions beyond RWA: circuit QED in the ultrastrong coupling regime
Name of the conference: XIII International Conference on Quantum Optics and Quantum Information
City of event: Kiev, Ukraine
Date of event: 28/05/2010
End date: 01/06/2010
Carlos Sabín.
- 25 Title of the work:** Entanglement dynamics and single photons in circuit QED
Name of the conference: SOLID-EuroSQIP Workshop
City of event: Bilbao, Spain
Date of event: 09/02/2010
End date: 11/02/2010
Carlos Sabín.
- 26 Title of the work:** Nonlocal generation of bipartite entanglement in nonsignaling systems
Name of the conference: International Conference on Quantum Information Processing and Communication
City of event: Roma, Italy
Date of event: 21/09/2009
End date: 25/09/2009
Carlos Sabín.
- 27 Title of the work:** Birth, life and death of entanglement in two qubits: a quantum field theory approach to circuit QED
Name of the conference: International Workshop Quantum Information and Solid State Systems
Date of event: 05/08/2009
End date: 07/08/2009



Carlos Sabín.

- 28** **Title of the work:** Entanglement and the light cone in atomic systems
Name of the conference: International Workshop Causality in Quantum Physics: Philosophers and Physicists Share their Views,
City of event: Madrid, Spain
Date of event: 09/03/2009
Carlos Sabín.
- 29** **Title of the work:** Quantum correlations between causally disconnected parties
Name of the conference: International Workshop on the mathematical foundations of quantum control and quantum information
City of event: Madrid, Spain
Date of event: 26/05/2008
End date: 30/05/2008
Carlos Sabín.

Works submitted to national or international seminars, workshops and/or courses

- 1** **Title of the work:** Divulgación científica en la era de la posverdad
Name of the event: Redes y medios sociales para la divulgación de la ciencia
City of event: Madrid, Community of Madrid, Spain
Date of event: 21/10/2019
End date: 22/10/2019
Organising entity: Consejo Superior de Investigaciones Científicas
Type of entity: State agency
Carlos Sabín.
- 2** **Title of the work:** No, la física cuántica no es eso
Name of the event: XVIII Semana de la Ciencia y la Tecnología en Madrid
City of event: Madrid, Community of Madrid, Spain
Date of event: 16/11/2018
Organising entity: Comunidad de Madrid
Type of entity: Comunidad de Madrid
Available on-line at: <<https://www.youtube.com/watch?v=NQWcop8E8wc&t=116s>>.
- 3** **Title of the work:** El computador cuántico 2.0
Name of the event: XVII Semana de la Ciencia en Madrid
City of event: Madrid, Community of Madrid, Spain
Date of event: 17/11/2017
Organising entity: Comunidad de Madrid
Type of entity: Comunidad de Madrid
Available on-line at: <<https://www.youtube.com/watch?v=jdGglwoaVXQ&t=>>>.
- 4** **Title of the work:** El computador cuántico
Name of the event: XVI Semana de la Ciencia en Madrid
City of event: Madrid, Community of Madrid, Spain
Date of event: 10/11/2016
Organising entity: Comunidad de Madrid
Type of entity: Comunidad de Madrid
Available on-line at: <<https://www.youtube.com/watch?v=1JeOMbVphKI>>.



R&D management and participation in scientific committees

Organization of R&D activities

- 1** **Title of the activity:** International Workshop on Relativistic Quantum Metrology
Type of activity: Congreso Internacional **Geographical area:** Non EU International
Convening entity: University of Nottingham
City convening entity: Nottingham, United Kingdom
Start-End date: 07/03/2014 - 08/03/2014
- 2** **Title of the activity:** International Workshop on Relativistic Quantum Information-North
Type of activity: Congreso Internacional **Geographical area:** Non EU International
Convening entity: University of Nottingham
City convening entity: Nottingham, United Kingdom
Start-End date: 24/06/2013 - 27/06/2013
- 3** **Title of the activity:** International Workshop "When Relativistic Quantum Information met Analogue Gravity"
Type of activity: Congreso Internacional **Geographical area:** Non EU International
Convening entity: University of Nottingham **Type of entity:** University
City convening entity: Nottingham, United Kingdom
Start-End date: 25/03/2013 - 26/03/2013

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Universidad del País Vasco **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencia y Tecnología
City of entity: Bilbao, Basque Country, Spain
Start-End date: 16/10/2016 - 19/10/2016
Goals of the stay: Guest
- 2** **Entity:** Harvard University **Type of entity:** University
Faculty, institute or centre: Department of Chemistry & Chemical Biology
City of entity: Cambridge, United States of America
Start-End date: 29/08/2016 - 02/09/2016
Goals of the stay: Guest
- 3** **Entity:** Universidad de Viena **Type of entity:** University
Faculty, institute or centre: Facultad de Física
City of entity: Viena, Austria
Start-End date: 10/03/2016 - 11/03/2016 **Duration:** 1 day
Goals of the stay: Guest
Provable tasks: Reunión discusión de inicio de proyecto "Leaps in cosmology: gravitational wave detection with quantum systems" y charla "The GW detector at finite temperatures"



