



Fernando Galve Conde

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Trajectory .-- 14 years of postdoctoral experience, 11 supervised students at different career stages, 46 articles in international journals, 1 book chapter, involved in 16 funded projects, participation in 30 conferences and 16 seminars, 4 organized conferences (including 2018 CEWQO), leader of 3 funded projects, 3 year experience in University undergraduate teaching in 2 different countries, participation in outreach magazines and radio programme. Recently won a CSIC's "Distinguished Researcher" position through competitive access.

Research interests .-- My current research interests are quantum information and dynamics of complex systems, decoherence and dissipation in structured media, quantum probing of complex environments, and implementation of these concepts in trapped ion, optomechanical and other platforms. I have been also interested in quantum simulation of tight binding models with atoms coupled to photonic crystals. Recently I am importing quantum optics methods to the MRI community for imaging of hard tissues as teeth and bone, and also researching phase-coding methods alternative to k-space.



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.

WoS:

*h-index 20

*1187 citations (1087 without self-citations)

*1 Nature Partner Journal Q. Information, 1ACSPhotonics, 5 Phys. Rev. Lett., 5 Sci. Reps., 3

*New. J. Phys. and 1 book chapter.

Google scholar:

*h-index 26 (22 since 2015).

*1967 citations (1312 since 2015).

*i10-index 37 (32 since 2014).

Fernando Galve Conde

Surname(s): **Galve Conde**
Name: **Fernando**
ORCID: **0000-0002-1600-7341**
Email: **fernando.galve@i3m.upv.es**

Current professional situation

Employing entity: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
Department: Instituto de Instrumentación para Imagen Molecular
Professional category: CSIC Doctor FC2, postdoctoral senior researcher
Start date: 01/08/2018
Type of contract: Temporary employment contract **Dedication regime:** Full time

Previous positions and activities

	Employing entity	Professional category	Start date
1	IFISC (UIB-CSIC)	Postdoc CSIC (contrato a cargo de EpheQuCS)	15/06/2017
2	IFISC (UIB-CSIC)	Postdoc (beca postdoctoral UIB)	09/06/2015
3	IFISC (UIB-CSIC)	Postdoc-Ayudante Doctor	09/02/2015
4	IFISC (UIB-CSIC)	Postdoc	16/07/2014
5	IFISC (UIB-CSIC)	JaeDoc (CSIC) Postdoc	15/07/2011
6	IFISC (UIB-CSIC)	Postdoc	15/11/2010
7	IFISC (UIB-CSIC)	Postdoc	15/11/2009
8	IFISC (UIB-CSIC)	Postdoc	01/05/2009
9	Universitaet Augsburg	Postdoc	01/10/2008
10	Universitaet Augsburg	Postdoc	01/10/2007
11	Johanes Gutenberg Universitaet-Mainz	PhD Thesis	01/07/2003
12	Johannes Gutenberg Universitaet-Mainz	Master Thesis	01/06/2002
13	Johanes Gutenberg Universitaet-Mainz	Research Assistant	01/09/2001

1 **Employing entity:** IFISC (UIB-CSIC)
Professional category: Postdoc CSIC (contrato a cargo de EpheQuCS)
Start date: 15/06/2017 **Duration:** 1 year

2 **Employing entity:** IFISC (UIB-CSIC)
Professional category: Postdoc (beca postdoctoral UIB)
Start date: 09/06/2015 **Duration:** 2 years - 2 days



- 3** **Employing entity:** IFISC (UIB-CSIC)
Professional category: Postdoc-Ayudante Doctor
Start date: 09/02/2015 **Duration:** 4 months
- 4** **Employing entity:** IFISC (UIB-CSIC)
Professional category: Postdoc
Start date: 16/07/2014 **Duration:** 5 months - 15 days
- 5** **Employing entity:** IFISC (UIB-CSIC)
Professional category: JaeDoc (CSIC) Postdoc
Start date: 15/07/2011 **Duration:** 3 years
- 6** **Employing entity:** IFISC (UIB-CSIC)
Professional category: Postdoc
Start date: 15/11/2010 **Duration:** 8 months
- 7** **Employing entity:** IFISC (UIB-CSIC)
Professional category: Postdoc
Start date: 15/11/2009 **Duration:** 1 year
- 8** **Employing entity:** IFISC (UIB-CSIC)
Professional category: Postdoc
Start date: 01/05/2009 **Duration:** 6 months - 14 days
- 9** **Employing entity:** Universitaet Augsburg
Professional category: Postdoc
Start date: 01/10/2008 **Duration:** 7 months
- 10** **Employing entity:** Universitaet Augsburg
Professional category: Postdoc
Start date: 01/10/2007 **Duration:** 11 months
- 11** **Employing entity:** Johannes Gutenberg Universitaet-Mainz
Professional category: PhD Thesis
Start date: 01/07/2003 **Duration:** 3 years - 6 months
- 12** **Employing entity:** Johannes Gutenberg Universitaet-Mainz
Professional category: Master Thesis
Start date: 01/06/2002 **Duration:** 1 year
- 13** **Employing entity:** Johannes Gutenberg Universitaet-Mainz
Professional category: Research Assistant
Start date: 01/09/2001 **Duration:** 9 months



Education

University education

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

University degree: Diploma / Degree / Activities
Name of qualification: Physics Degree
City degree awarding entity: Spain
Degree awarding entity: Universitat de València
Date of qualification: 2002

Doctorates

Doctorate programme: PhD Physics
Degree awarding entity: Johannes Gutenberg
 Universitaet in Mainz
City degree awarding entity: Germany
Date of degree: 18/12/2006
Standardised degree: Yes

Type of entity: University
Date of standardisation: 30/11/2009

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
German	B1	B2	B1	B1	B1
Catalan	C1	C1	C1	C1	C1
English	C2	C2	C1	C1	C1

Teaching experience

Experience supervising doctoral thesis and/or final year projects

- Project title:** Synchronization and Quantum Correlations in Optomechanical Systems
Type of project: Master's Thesis
Entity: Universidad de las Islas Baleares
City of entity: Spain
Student: Albert Cabot Martorell
Date of reading: 2016
- Project title:** Optimal production of squeezing by frequency modulation
Type of project: Research Project
Entity: Universidad de las Islas Baleares



City of entity: Spain
Student: Ana Montaner
Obtained qualification: Excellent
Date of reading: 2009

- 3** **Project title:** A planar Penning trap and the dependence of the electron's life-time on the magnetic field in a 3-D Penning trap
Type of project: Master's Thesis
Entity: Johannes Gutenberg Universitaet Mainz
City of entity: Germany
Student: Paula Fernández
Obtained qualification: Excellent
Date of reading: 2005

Most relevant contributions of your teaching CV

- 1** **Description:** [STUDENT SUPERVISION]: (2004-2005) -- master student Paula Fernández during my PhD in Mainz
Organising entity: Johannes Gutenberg Universitaet Mainz, Germany
- 2** **Description:** [STUDENT SUPERVISION]: (2009) -- summer Jae-Intro (predoctoral) student Ana Montaner
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 3** **Description:** [STUDENT SUPERVISION]: (2011-2017) -- predoc+PhD cosupervision of student Gonzalo Manzano
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 4** **Description:** [STUDENT SUPERVISION]: (2014) -- PhD student Antonio Alecce during his visit to Palma de Mallorca
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 5** **Description:** [STUDENT SUPERVISION]: (2014) -- PhD student Antonio Mandarino during his visit to Palma de Mallorca
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 6** **Description:** [STUDENT SUPERVISION]: (2014) -- PhD student Claudia Benedetti during his visit to Palma de Mallorca
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 7** **Description:** [STUDENT SUPERVISION]: (2014) -- PhD student Johannes Nokkala during his visit to Palma de Mallorca
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 8** **Description:** [STUDENT SUPERVISION]: (2015) -- summer undergraduate student Gorka Muñoz
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 9** **Description:** [STUDENT SUPERVISION]: (2016) -- Master thesis of Albert Cabot
Organising entity: Universitat de les Illes Balears **Type of entity:** University



- 10** **Description:** [STUDENT SUPERVISION]: (2016) -- summer undergraduate student Gabriel Torregrosa
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 11** **Description:** [STUDENT SUPERVISION]: (2017) -- PhD thesis of Albert Cabot
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 12** **Description:** [STUDENT SUPERVISION]: (2017) -- summer undergraduate student Rodrigo Tenorio
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 13** **Description:** [STUDENT SUPERVISION]:(2015) -- summer undergraduate student Albert Cabot
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 14** **Description:** [STUDENT SUPERVISION]:(2017) -- Master thesis of Oriol Morgu??
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 15** **Description:** [TEACHING]: (2003-2006) 2,5 years (400 hours) of laboratory-practices teaching (last-year of Physics degree) in the Johannes Gutenberg University in Mainz (Germany)
Organising entity: Johannes Gutenberg University in Mainz, Germany
- 16** **Description:** [TEACHING]: (2015) Spanish ANECA certification obtained: 'Profesor Contratado Doctor'
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 17** **Description:** [TEACHING]:(2015) 1 semester teaching Statistical Physics (3rd course, Physics Degree Uni. Illes Balears)
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 18** **Description:** [TEACHING]:(2016-2017) 2 lessons in the Master Degree of Physics (Uni. Illes Balears)
Organising entity: Universitat de les Illes Balears **Type of entity:** University
- 19** **Description:** [TEACHING]:1 semester teaching Physics (1st course, Computer Engineering Degree Uni. Illes Balears)
Organising entity: Universitat de les Illes Balears **Type of entity:** University



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:** Elastography with Acousto-optical techniques and Rapid Magnetic control of biocompatible nanoParticles (EARMAP)
Entity where project took place: Instituto de Instrumentación para Imagen Molecular
City of entity: Valencia, Valencian Community, Spain
Name principal investigator (PI, Co-PI....): Pablo Botella; Jose Maria Benlloch Baviera; Francisco Camarena
Start-End date: 01/01/2020 - 31/12/2021
Total amount: 205.000 €
- 2** **Name of the project:** DentMRI, 'Dental Imaging with Low-Field Magnetic Resonance Imaging'
Entity where project took place: Instituto de Instrumentación para Imagen Molecular
City of entity: Valencia, Valencian Community, Spain
Name principal investigator (PI, Co-PI....): Jose Maria Benlloch Baviera
Start-End date: 01/01/2019 - 31/12/2021
Total amount: 100.000 €
- 3** **Name of the project:** Emergent phenomena and decoherence in quantum complex systems (EPHEQUCS)
Entity where project took place: IFISC **Type of entity:** **Altres organismes
City of entity: Unknown
Name principal investigator (PI, Co-PI....): Roberta Zambrini
N° of researchers: 1
Funding entity or bodies:
Ministerio de Economía y Competitividad (MINECO) **Type of entity:** **Ministeris
City funding entity: Spain
Code according to the funding entity: FIS2016-78010-P
Start-End date: 01/01/2017 - 31/12/2019 **Duration:** 3 years
Participating entity/entities: IFISC
Total amount: 102.850 €
- 4** **Name of the project:** Histo-MRI (H2020-EU.1.2.1. - FET Open)
Entity where project took place: Instituto de Instrumentación para Imagen Molecular
City of entity: Valencia, Valencian Community, Spain
Name principal investigator (PI, Co-PI....): Jose Maria Benlloch Baviera
Start-End date: 01/01/2017 - 31/12/2019
Total amount: 980.000 €
- 5** **Name of the project:** Non-Markovian quantum evolutions in structured environments
Entity where project took place: IFISC **Type of entity:** **Altres organismes
City of entity: Unknown
Name principal investigator (PI, Co-PI....): Roberta Zambrini



Nº of researchers: 5

Funding entity or bodies:

Ministerio de Economía y Competitividad (MINECO) **Type of entity:** **Ministeris

City funding entity: Spain

Code according to the funding entity: FIS2014-60343-P

Start-End date: 22/03/2015 - 22/03/2018

Duration: 3 years - 1 day

Participating entity/entities: IFISC

Total amount: 27.000 €

6 Name of the project: QuProCS:Quantum Probes for Complex Systems (Horizon 2020, FET Proactive 3:Quantum Simulation)

Entity where project took place: IFISC

Type of entity: **Altres organismes

City of entity: Unknown

Name principal investigator (PI, Co-PI....): Sabrina Maniscalco

Nº of researchers: 7

Funding entity or bodies:

EUROPEAN UNION

Type of entity: **Altres organismes

City funding entity: Unknown

Code according to the funding entity: 641277

Start-End date: 22/03/2015 - 22/03/2018

Duration: 3 years - 1 day

Participating entity/entities: University of Turku

Total amount: 2.268.746 €

7 Name of the project: Quantum information preserving with structured embeddings

Entity where project took place: IFISC

Type of entity: **Altres organismes

City of entity: Unknown

Name principal investigator (PI, Co-PI....): Fernando Galve

Nº of researchers: 1

Funding entity or bodies:

Ministerio de Economía y Competitividad (MINECO) **Type of entity:** **Ministeris

City funding entity: Spain

Code according to the funding entity: FIS2015-66860-P

Start-End date: 01/01/2016 - 01/01/2018

Duration: 2 years - 1 day

Participating entity/entities: IFISC

Total amount: 11.858 €

8 Name of the project: Efectos cuánticos en pigmentos fotosintéticos artificiales

Entity where project took place: IFISC

Type of entity: **Altres organismes

City of entity: Unknown

Name principal investigator (PI, Co-PI....): Fernando Galve

Nº of researchers: 1

Funding entity or bodies:

Universidad de las Islas Baleares

Type of entity: **Universitats

City funding entity: Spain

Start-End date: 09/06/2015 - 09/06/2017

Duration: 2 years - 1 day

Participating entity/entities: IFISC

Total amount: 64.000 €



- 9** **Name of the project:** Transporte e Información en Sistemas Cuánticos
Entity where project took place: Universidad de las Islas Baleares **Type of entity:** **Universitats
City of entity: Spain
Name principal investigator (PI, Co-PI....): Llorenç Serra Crespi
Nº of researchers: 12
Funding entity or bodies: Ministerio de Ciencia e Innovación **Type of entity:** **Altres organismes
City funding entity: Unknown
Code according to the funding entity: FIS2011 23526
Start-End date: 01/01/2012 - 31/03/2015 **Duration:** 3 years - 3 months
Participating entity/entities: Universitat de les Illes Balears
Total amount: 183.920 €
- 10** **Name of the project:** JaeDoc Fellowship (Project title 'Quantum properties of complex systems very far from equilibrium')
Entity where project took place: IFISC **Type of entity:** **Altres organismes
City of entity: Unknown
Name principal investigator (PI, Co-PI....): Fernando Galve
Nº of researchers: 1
Funding entity or bodies: CSIC **Type of entity:** **Altres organismes
City funding entity: Unknown
Start-End date: 16/07/2011 - 15/07/2014 **Duration:** 3 years
Participating entity/entities: IFISC
- 11** **Name of the project:** Interdisciplinary Physics of Complex Systems (FISICOS)
Entity where project took place: IFISC **Type of entity:** **Altres organismes
City of entity: Unknown
Name principal investigator (PI, Co-PI....): Maximino San Miguel Ruibal
Funding entity or bodies: Gobierno Español. Ministerio de Ciencia y Tecnología. Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria **Type of entity:** **Altres organismes
City funding entity: Unknown
Code according to the funding entity: FIS2007-60327
Start-End date: 01/10/2007 - 30/07/2013 **Duration:** 5 years - 9 months - 30 days
Participating entity/entities: IFISC
Total amount: 1.318.900 €
- 12** **Name of the project:** COQUSYS, Complexity and Quantum Systems
Entity where project took place: Universidad de las Islas Baleares **Type of entity:** **Universitats
City of entity: Spain
Name principal investigator (PI, Co-PI....): Maxi San Miguel
Funding entity or bodies: IFISC **Type of entity:** **Altres organismes
City funding entity: Unknown
Code according to the funding entity: 200450E566
Start-End date: 15/01/2009 - 14/01/2012 **Duration:** 3 years



Participating entity/entities: Universitat de les Illes Balears
Total amount: 41.608,99 €

13 Name of the project: Dinámica de sistemas cuánticos complejos
Entity where project took place: IFISC **Type of entity:** **Altres organismes
City of entity: Unknown
Name principal investigator (PI, Co-PI....): Roberta Zambrini
Nº of researchers: 1
Funding entity or bodies:
 Govern de les Illes Balears **Type of entity:** **Altres organismes
City funding entity: Unknown
Code according to the funding entity: CAIB (AAEE0113/09)
Start-End date: 01/03/2011 - 31/08/2011 **Duration:** 6 months
Participating entity/entities: IFISC
Total amount: 8.000 €

14 Name of the project: Quantum effects in complex systems (ECUSCO)
Entity where project took place: IFISC **Type of entity:** **Altres organismes
City of entity: Unknown
Name principal investigator (PI, Co-PI....): Roberta Zambrini
Funding entity or bodies:
 Universitat de les Illes Balears - Consell Superior **Type of entity:** **Altres organismes
 d'Investigacions Científiques (UIB-CSIC)
City funding entity: Unknown
Code according to the funding entity: 2008501047
Start-End date: 2008 - 2009 **Duration:** 1 year - 1 day
Participating entity/entities: IFISC

15 Name of the project: Nanosystems Initiative Munich
Entity where project took place: universitat **Type of entity:** **Altres organismes
 augsburg
City of entity: augsburg, Germany
Name principal investigator (PI, Co-PI....): Dr. Eric Lutz
Funding entity or bodies:
 gobierno aleman **Type of entity:** **Altres organismes
City funding entity: Unknown
Start-End date: 2007 - 2009 **Duration:** 2 years - 1 day
Participating entity/entities: universitat augsburg