- 4** **Entity:** Instituto de Ciencia de Materiales de Aragón **Type of entity:** State agency
City of entity: Zaragoza, Aragon, Spain
Start-End date: 09/02/2016 - 09/02/2016 **Duration:** 1 day
Goals of the stay: Guest
Provable tasks: Charla "Relativistic physics with superconducting circuits" dentro del ciclo de seminarios "Martes cuanticos "
- 5** **Entity:** Universidad del País Vasco **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencia y Tecnología
City of entity: Bilbao, Basque Country, Spain
Start-End date: 18/10/2015 - 20/10/2015 **Duration:** 2 days
Goals of the stay: Guest
Provable tasks: Visita al grupo QUTIS del Prof. Enrique Solano y charla "Quantum estimation via parametric amplification in circuit QED arrays"
- 6** **Entity:** Universidad del País Vasco **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencia y Tecnología
City of entity: Bilbao, Basque Country, Spain
Start-End date: 11/05/2015 - 15/05/2015 **Duration:** 5 days
Goals of the stay: Guest
Provable tasks: Visita grupo QUTIS del Prof. Enrique Solano
- 7** **Entity:** Universidad Nacional Autónoma de México **Type of entity:** University
Faculty, institute or centre: IIMAS
City of entity: Ciudad de México, Mexico
Start-End date: 24/08/2014 - 01/09/2014
Goals of the stay: Guest
Provable tasks: Curso sobre "Relativistic quantum Information" 28-29-Agosto 2014
- 8** **Entity:** LENS/QSTAR **Type of entity:** Public Research Body
City of entity: Florencia, Italy
Start-End date: 07/04/2014 - 10/04/2014 **Duration:** 3 days
Goals of the stay: Guest
Provable tasks: Visita Prof. Augusto Smerzi y seminario "Relativistic quantum clocks"
- 9** **Entity:** Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Faculty, institute or centre: INSTITUTO DE FISICA FUNDAMENTAL
City of entity: Madrid, Community of Madrid, Spain
Start-End date: 20/10/2013 - 27/10/2013
Goals of the stay: Guest
Provable tasks: Curso "Relativistic quantum metrology" dentro de 4th Quarter lectures on Quantum Field Theory for Quantum Information 22-24/10/2013
- 10** **Entity:** Chalmers University of Technology **Type of entity:** University
City of entity: Gotemburgo, Sweden
Start-End date: 09/09/2013 - 11/09/2013 **Duration:** 3 days
Goals of the stay: Guest
Provable tasks: Visita grupos Prof. Göran Johansson y Prof. Per Delsing



- 11** **Entity:** Chalmers University of Technology **Type of entity:** University
City of entity: Gotemburgo, Sweden
Start-End date: 05/02/2013 - 08/02/2013
Goals of the stay: Guest
Provable tasks: Charla "Quantum Information out of the vacuum" 07/02/2013
- 12** **Entity:** Universidad del País Vasco **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencia y Tecnología
City of entity: Bilbao, Basque Country, Spain
Start-End date: 12/02/2012 - 23/02/2012 **Duration:** 11 days
Goals of the stay: Guest
Provable tasks: Visita al grupo QUTIS del Prof. Enrique Solano
- 13** **Entity:** Centro de Física Miguel Antonio Catalán **Type of entity:** State agency
Faculty, institute or centre: Insituto de Estructura de la Materia (CSIC)
City of entity: Madrid, Community of Madrid, Spain
Start date: 28/03/2019
Goals of the stay: Guest
Provable tasks: Charla "Quantum simulation of traversable wormholes and exotic spacetimes" dentro del ciclo "De Madrid al cosmos"
- 14** **Entity:** Centro de Investigaciones Biológicas **Type of entity:** State agency
City of entity: Madrid, Community of Madrid, Spain
Start date: 22/03/2019
Goals of the stay: Guest
Provable tasks: Seminario "Introduction to quantum computing"

Editorial councils

- 1** **Name of the editorial council:** Revista Española de Física
Affiliation entity: REAL SOCIEDAD ESPAÑOLA DE FISICA
Start date: 2018
- 2** **Name of the editorial council:** Scientific Reports
Affiliation entity: Nature Publishing Group
City affiliation entity: LondresLondres, United Kingdom
Start date: 2015

Obtained accreditations/recognitions

- 1** **Description:** Certificación I3
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia Nacional de Evaluación de la Calidad y Acreditación
Date of recognition: 23/01/2020
- 2** **Description:** Evaluación positiva profesor contratado doctor
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia nacional de evaluación de la calidad y acreditación
Date of recognition: 19/11/2019



- 3** **Description:** Evaluación positiva profesor universidad privada
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia nacional de evaluación de la calidad y acreditación
Date of recognition: 19/11/2019
- 4** **Description:** Evaluación positiva acreditación como profesor ayudante doctor
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia Nacional de evaluación de la calidad y acreditación
Date of recognition: 26/10/2016

Summary of other achievements

- 1** **Description of the achievement:** Organizador Ciclo de Coloquios "Marie Sklodowska-Curie"
- 2** **Description of the achievement:** Organizador del IFF en "Semana de la Ciencia y la Tecnología 2017"
- 3** **Description of the achievement:** Referee de unas 30 revistas internacionales, incluyendo las más prestigiosas de mi campo: Physical Review Letters, Physical Review, Scientific Reports, New Journal of Physics etc.