16 Name of the project: Kooperative Phänomene im Festkörper, SFB 484 (Teilprojekte D7)
Entity where project took place: universitat **Type of entity:** **Altres organismes
 augsburg
City of entity: augsburg, Germany
Name principal investigator (PI, Co-PI....): Prof. Peter Hänggi
Funding entity or bodies:
 DFG - German Science Foundation **Type of entity:** **Altres organismes
City funding entity: Unknown
Code according to the funding entity: SFB 484(Teilprojekte D7)
Start-End date: 2006 - 2009 **Duration:** 3 years - 1 day



Participating entity/entities: universitat augsburg

17 Name of the project: QUELE (quantum computing with electrons)

Entity where project took place: johannes gutenberg

Type of entity: **Altres organismes

City of entity: mainz, Germany

Name principal investigator (PI, Co-PI....): Prof. G. Werth y Prof. P. Tombesi

Funding entity or bodies:

EUROPEAN UNION

Type of entity: **Altres organismes

City funding entity: Unknown

Code according to the funding entity: IST-2002-2.3.4.1

Start-End date: 01/09/2004 - 31/08/2007

Duration: 3 years

Participating entity/entities: johannes gutenberg

Total amount: 1.400.000 €

Results

Industrial and intellectual property

1 Title registered industrial property: Magnetic Resonance Imaging with prior knowledge and oversampling

Type of industrial property: Patent of invention **Author's rights:** Yes

Inventors/authors/obtainers: Fernando Galve; Joseba Alonso; José Miguel Algarín; José María Benlloch

Entity holder of rights: Consejo Superior de Investigaciones Científicas

Nº of application: EP20382540.1

Country of inscription: Spain

Date of register: 2020

Spanish patent: No

EU patent: Yes

PCT patent: No

2 Title registered industrial property: Magnetic Resonance Imaging method with zero echo time and slice selection

Type of industrial property: Patent of invention **Author's rights:** Yes

Inventors/authors/obtainers: Fernando Galve; Joseba Alonso; José Miguel Algarín; José María Benlloch

Entity holder of rights: Consejo Superior de Investigaciones Científicas

Nº of application: P202030504

Country of inscription: Spain

Date of register: 2020

Spanish patent: Yes

EU patent: No

PCT patent: No

3 Title registered industrial property: Method and apparatus for Magnetic Resonance Imaging with time-varying inhomogeneous magnetic fields

Type of industrial property: Patent of invention **Author's rights:** Yes

Inventors/authors/obtainers: Joseba Alonso; Fernando Galve; José Miguel Algarín; José María Benlloch

Entity holder of rights: Consejo Superior de Investigaciones Científicas

Nº of application: P201930719

Country of inscription: Spain

Date of register: 2019

Spanish patent: Yes



PCT patent: No

- 4 Title registered industrial property:** Method and apparatus for MRI fast magic-angle rotation of spatial encoding magnetic fields
Type of industrial property: Patent of invention **Author's rights:** Yes
Inventors/authors/obtainers: Joseba Alonso; Fernando Galve; José María Benlloch; José Miguel Algarín
Entity holder of rights: Consejo Superior de Investigaciones Científicas
N° of application: P201930015
Country of inscription: Spain
Date of register: 2018
Spanish patent: Yes
PCT patent: Yes

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

- 1** Fernando Galve; Joseba Alonso. Model-driven reconstruction for highly-oversampled MRI. <https://arxiv.org/abs/2007.15674>. 2020.
Type of production: Scientific paper **Format:** Journal
- 2** José Miguel Algarín. Simultaneous imaging of hard and soft biological tissues in a low-field dental MRI scanner. Nature Scientific Reports (accepted), <https://arxiv.org/abs/2005.01462>. 2020.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 3** Albert Cabot; Gian Luca Giorgi; Fernando Galve; Roberta Zambrini. Quantum Synchronization in Dimer Atomic Lattices. Physical Review Letters. 123, pp. 023604. APS, 09/07/2019.
Type of production: Scientific paper **Format:** Journal
- 4** Fernando Galve; Alejandro González-Tudela. Anisotropic Quantum Emitter Interactions in Two- Dimensional Photonic-Crystal Baths. ACS Photonics. 6 - 1, pp. 221. ACS, 20/12/2018.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
- 5** Albert Cabot; Fernando Galve; Victor M. Eguíluz; Konstantin Klemm; Sabrina Maniscalco; Roberta Zambrini. Unveiling noise- less clusters in complex quantum networks. Nature Partner Journal Quantum Information. 4 - 57, 05/11/2018.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 6** F. Galve; R. Zambrini. Coherent and radiative couplings through two-dimensional structured environments. 906773 - Physical Review A. 97, pp. 033846. (United States of America): American Physical Society, 2018. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.97.033846>>. ISSN 1050-2947
DOI: <https://doi.org/10.1103/PhysRevA.97.033846>
Type of production: Scientific paper **Format:** Journal
Position of signature: 1



Total no. authors: 2

- 7** Fernando Galve; Roberta Zambrini. Completely subradiant multi-atom architectures through 2D photonic crystals. 903211 - Annalen der Physik. 530, pp. 1800017. (Germany): 2018. Available on-line at: <<https://onlinelibrary.wiley.com/doi/abs/10.1002/andp.201800017>>. ISSN 0003-3804
DOI: <https://doi.org/10.1002/andp.201800017>
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 2
- 8** J. Nokkala; F. Arzani; F. Galve; R. Zambrini; S. Maniscalco; J. Piilo; N. Treps; V. Parigi. Reconfigurable optical implementation of quantum complex networks. 912198 - New Journal of Physics. 20, pp. 053024. (United Kingdom): 2018. Available on-line at: <<http://iopscience.iop.org/article/10.1088/1367-2630/aabc77/meta>>. ISSN 1367-2630
DOI: <https://doi.org/10.1088/1367-2630/aabc77>
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 8
- 9** Albert Cabot; Fernando Galve; Roberta Zambrini. Dynamical and quantum effects of collective dissipation in optomechanical systems. 912198 - New Journal of Physics. 19, pp. 113007. (United Kingdom): 2017. ISSN 1367-2630
DOI: <https://doi.org/10.1088/1367-2630/aa8b9c>
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
- 10** Galve, F.; Mandarino, A.; Paris, M.A.G.; Benedetti, C.; Zambrini, R.. Microscopic description for the emergence of collective dissipation in extended systems. 917079 - Scientific Reports. 7, pp. 42050. (United Kingdom): Nature Publishing Group, 2017. Available on-line at: <<https://arxiv.org/abs/1606.03390>>. ISSN 2045-2322
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 5
- 11** F. Galve; J. Alonso; R. Zambrini. Multi-ion sensing of dipolar noise sources in ion traps. 906773 - Physical Review A. 96, pp. 033409. (United States of America): American Physical Society, 2017. Available on-line at: <<https://journals.aps.org/pr/abstract/10.1103/PhysRevA.96.033409>>. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 3
- 12** Nokkala, J.; Galve, F.; Zambrini, R.; Maniscalco, S.; Piilo, J.. Complex quantum networks as structured environments: engineering and probing. 917079 - Scientific Reports. 6, pp. 26861. (United Kingdom): Nature Publishing Group, 2016. Available on-line at: <<http://arxiv.org/abs/1503.04635>>. ISSN 2045-2322
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5
Impact source: ISI **Category:** MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 4.259 **Journal in the top 25%:** Yes
Position of publication: 10 **No. of journals in the cat.:** 64

- 13** Gonzalo Manzano; Fernando Galve; Roberta Zambrini; Juan M. R. Parrondo. Entropy production and thermodynamic power of the squeezed thermal reservoir. 908787 - Physical Review E. 93, pp. 052120. (United States of America): American Physical Society, 2016. Available on-line at: <<http://journals.aps.org/pre/abstract/10.1103/PhysRevE.93.052120>>. ISSN 1539-3755
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 4
- 14** C. Benedetti; F. Galve; A. Mandarino; M. G. A. Paris; R. Zambrini. Minimal model for spontaneous synchronization. 906773 - Physical Review A. 94, pp. 052118. (United States of America): American Physical Society, 2016. Available on-line at: <<https://arxiv.org/abs/1607.07277>>. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5
- 15** F. Galve; R. Zambrini; S. Maniscalco. Non-Markovianity hinders Quantum Darwinism. 917079 - Scientific Reports. 6, pp. 19607. (United Kingdom): Nature Publishing Group, 2016. Available on-line at: <<https://www.nature.com/articles/srep19607>>. ISSN 2045-2322
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 3
Impact source: ISI **Category:** MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 5.228 **Journal in the top 25%:** Yes
Position of publication: 10 **No. of journals in the cat.:** 64
- 16** Gian Luca Giorgi; Fernando Galve; Roberta Zambrini. Probing the spectral density of a dissipative qubit via quantum synchronization. 906773 - Physical Review A. 94, pp. 052121. (United States of America): American Physical Society, 2016. Available on-line at: <<https://arxiv.org/abs/1607.02912>>. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 3
- 17** Gian Luca Giorgi; Fernando Galve; Roberta Zambrini. Quantum Darwinism and non-Markovian dissipative dynamics from quantum phases of the spin-1/2 XX model. 906773 - Physical Review A. 92 - 022105, pp. 1 - 7. (United States of America): American Physical Society, 2015. Available on-line at: <<http://arxiv.org/abs/1504.02105>>. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 3
- 18** Alecce, A.; Galve, F.; Nicola Lo, G.; Dell'Anna, L.; Plastina, F.; Zambrini, R.. Quantum Otto cycle with inner friction: finite-time and disorder effects. 912198 - New Journal of Physics. 17, pp. 075007. (United Kingdom): 2015. Available on-line at: <<http://iopscience.iop.org/1367-2630/17/7/075007/>>. ISSN 1367-2630
DOI: <https://doi.org/10.1088/1367-2630/17/7/075007>
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 6
Impact source: ISI **Category:** PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 3.558 **Journal in the top 25%:** Yes
Position of publication: 10 **No. of journals in the cat.:** 79

- 19** Galve, F.; Zambrini, R. Energy and information propagation in a finite coupled bosonic heat bath. 913419 - International Journal Of Quantum Information. 12 - 1560022, (United States of America): 2014. Available on-line at: <<http://arxiv.org/abs/1409.4281>>. ISSN 0219-7499
DOI: <https://doi.org/10.1142/S0219749915600229>
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 8
Impact source: ISI
Impact index in year of publication: 0.877
Position of publication: 24
Impact source: ISI
Impact index in year of publication: 0.877
Position of publication: 36
Impact source: ISI
Impact index in year of publication: 0.877
Position of publication: 54
Format: Journal
Category: PHYSICS, PARTICLES & FIELDS
Journal in the top 25%: No
No. of journals in the cat.: 27
Category: PHYSICS, MATHEMATICAL
Journal in the top 25%: No
No. of journals in the cat.: 54
Category: COMPUTER SCIENCE, THEORY & METHODS
Journal in the top 25%: No
No. of journals in the cat.: 102
- 20** Guan, Z.; He, H.; Han, Y.J.; Li, C.F.; Galve, F.; Guo, G.C.. Entangling power of two-qubit gates on mixed states. 906773 - Physical Review A. 89, pp. 012324. (United States of America): American Physical Society, 2014. Available on-line at: <<http://pra.aps.org/abstract/PRA/v89/i1/e012324>>. ISSN 1050-2947
Type of production: Scientific paper
Position of signature: 5
Total no. authors: 6
Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 16
Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 9
Format: Journal
Category: OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 87
Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Journal in the top 25%: No
No. of journals in the cat.: 34
- 21** Plastina, F.; Alecce, A.; Apollaro, T.J.G.; Falcone, G.; Francica, G.; Galve, F.; Lo Gullo, N.; Zambrini, R.. Irreversible work and inner friction in quantum thermodynamic processes. 903244 - Physical Review Letters. 113 - 260601, pp. 1 - 5. (United States of America): 2014. Available on-line at: <<http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.113.260601>>. ISSN 0031-9007
DOI: <https://doi.org/10.1103/PhysRevLett.113.260601>
Type of production: Scientific paper
Position of signature: 6
Total no. authors: 8
Impact source: ISI
Impact index in year of publication: 7.512
Position of publication: 6
Format: Journal
Category: PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 78
- 22** Vasile, R.; Galve, F.; Zambrini, R.. On the spectral origin of non-Markovianity: an exact finite model. 906773 - Physical Review A. 89, pp. 022109. (United States of America): American Physical Society, 2014. Available on-line at: <<http://arxiv.org/abs/1311.2923>>. ISSN 1050-2947
DOI: <https://doi.org/10.1103/PhysRevA.89.022109>



Type of production: Scientific paper
Position of signature: 2
Total no. authors: 3
Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 16

Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 9

Format: Journal

Category: OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 87

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Journal in the top 25%: No
No. of journals in the cat.: 34

- 23** Manzano, G.; Galve, F.; Zambrini, R.. Avoiding dissipation in a system of three quantum harmonic oscillators. 906773 - Physical Review A. 87 - 032114, pp. 1 - 13. (United States of America): American Physical Society, 2013. Available on-line at: <<http://pra.aps.org/abstract/PRA/v87/i3/e032114>>. ISSN 1050-2947

DOI: <https://doi.org/10.1103/PhysRevA.87.032114>

Type of production: Scientific paper
Position of signature: 2
Total no. authors: 3
Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 12

Format: Journal

Category: OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 82

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Journal in the top 25%: No
No. of journals in the cat.: 33

Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 9

- 24** Galve, F.; Plastina, F.; Paris, M.G.A.; Zambrini, R.. Discarding power of quantum evolutions. 903244 - Physical Review Letters. 110 - 010501, pp. 1 - 5. (United States of America): 2013. Available on-line at: <<http://prl.aps.org/abstract/PRL/v110/i1/e010501>>. ISSN 0031-9007

DOI: <https://doi.org/10.1103/PhysRevLett.110.010501>

Type of production: Scientific paper
Position of signature: 1
Impact source: ISI
Impact index in year of publication: 7.943
Position of publication: 6

Format: Journal

Category: PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 77

Source of citations: WOS

Citations: 5

- 25** Cardillo, A.; Galve, F.; Zueco, D.; Gomez-Gardeñes, J.. Information sharing in quantum complex networks. 906773 - Physical Review A. 87, pp. 052312. (United States of America): American Physical Society, 2013. Available on-line at: <<http://pra.aps.org/abstract/PRA/v87/i5/e052312>>. ISSN 1050-2947

DOI: <https://doi.org/10.1103/PhysRevA.87.052312>

Type of production: Scientific paper
Position of signature: 2
Total no. authors: 4
Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 12

Format: Journal

Category: OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 82



Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 9

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

Journal in the top 25%: No

No. of journals in the cat.: 33

- 26** Manzano, G.; Galve, F.; Giorgi, G-L.; Hernández-García, E.; Zambrini, R.. Synchronization, quantum correlations and entanglement in oscillator networks. 917079 - Scientific Reports. 3 - 1439, pp. 1 - 6. (United Kingdom): Nature Publishing Group, 2013. Available on-line at: <<http://www.nature.com/srep/2013/130313/srep01439/full/srep01439.html>>. ISSN 2045-2322

DOI: <https://doi.org/10.1038/srep01439>

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 5

Impact source: ISI

Impact index in year of publication: 2.927

Position of publication: 5

Format: Journal

Category: MULTIDISCIPLINARY SCIENCES

Journal in the top 25%: Yes

No. of journals in the cat.: 55

- 27** Giorgi, G.L.; Galve, F.; Manzano, G.; Colet, P.; Zambrini, R.. Quantum correlations and mutual synchronization. 906773 - Physical Review A. 85 - 052101, pp. 1 - 7. (United States of America): American Physical Society, 2012. Available on-line at: <<http://pra.aps.org/abstract/PRA/v85/i5/e052101>>. ISSN 1050-2947

DOI: <https://doi.org/10.1103/PhysRevA.85.052101>

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 5

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 8

Format: Journal

Category: OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 80

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 9

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

Journal in the top 25%: No

No. of journals in the cat.: 34

Source of citations: WOS

Citations: 8

- 28** Bellomo, B.; Giorgi, G.L.; Galve, F.; Franco, R.L.; Compagno, G; Zambrini, R.. Unified view of correlations using the square-norm distance. 906773 - Physical Review A. 85 - 032104, pp. 1 - 3. (United States of America): American Physical Society, 2012. Available on-line at: <<http://pra.aps.org/abstract/PRA/v85/i3/e032104>>. ISSN 1050-2947

DOI: <https://doi.org/10.1103/PhysRevA.85.032104>

Type of production: Scientific paper

Position of signature: 3

Total no. authors: 6

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 8

Format: Journal

Category: OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 80

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 9

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

Journal in the top 25%: No

No. of journals in the cat.: 34

**Source of citations:** WOS**Citations:** 24

- 29** Giorgi, G.L.; Bellomo, B.; Galve, F.; Zambrini, R.. Genuine Quantum and Classical Correlations in Multipartite Systems. 903244 - Physical Review Letters. 107 - 190501, pp. 1 - 5. (United States of America): 2011. Available on-line at: <<http://prl.aps.org/abstract/PRL/v107/i19/e190501>>. ISSN 0031-9007

Type of production: Scientific paper**Format:** Journal**Position of signature:** 3**Total no. authors:** 4**Impact source:** ISI**Category:** PHYSICS, MULTIDISCIPLINARY**Impact index in year of publication:** 7.943**Journal in the top 25%:** Yes**Position of publication:** 5**No. of journals in the cat.:** 82**Source of citations:** WOS**Citations:** 31

- 30** Galve, F.; Giorgi, G.L.; Zambrini, R.. Maximally discordant mixed states of two qubits. 906773 - Physical Review A. 83 - 012102, pp. 1 - 5. (United States of America): American Physical Society, 2011. Available on-line at: <<http://pra.aps.org/abstract/PRA/v83/i1/e012102>>. ISSN 1050-2947

Type of production: Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 3**Impact source:** ISI**Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL**Impact index in year of publication:** 3.042**Journal in the top 25%:** No**Position of publication:** 10**No. of journals in the cat.:** 33**Impact source:** ISI**Category:** OPTICS**Impact index in year of publication:** 3.042**Journal in the top 25%:** Yes**Position of publication:** 10**No. of journals in the cat.:** 78**Source of citations:** WOS**Citations:** 40

- 31** Galve, F.; Giorgi, G.L.; Zambrini, R.. Orthogonal measurements are almost sufficient for quantum discord of two qubits. 903223 - Europhysics Letters. 96 - 40005, pp. 1 - 6. (France): 2011. Available on-line at: <<http://iopscience.iop.org/0295-5075/96/4/40005/>>. ISSN 0295-5075

DOI: <https://doi.org/10.1209/0295-5075/96/40005>**Type of production:** Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 3**Impact source:** Others**Impact index in year of publication:** 2.26**Source of citations:** WOS**Citations:** 13

- 32** Galve, F.. Propagation properties and limitations on the attainable entanglement in a driven harmonic chain. 906773 - Physical Review A. 84 - 012318, (United States of America): American Physical Society, 2011. Available on-line at: <<http://pra.aps.org/abstract/PRA/v84/i1/e012318>>. ISSN 1050-2947

Type of production: Scientific paper**Format:** Journal**Position of signature:** 1**Total no. authors:** 1**Impact source:** ISI**Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL



Impact index in year of publication: 3.042
Position of publication: 10

Impact source: ISI
Impact index in year of publication: 3.042
Position of publication: 10

Journal in the top 25%: No
No. of journals in the cat.: 33

Category: OPTICS
Journal in the top 25%: Yes
No. of journals in the cat.: 78

- 33** Giorgi, G.L.; Galve, F.; Zambrini, R.. Robustness of different indicators of quantumness in the presence of dissipation. 913419 - International Journal Of Quantum Information. 9, pp. 1825 - 1836. (United States of America): 2011. Available on-line at: <<http://iopscience.iop.org/0295-5075/96/4/40005/>>. ISSN 0219-7499

Type of production: Scientific paper
Position of signature: 2
Total no. authors: 3

Impact source: ISI
Impact index in year of publication: 0.67
Position of publication: 22

Impact source: ISI
Impact index in year of publication: 0.67
Position of publication: 42

Impact source: ISI
Impact index in year of publication: 0.67
Position of publication: 56

Format: Journal

Category: PHYSICS, PARTICLES & FIELDS
Journal in the top 25%: No
No. of journals in the cat.: 27

Category: PHYSICS, MATHEMATICAL
Journal in the top 25%: No
No. of journals in the cat.: 55

Category: COMPUTER SCIENCE, THEORY & METHODS
Journal in the top 25%: No
No. of journals in the cat.: 99

- 34** Galve, F.; Pachón, L.A.; Zueco, D.. Bringing entanglement to the high temperature limit. 903244 - Physical Review Letters. 105, pp. 180501. (United States of America): 2010. ISSN 0031-9007

Type of production: Scientific paper
Position of signature: 1
Total no. authors: 3

Impact source: ISI
Impact index in year of publication: 7.943
Position of publication: 5

Source of citations: WOS

Format: Journal

Category: PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 79

Citations: 42

- 35** F. Galve; D. Zueco; G.M. Reuter; S. Kohler; P. Hänggi. Creation and manipulation of entanglement in spin chains far from equilibrium. 912721 - European Journal Of Physics. 180, pp. 237 - 246. (United Kingdom): 2010. ISSN 0143-0807

DOI: <https://doi.org/10.1140/epjst/e2010-01220-5>

Type of production: Scientific paper

Impact source: ISI
Impact index in year of publication: 1.796
Position of publication: 21

Impact source: ISI
Impact index in year of publication: 1.796
Position of publication: 47

Format: Journal

Category: EDUCATION, SCIENTIFIC DISCIPLINES
Journal in the top 25%: No
No. of journals in the cat.: 33

Category: PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: No
No. of journals in the cat.: 79



- 36** Galve, F.; Giorgi, G.L.; Zambrini, R.. Entanglement dynamics of nonidentical oscillators under decohering environments. 906773 - Physical Review A. 81 - 062117, pp. 1 - 10. (United States of America): American Physical Society, 2010. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Total no. authors: 3
Impact source: ISI **Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Impact index in year of publication: 3.042 **Journal in the top 25%:** No
Position of publication: 8 **No. of journals in the cat.:** 32
Impact source: ISI **Category:** OPTICS
Impact index in year of publication: 3.042 **Journal in the top 25%:** Yes
Position of publication: 9 **No. of journals in the cat.:** 77
Source of citations: WOS **Citations:** 12
- 37** Giorgi, G.L.; Paganelli, S.; Galve, F.. Ion-trap simulation of the quantum phase transition in an exactly solvable model of spins coupled to bosons. 906773 - Physical Review A. 81, (United States of America): American Physical Society, 2010. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Total no. authors: 3
Impact source: ISI **Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Impact index in year of publication: 3.042 **Journal in the top 25%:** No
Position of publication: 8 **No. of journals in the cat.:** 32
Impact source: ISI **Category:** OPTICS
Impact index in year of publication: 3.042 **Journal in the top 25%:** Yes
Position of publication: 9 **No. of journals in the cat.:** 77
Source of citations: WOS **Citations:** 5
- 38** F. Galve; E. Lutz.. Energy cost an optimal entanglement production in harmonic chains. 906773 - Physical Review A. 79 - 032327, (United States of America): American Physical Society, 2009. Available on-line at: <<http://pra.aps.org/abstract/PRA/v79/i3/e032327>>. ISSN 1050-2947
DOI: <https://doi.org/10.1103/PhysRevA.79.032327>
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** OPTICS
Impact index in year of publication: 3.042 **Journal in the top 25%:** Yes
Position of publication: 7 **No. of journals in the cat.:** 71
Impact source: ISI **Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Impact index in year of publication: 3.042 **Journal in the top 25%:** Yes
Position of publication: 9 **No. of journals in the cat.:** 33
Source of citations: WOS **Citations:** 13
- 39** F. Galve; D. Zueco; S. Kohler; E. Lutz; P. Hänggi. Entanglement resonance in driven spin chains. 906773 - Physical Review A. 79 - 032332, (United States of America): American Physical Society, 2009. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** OPTICS
Impact index in year of publication: 3.042 **Journal in the top 25%:** Yes



Position of publication: 7

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 9

Source of citations: WOS

No. of journals in the cat.: 71

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

Journal in the top 25%: Yes

No. of journals in the cat.: 33

Citations: 25

40 F. Galve; E. Lutz. Nonequilibrium Thermodynamic Analysis of Squeezing. 906773 - Physical Review A. 79 - 055804, (United States of America): American Physical Society, 2009. ISSN 1050-2947

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 7

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 9

Source of citations: WOS

Format: Journal

Category: OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 71

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

Journal in the top 25%: Yes

No. of journals in the cat.: 33

Citations: 5

41 F. Galve; D. Zueco; S. Kohler; P. Hänggi. Quantum router based on ac control of qubit chains. 906773 - Physical Review A. 80 - 042303, (United States of America): American Physical Society, 2009. ISSN 1050-2947

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 7

Impact source: ISI

Impact index in year of publication: 3.042

Position of publication: 9

Source of citations: WOS

Format: Journal

Category: OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 71

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

Journal in the top 25%: Yes

No. of journals in the cat.: 33

Citations: 21

42 F. Galve; G. Werth. Motional frequencies in a planar penning trap. 903332 - Hyperfine Interactions. 174 - 41, (Holland): 2007. ISSN 0304-3843

Type of production: Scientific paper

Impact source: ISI

Impact index in year of publication: 0.209

Position of publication: 18

Impact source: ISI

Impact index in year of publication: 0.209

Position of publication: 31

Impact source: ISI

Impact index in year of publication: 0.209

Position of publication: 57

Source of citations: WOS

Format: Journal

Category: PHYSICS, NUCLEAR

Journal in the top 25%: No

No. of journals in the cat.: 21

Category: PHYSICS, ATOMIC, MOLECULAR & CHEMICAL

Journal in the top 25%: No

No. of journals in the cat.: 32

Category: PHYSICS, CONDENSED MATTER

Journal in the top 25%: No

No. of journals in the cat.: 61

Citations: 1



- 43** F. Galve; G. Werth. Confinement study in a planar penning trap. 907417 - AIP Conference Proceedings. 862, pp. 313 - 318. (United States of America): 2006. ISSN 0094-243X
DOI: <https://doi.org/10.1063/1.2387938>
Type of production: Scientific paper **Format:** Journal
- 44** F. Galve; P. Fernández; G. Werth. Operation of a planar penning trap. 909885 - European Physical Journal D. 40 - 201, (Germany): 2006. ISSN 1434-6060
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Impact index in year of publication: 1.988 **Journal in the top 25%:** No
Position of publication: 13 **No. of journals in the cat.:** 31
Source of citations: WOS **Citations:** 8
- 45** G. Ciaramicoli; F. Galve; I. Marzoli; P. Tombesi. Array of Planar Penning Trap as a nuclear magnetic Resonance molecule for quatum computation. 906773 - Physical Review A. 72 - 042323, (United States of America): American Physical Society, 2005. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Impact index in year of publication: 3.042 **Journal in the top 25%:** Yes
Position of publication: 5 **No. of journals in the cat.:** 31
Impact source: ISI **Category:** OPTICS
Impact index in year of publication: 3.042 **Journal in the top 25%:** Yes
Position of publication: 5 **No. of journals in the cat.:** 55
Source of citations: WOS **Citations:** 18
- 46** S. Stahl; F. Galve; others. A Planar Penning Trap. 909885 - European Physical Journal D. 32 - 139, (Germany): 2004. ISSN 1434-6060
Type of production: Scientific paper **Format:** Journal
Impact source: ISI **Category:** PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Impact index in year of publication: 1.692 **Journal in the top 25%:** No
Position of publication: 16 **No. of journals in the cat.:** 34
Source of citations: WOS **Citations:** 43
- 47** Fernando Galve; Gian Luca Giorgi; Roberta Zambrini. Quantum correlations and synchronization measures. Lectures on general quantum correlations and their applications. (Spain): Springer, 2017. Available on-line at: <<http://www.springer.com/gp/book/9783319534107>>. ISBN 978-3-319-53412-1
Type of production: Book chapter **Format:** Book
Total no. authors: 3



Works submitted to national or international conferences

- 1** **Name of the conference:** Central European Workshop on Quantum Optics, CEWQO 2018
Type of event: Conference **Geographical area:** International
Type of participation: Organizing committee
City of event: Palma de Mallorca, Spain
Date of event: 2018
End date: 2018
Galve, F.
- 2** **Title of the work:** (Member of scientific committee)
Name of the conference: Central European Workshop on Quantum Optics, CEWQO 2018
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - others
City of event: Palma de Mallorca, Spain
Date of event: 2018
End date: 2018
Galve, F.
- 3** **Title of the work:** Completely subradiant atom architectures and exotic coherent couplings through 2D photonic crystals
Name of the conference: Quantum information & Computation, Bilbao 2018
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Bilbao, Spain
Date of event: 2018
End date: 2018
Organising entity: 06520 - UNIVERSIDAD DEL PAÍS VASCO-EUSKAL HERRIKO UNIBERTSITATEA (UPV/EHU) **Type of entity:** **Universitats
Galve, F.
- 4** **Name of the conference:** QuProCS meeting
Type of event: Conference **Geographical area:** International
Type of participation: Organizing committee
City of event: Palma de Mallorca, Spain
Date of event: 2017
End date: 2017
Organising entity: 3172 - IFISC
Galve, F.
- 5** **Title of the work:** A 2-ions probe for anomalous heating
Name of the conference: QuProCS meeting
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Palma de Mallorca, Spain
Date of event: 2017
End date: 2017
Organising entity: 3172 - IFISC



Galve, F.

- 6** **Title of the work:** Geometric aspects of extended quantum dissipative systems
Name of the conference: Crossroads in Complex Systems
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Palma de Mallorca, Spain
Date of event: 2017
End date: 2017
Organising entity: 3172 - IFISC
Galve, F.
- 7** **Title of the work:** Microscopic origins of collective dissipation in extended systems
Name of the conference: 14th Granada Seminar, Quantum Systems In and Out of Equilibrium: Fundamentals, dynamics and applications
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Granada, Spain
Date of event: 2017
End date: 2017
Galve, F.
- 8** **Title of the work:** Microscopic origins of collective dissipation in extended systems
Name of the conference: Quantum 2017
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Turin, Italy
Date of event: 2017
End date: 2017
Galve, F.
- 9** **Title of the work:** Microscopic origins of collective dissipation in extended systems
Name of the conference: Quantum Optics to Quantum Technology (Royal Society London)
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Londres, United Kingdom
Date of event: 2017
End date: 2017
Galve, F.
- 10** **Name of the conference:** ICE-3 'Información Cuántica en España'
Type of event: Conference
Type of participation: Organizing committee
City of event: Palma de Mallorca, Spain
Date of event: 2016
End date: 2016
Galve, F.
- 11** **Name of the conference:** European Conference on Trapped Ions 2016, Arosa (Switzerland)
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - others



City of event: Switzerland

Date of event: 2016

End date: 2016

Galve, F.

- 12 Title of the work:** (Member of scientific committee)
Name of the conference: ICE-3 'Información Cuántica en España'
Type of event: Conference
Type of participation: Participatory - others
City of event: Palma de Mallorca, Spain
Date of event: 2016
End date: 2016
Galve, F.

- 13 Title of the work:** Microscopic description for the emergence of collective decoherence in extended systems
Name of the conference: 9th Italian Quantum Information Science Conference
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Roma, Italy
Date of event: 2016
End date: 2016
Galve, F.

- 14 Title of the work:** Microscopic description for the emergence of collective decoherence in extended systems
Name of the conference: ICE-3 'Información Cuántica en España'
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Palma de Mallorca, Spain
Date of event: 2016
End date: 2016
Galve, F.

- 15 Title of the work:** Quantum Darwinism and memory effects in bosonic and spin environments
Name of the conference: 9th Italian Quantum Information Science Conference
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Italy
Date of event: 2016
End date: 2016
Galve, F.

- 16 Name of the conference:** 2nd Quantum Thermodynamics Conference
Type of event: Conference **Geographical area:** International
Type of participation: Organizing committee
City of event: Palma de Mallorca, Spain
Date of event: 2015
End date: 2015
Galve, F.



- 17** **Title of the work:** Quantum Darwinism and memory effects in spin and bosonic environments
Name of the conference: ICE-2 'Información Cuántica en España'
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Bilbao, Spain
Date of event: 2015
End date: 2015
F. Galve.
- 18** **Title of the work:** Quantum Darwinism with finite environments
Name of the conference: 586 Heraeus Seminar: Quantum Correlations beyond Entanglement
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Bad Honnef (Germany), Germany
Date of event: 2015
End date: 2015
Fernando Galve.
- 19** **Title of the work:** Discording and entangling power of quantum evolutions.
Name of the conference: ICE-1, Zaragoza
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Zaragoza, Spain
Date of event: 2014
End date: 2014
Organising entity: UZA - Universidad de Zaragoza
Fernando Galve.
- 20** **Title of the work:** On the spectral origin of non-Markovianity: an exact finite model
Name of the conference: 576 Heraeus Seminar: Designed Quantum States of Matter
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Bad Honnef (Germany), Germany
Date of event: 2014
End date: 2014
Fernando Galve.
- 21** **Title of the work:** On the spectral origin of non-Markovianity: an exact finite model
Name of the conference: Thermodynamics in the quantum regime
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Potsdam (Berlin), Germany
Date of event: 2014
End date: 2014
Organising entity: 2453 - COST ACTION
Fernando Galve.
- 22** **Title of the work:** Spectral origin of non-Markovianity in an exact finite harmonic model
Name of the conference: LPHYS'14
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk



City of event: Sofia, Bulgaria
Date of event: 2014
End date: 2014
Fernando Galve.

23 **Title of the work:** Bringing entanglement to the high temperature limit
Name of the conference: Quantum Information and Measurement
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Berlin, Germany
Date of event: 2012
End date: 2012
Organising entity: OSOA - Optical Society of America **Type of entity:** **Associacions
Fernando Galve Conde.

24 **Title of the work:** Bringing entanglement to the high temperature limit
Name of the conference: Advances in Foundations of Quantum Mechanics and Quantum Information with atoms and photons
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Turin, Italy
Date of event: 2012
End date: 2012
Fernando Galve Conde.

25 **Title of the work:** QUANTUM DISCORD OF TWO QUBITS: Maximally correlated states and sufficiency of perfect measurements
Name of the conference: Advances in Foundations of Quantum Mechanics and Quantum Information with atoms and photons
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Turin, Italy
Date of event: 2012
End date: 2012
Fernando Galve Conde.

26 **Title of the work:** Quantum discord of two qubits: maximally correlated states and sufficiency of perfect measurements
Name of the conference: ICE-0 (Información Cuántica en España)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Madrid, Spain
Date of event: 2012
End date: 2012
Fernando Galve Conde.

27 **Title of the work:** Bringing entanglement to the high temperature limit
Name of the conference: CEWQO2011
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication



City of event: Madrid, Spain
Date of event: 2011
End date: 2011
Fernando Galve Conde.

- 28** **Title of the work:** Bringing entanglement to the high temperature limit
Name of the conference: Quantum Information Concepts for Condensed Matter Problems
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: MPIPKS, Dresde, Germany
Date of event: 2010
End date: 2010
Fernando Galve Conde.
- 29** **Title of the work:** Quantum correlations of dissipative oscillators: Driving and synchronization effects
Name of the conference: Complex Quantum Systems
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: IFISC, Palma de Mallorca, Spain
Date of event: 2010
End date: 2010
Fernando Galve Conde.
- 30** **Title of the work:** Disappearance of the classical limit: Entangled oscillators at room temperature
Name of the conference: 2nd Vienna Symposium on the Foundations of Modern Physics
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Viena, Austria
Date of event: 2009
End date: 2009
F. Galve.
- 31** **Title of the work:** Optimal Nonequilibrium Entanglement at the nanoscale
Name of the conference: NIM Focus 'Nonequilibrium thermodynamics at the nanoscale'
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Universitaet Augsburg, Germany
Date of event: 2008
End date: 2008
Fernando Galve Conde.
- 32** **Title of the work:** Optimal nonequilibrium entanglement of nanomechanical oscillators
Name of the conference: NIM 'Interactions in Hybrid Nanosystems'
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Frauenwörth, Germany
Date of event: 2008
End date: 2008
F. Galve.



- 33** **Title of the work:** A Planar Penning Trap
Name of the conference: Jahrestagung der Deutschen Physikalischen Gesellschaft (DPG)
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Frankfurt, Germany
Date of event: 2006
End date: 2006
Fernando Galve Conde.
- 34** **Title of the work:** QUELE project: A Planar Penning Trap
Name of the conference: ICAP (Int. Conference on Atomic Physics) Satellite Meeting "Atomic Physics with trapped ions"
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: University of Innsbruck, Austria
Date of event: 2006
End date: 2006
Fernando Galve Conde.
- 35** **Name of the conference:** Jahrestagung der Deutschen Physikalischen Gesellschaft (DPG)
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - others
City of event: Munich, Germany
Date of event: 2004
End date: 2004
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- 36** **Title of the work:** A Planar Penning Trap
Name of the conference: Symposium "Cryptography and Quantum Information"
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: La Thuile, Italy
Date of event: 2004
End date: 2004
F. Galve.
- 37** **Name of the conference:** 304th WE-Heraeus-Seminar 'Elementary Quantum Processors'
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - others
City of event: Bad Honnef, Germany
Date of event: 2003
End date: 2003
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Works submitted to national or international seminars, workshops and/or courses

- 1** **Title of the work:** Hard Tissues MRI
Name of the event: i3M General Weekly Seminar
Corresponding author: Yes
City of event: Valencia, Spain
Date of event: 27/03/2019
Organising entity: i3M, UPV
Fernando Galve.
- 2** **Title of the work:** MASSIF: fast rotational encoding +T2 elimination
Name of the event: Internal seminar i3M
Corresponding author: Yes
City of event: Valencia, Spain
Date of event: 05/03/2019
Organising entity: i3M, MRIlab
Fernando Galve.
- 3** **Title of the work:** Target field method, stream function and algebraic reconstruction techniques
Name of the event: Internal seminar i3M
Corresponding author: Yes
City of event: Valencia, Spain
Date of event: 05/02/2019
Organising entity: i3M, MRIlab
Fernando Galve.
- 4** **Title of the work:** Dissipation of multi-partite systems under structured environments
Name of the event: Invited seminar at the Max Planck for the Science of Light (Invitation by Prof. Genes)
Reasons for participation: Upon invitation
City of event: Erlangen, Germany
Date of event: 03/02/2018
End date: 03/02/2018
- 5** **Title of the work:** Quantum Darwinism and non-Markovian evolution
Name of the event: weekly seminar
Reasons for participation: Speaker
City of event: IFISC Palma de Mallorca, Spain
Date of event: 03/02/2016
End date: 03/02/2016
- 6** **Title of the work:** Programming with Mathematica: Advanced
Name of the event: weekly seminar
Reasons for participation: Speaker
City of event: IFISC (CSIC), Palma de Mallorca, Spain
Date of event: 27/02/2014
End date: 27/02/2014



- 7** **Title of the work:** Programming with Mathematica: Basics
Name of the event: weekly seminar
Reasons for participation: Speaker
City of event: IFISC (CSIC),Palma de Mallorca, Spain
Date of event: 11/02/2014
End date: 11/02/2014
- 8** **Title of the work:** Discarding power of quantum evolutions
Name of the event: weekly seminar
Reasons for participation: Speaker
City of event: IFISC (CSIC),Palma de Mallorca, Spain
Date of event: 2013
End date: 2013
- 9** **Title of the work:** How to entangle two objects at room temperature
Name of the event: weekly seminar
Reasons for participation: Speaker
City of event: IFISC, Palma de Mallorca, Spain
Date of event: 2009
End date: 2009
- 10** **Title of the work:** Entanglement localization and ratchet-like effects in driven spin chains
Name of the event: weekly seminar
Reasons for participation: Speaker
City of event: University of Augsburg, Germany
Date of event: 03/11/2008
End date: 03/11/2008
- 11** **Title of the work:** Optimal entanglement production in engineered quantum systems
Name of the event: weekly seminar
Reasons for participation: Speaker
City of event: UIB, Palma de Mallorca, Spain
Date of event: 2008
End date: 2008
- 12** **Title of the work:** Frequencies and anharmonicities measurements with the QUELE planar trap
Name of the event: QUELE network collaboration meeting
Reasons for participation: Speaker
City of event: University of Innsbruck, Austria
Date of event: 2006
End date: 2006
- 13** **Title of the work:** A planar trap for QUELE
Name of the event: Seminar
Reasons for participation: Speaker
City of event: University of Ulm, Germany
Date of event: 2005
End date: 2005



- 14** **Title of the work:** Topological and non-topological properties of a one dimensional model
Name of the event: Condensed matter weekly seminar
Reasons for participation: Speaker
City of event: University of Mainz, Germany
Date of event: 2004
End date: 2004
- 15** **Title of the work:** Suitability and properties of a dipole field to avoid trapping conditions in the primary spectrometer
Name of the event: KATRIN collaboration meeting
Reasons for participation: Speaker
City of event: University of Karlsruhe, Germany
Date of event: 2002
End date: 2002
- 16** **Title of the work:** Trapping conditions in the KATRIN neutrino experiment mass spectrometer
Name of the event: S.e.a.c.a.v.a Summer programme for physicists
Reasons for participation: Speaker
City of event: University of Mainz, Germany
Date of event: 2001
End date: 2001

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1** **Committee title:** Organizing & scientific committee in CEWQO 2018
Affiliation entity: UE - Unió Europea
Start-End date: 21/05/2018 - 25/05/2018
- 2** **Committee title:** Organizing committee in QuProCS meeting 2017
Affiliation entity: UE - Unió Europea
Start-End date: 06/04/2017 - 07/04/2017
- 3** **Committee title:** Organizing & Scientific committee in ICE-3 (Información Cuántica en España)
Affiliation entity: 3172 - IFISC
Start-End date: 13/04/2016 - 15/04/2016
- 4** **Committee title:** Organizing committee in QTD2 (2nd Quantum Thermodynamics Conference of the COST action1209 'Quantum Thermodynamics')
Affiliation entity: 2453 - COST ACTION
Start date: 19/04/2015



Organization of R&D activities

- 1 Title of the activity:** Organizing committee in CEWQO 2018
Type of activity: Congreso
Start date: 2018
- 2 Title of the activity:** Organizer in QuProCS meeting 2017
Type of activity: Meeting de proyecto europeo con conferenciantes invitados internacionales (<https://quprocs.ifisc.uib-csic.es/>)
Start date: 2017
- 3 Title of the activity:** ICE-3 Quantum Information In Spain
Type of activity: Congreso
Start date: 2016
- 4 Title of the activity:** Organizing committee in QTD2 (2nd Quantum Thermodynamics Conference of the COST action1209 'Quantum Thermodynamics')
Type of activity: Congreso
Start date: 2015
- 5 Title of the activity:** Advanced Programming with Mathematica
Type of activity: Advanced course on a programming language
Start date: 2013
- 6 Title of the activity:** Basics of Programming with Mathematica
Type of activity: Basics course on a programming language
Start date: 2013

R&D management

- 1 Name of the activity:** Evaluation of a 'Swiss National Science Foundation' Research Project
Performed tasks: Evaluation of a 'Swiss National Science Foundation' Research Project
Entity: SNSF
Start date: 2019
- 2 Name of the activity:** Evaluation of a 'Mobilitas Pluss postdoctoral grant' for the Estonian Research Council.
Start date: 2017
- 3 Name of the activity:** Evaluation of a 'Mobilitas Pluss postdoctoral grant' for the Estonian Research Council.
Start date: 2016
- 4 Name of the activity:** Project evaluation for the Estonian Research Council 'Relativistic entanglement from algebraic and geometric perspectives.'
Start date: 2016



Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Leids Universitair Medisch Centrum
City of entity: Leiden, Holland
Start date: 2019
Goals of the stay: Post-doctoral
Provable tasks: Collaboration
Type of entity: R&D Centre
Duration: 2 days
- 2** **Entity:** Max Planck Institute for the Science of Light
City of entity: Erlangen, Germany
Start date: 2018
Goals of the stay: Postdoctoral
Provable tasks: Iniciar nueva colaboración con el grupo del Prof. Claudiu Genes
Duration: 2 days
- 3** **Entity:** Max Planck Institute for Quantum Optics
City of entity: Garching, Germany
Start date: 2018
Goals of the stay: Postdoctoral
Provable tasks: Continuar colaboración con el grupo del Prof. Ignacio Cirac
Duration: 4 days
- 4** **Entity:** Max Planck Institute for Quantum Optics
City of entity: Garching, Germany
Start date: 2017
Goals of the stay: Postdoctoral
Provable tasks: Iniciar nueva colaboración con el grupo del Prof. Ignacio Cirac
Duration: 5 days
- 5** **Entity:** Physikalisches Institut, Universitaet Freiburg (Alemania)
City of entity: Freiburg, Germany
Start date: 2016
Goals of the stay: Postdoctoral
Provable tasks: Establecer nueva colaboración con Prof. A. Buchleitner, perteneciente al proyecto europeo común QuProCS
Duration: 3 days
- 6** **Entity:** Swiss Federal Institute of Technology (ETH) in Zurich
City of entity: Zurich, Switzerland
Start date: 2016
Goals of the stay: Postdoctoral
Provable tasks: Establecer nueva colaboración con el grupo experimental de trampas de iones liderado por Prof. J. Home
Duration: 3 days
- 7** **Entity:** School of Engineering & Physical Sciences; Photonics & Quantum Sciences, Heriot-Watt University, Edinburgh
City of entity: Edimburgo, United Kingdom
Start date: 2014
Goals of the stay: Postdoctoral
Provable tasks: Non-Markovianity hinders Quantum Darwinism
Duration: 5 days



- 8** **Entity:** Instituto de Ciencia de Materiales de Aragón, Departamento de Física de la Materia Condensada, CSIC-Universidad de Zaragoza
City of entity: Zaragoza, Spain
Start date: 2012 **Duration:** 7 days
Goals of the stay: Postdoctoral
Provable tasks: Information sharing in Quantum Complex Networks
- 9** **Entity:** IFISC (CSIC-UIB)
City of entity: Palma de Mallorca, Spain
Start date: 2009 **Duration:** 9 years
Goals of the stay: Postdoctoral
Provable tasks: Entanglement in Complex Systems
- 10** **Entity:** Institut fuer Physik
City of entity: Augsburg, Germany
Start date: 2008 **Duration:** 1 year
Goals of the stay: Postdoctoral
Provable tasks: Entanglement generation and manipulation in driven spin/harmonic chains
- 11** **Entity:** Institut fuer Physik
City of entity: Augsburg, Germany
Start date: 2007 **Duration:** 1 year
Goals of the stay: Postdoctoral
Provable tasks: Entanglement generation in driven harmonic systems and relation to quantum thermodynamics
- 12** **Entity:** Physics Institute (University of Camerino, Italy)
City of entity: Camerino, Italy
Start date: 2006 **Duration:** 16 days
Goals of the stay: Guest
Provable tasks: Bose-Hubbard model ing with an array of planar Penning traps
- 13** **Entity:** Physics Institute (University of Camerino, Italy)
City of entity: Camerino, Italy
Start date: 2005 **Duration:** 7 days
Goals of the stay: Guest
Provable tasks: Array of Planar Penning Traps for NMR type quantum computing
- 14** **Entity:** Institut fuer Physik
City of entity: Mainz, Germany
Start date: 2003 **Duration:** 3 years
Goals of the stay: PhD Student
Provable tasks: A Planar Penning Trap



Summary of other achievements

- 1 Description of the achievement:** 'Profesor Contratado Doctor' certification from the ANECA
- 2 Description of the achievement:** - Building one of the 3 world's first planar ion trap (2005, the first planar trap of Penning type) for quantum information tasks using electrons (within the QUELE project). The other two (Paul type) were presented by Prof. Wineland's group at NIST, Nobel prize winner, and by I. L. Chuang's group at MIT.
- 3 Description of the achievement:** 2016-2017-- 2 lessons in the Master Degree of Physics (Uni. Illes Balears)
2015----- 1 semester teaching Statistical Physics (3rd course, Physics Degree Uni. Illes Balears)
2015----- 1 semester teaching Physics (1st course, Computer Engineering Degree Uni. Illes Balears)
2015 ----- Spanish ANECA certification obtained: 'Profesor Contratado Doctor'
2003-2006-- 2,5 years (400 hours) of laboratory-practices teaching (last-year of Physics degree) in the Johannes Gutenberg University in Mainz (Germany)
__Student supervision__ :
2017 -- PhD thesis of Albert Cabot.
2017 -- Master thesis of Oriol Morgu??.
2017 -- summer undergraduate student Rodrigo Tenorio.
2016 -- Master thesis of Albert Cabot
2016 -- summer undergraduate student Gabriel Torregrosa.
2015 -- summer undergraduate student Gorka Mun?oz
2015 -- summer undergraduate student Albert Cabot.
2014 -- PhD student Johannes Nokkala during his visit to Palma de Mallorca
2014 -- PhD student Antonio Mandarinò during his visit to Palma de Mallorca
2014 -- PhD student Claudia Benedetti during his visit to Palma de Mallorca.
2014 -- PhD student Antonio Alecce during his visit to Palma de Mallorca.
2011-2017 -- predoc+PhD cosupervision of student Gonzalo Manzano.
2009 -- summer Jae-Intro (predoctoral) student Ana Montaner.
2004-2005 -- master student Paula Fern?andez during my PhD in Mainz.
- 4 Description of the achievement:** Heavy Equipment: Superconducting Magnet + Ultrahigh vacuum facility; Responsible; 01/07/2004 -- 31/05/2006
- 5 Description of the achievement:** Outreach/Divulgación:
- Participation in a personal radio interview about quantum physics in IB3 (Palma de Mallorca's local radio) http://ib3tv.com/20110203_138620-el-crepuscle-encen-estels-posa-la-fisica-quantica-a-debat.html
- Outreach article about our work on Quantum Darwinism (doi:10.1038/srep19607), in the Revista de Física (<http://revistadefisica.es>) belonging to Real Sociedad Española de Física (www.rsef.org) <http://revistadefisica.es/index.php/ref/article/download/2177/1749>
- 6 Description of the achievement:** Very eclectic character of my research career in Physics:
- Neutrino physics (simulation of electron trajectories in spectrometer for determination of electronic neutrino squared-mass)
- Statistical mechanics of spatially-chaotic 1D glasses (master thesis)
- Theoretical+experimental work with electromagnetic (Penning) traps (PhD thesis). I designed, studied, implemented and tested a new kind of Penning trap (planar), involving numerical simulations, quantum-mechanical calculations of interaction strengths, electrostatic properties of complex electrode geometries, ultra-high vacuum techniques, high-voltage circuits and simple electronics.
- Quantum thermodynamics of driven continuous variable systems (postdoc in Augsburg).



- Generation and preservation of entanglement in driven spin and oscillator systems (postdoc in Augsburg).
- Quantum information of complex systems, including the introduction of the concept of synchronization to the quantum realm. Studies of decoherence and dissipation for oscillator and spin systems. Quantum probes for ion traps anomalous heating. (postdoc in Palma de Mallorca).
- Quantum dissipation into structured environments, radiative and coherent atom-atom couplings through engineered photonic crystals (postdoc in Palma de Mallorca, collab. with Max Planck, Garching).
- Engineering of decoherence-free, metrologically useful, subspaces in molecules embedded in cold molecular matrices (postdoc in Palma de Mallorca, collab. with Max Planck, Erlangen).

7 Description of the achievement: _____ - h-index=17- total number of citations: 947 (849 without self-citations)- average number of citations per paper ~ 19-The total number of citations in decreasing order:93, 80, 64, 60, 58, 51, etc...most of which are posterior to 2010.- 1 Nature PJ Quantum Information, 4 Phys. Rev. Lett., 4 Sci. Repts., 3 New. J. Phys. and 1 book chapter. _____

8 Description of the achievement: _____

PLAN NACIONAL'S PROJECT GRANTED AS PRINCIPAL INVESTIGATOR:

- Project 'QuStruct' (Quantum information preserving with structured embeddings) under the Plan Nacional 2015 Call (Spain)

Code: FIS2015-66860-P

Duration: 2 years

P.I.: F. Galve

UIB working team: G.L. Giorgi

Fellowships awarded:

a) The QUELE project, funded within the 6th Framework programme of the EU, gave me a Marie Curie fellowship to do my PhD thesis.

b) I obtained a JAE-Doc (CSIC) Fellowship for 3 years in 2011

c) UIB postdoctoral fellowship awarded for the period 2015-2017