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Date of document: 24/06/2019
v 1.4.0
b13f751dbdc05c0e71af8644a7ce2484

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**Current professional situation****Employing entity:** Universidad de Granada (España)**Type of entity:** University**Department:** Facultad de Ciencias**Professional category:** Postdoc Marie Curie Cofund dentro del programa Athenea 3i (grant agreement No. 754446)**Start date:** 01/09/2018**Type of contract:** Temporary employment contract**Dedication regime:** Full time**Previous positions and activities**

	Employing entity	Professional category	Start date
1	University of Nottingham (Reino Unido)	Postdoc Position	20/06/2016
2	Università di Modena e Reggio Emilia	Postdoc Position (FIRB project, grant n. RBFR10N90W)	16/02/2015
3	Università di Modena e Reggio Emilia	Postdoc Position (FIRB project, grant n. RBFR10N90W)	16/02/2014
4	Universidad de Granada	Postdoc position (P07-FQM-02725 project)	01/02/2013
5	Universidad de Granada	PhD Student (P07-FQM-02725 project)	01/06/2008
6	Universidad de Granada	Research Contract (PET2005-0548-00 project)	01/09/2007

1 **Employing entity:** University of Nottingham (Reino Unido)**Professional category:** Postdoc Position**Start-End date:** 20/06/2016 - 15/08/2018**2** **Employing entity:** Università di Modena e Reggio Emilia **Type of entity:** University**Professional category:** Postdoc Position (FIRB project, grant n. RBFR10N90W)**Start-End date:** 16/02/2015 - 19/06/2016**Duration:** 1 year - 4 months - 3 days**3** **Employing entity:** Università di Modena e Reggio Emilia **Type of entity:** University**Professional category:** Postdoc Position (FIRB project, grant n. RBFR10N90W)**Start-End date:** 16/02/2014 - 15/02/2015**Duration:** 1 year



- 4** **Employing entity:** Universidad de Granada **Type of entity:** University
Professional category: Postdoc position (P07-FQM-02725 project)
Start-End date: 01/02/2013 - 31/01/2014 **Duration:** 1 year

- 5** **Employing entity:** Universidad de Granada **Type of entity:** University
Professional category: PhD Student (P07-FQM-02725 project)
Start-End date: 01/06/2008 - 31/05/2012 **Duration:** 4 years

- 6** **Employing entity:** Universidad de Granada **Type of entity:** University
Professional category: Research Contract (PET2005-0548-00 project)
Start-End date: 01/09/2007 - 31/05/2008 **Duration:** 9 months



Education

University education

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

1 University degree: Master

Name of qualification: Máster Universitario en Física y Matemáticas (FisyMat)

Degree awarding entity: Universidad de Granada **Type of entity:** University

Date of qualification: 21/04/2010

2 University degree: Higher degree

Name of qualification: Licenciado en Física

Degree awarding entity: Universidad de Granada **Type of entity:** University

Date of qualification: 01/07/2007

Doctorates

Doctorate programme: Doctor en Programa Oficial de Posgrado en Física y Matemáticas

Degree awarding entity: Universidad de Granada **Type of entity:** University

Date of degree: 21/11/2012

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
German	B1	B1	B1	B1	B1
French	B1	B1	B1	B1	B1
English	C1	C1	C1	C1	C1
Italian	C2	C2	C2	C2	C1

Teaching experience

General teaching experience

1 Name of the course: Física Computacional

University degree: Grado en Física

Start date: 02/2019

End date: 06/2019

Hours/ECTS credits: 57,5

Entity: Universidad de Granada

Faculty, institute or centre: Facultad de Ciencias

End date: 06/2019

Type of hours/ ECTS credits: Hours

Type of entity: University



- 2** **Name of the course:** Física de los Sistemas Complejos
University degree: Grado en Física
Start date: 02/2019
End date: 06/2019
Hours/ECTS credits: 15
Entity: Universidad de Granada
Faculty, institute or centre: Facultad de Ciencias
End date: 06/2019
Type of hours/ ECTS credits: Hours
Type of entity: University
- 3** **Name of the course:** Summer project
University degree: Physics
Start date: 01/07/2017
End date: 31/08/2017
Hours/ECTS credits: 10
Entity: University of Nottingham (United Kingdom)
End date: 31/08/2017
Type of hours/ ECTS credits: Hours
- 4** **Name of the course:** Applied Mathematics
University degree: Engineering Management
Start date: 29/02/2016
End date: 03/06/2016
Hours/ECTS credits: 81
Entity: University of Modena and Reggio Emilia (Italy)
End date: 03/06/2016
Type of hours/ ECTS credits: Hours
- 5** **Name of the course:** Introduction to statistics and methods for the social research
University degree: Communication Sciences
Start date: 21/09/2015
End date: 22/12/2015
Hours/ECTS credits: 84
Entity: University of Modena and Reggio Emilia (Italy)
Faculty, institute or centre: Department of Economy and Communication Sciences
End date: 22/12/2015
Type of hours/ ECTS credits: Hours
Type of entity: University
- 6** **Name of the course:** Física de Materiales
University degree: Licenciado en Física
Start date: 02/2012
End date: 07/2013
Hours/ECTS credits: 15
Entity: Universidad de Granada
Faculty, institute or centre: Facultad de Ciencias
End date: 07/2013
Type of hours/ ECTS credits: Hours
Type of entity: University
- 7** **Name of the course:** Física
University degree: Grado en Bioquímica
Start date: 02/2012
End date: 07/2012
Hours/ECTS credits: 8,5
Entity: Universidad de Granada
Faculty, institute or centre: Facultad de Ciencias
End date: 07/2013
Type of hours/ ECTS credits: Hours
Type of entity: University
- 8** **Name of the course:** Termodinámica
University degree: Grado en Física
Start date: 09/2011
End date: 02/2012
Hours/ECTS credits: 30
End date: 02/2012
Type of hours/ ECTS credits: Hours



Entity: Universidad de Granada
Faculty, institute or centre: Facultad de Ciencias

Type of entity: University

9 Name of the course: Física de Materiales

University degree: Licenciado en Física

Start date: 02/2011

End date: 07/2011

Hours/ECTS credits: 12,5

Entity: Universidad de Granada

Faculty, institute or centre: Facultad de Ciencias

End date: 07/2011

Type of hours/ ECTS credits: Hours

Type of entity: University

Experience supervising doctoral thesis and/or final year projects

1 Project title: Fluctuaciones, leyes de escala y transporte anómalo en sistemas fuera del equilibrio

Type of project: Doctoral thesis

Co-director of thesis: Pablo Hurtado Fernández; Carlos Pérez Espigares

Entity: Universidad de Granada

Student: Ruben Hurtado Gutiérrez

Date of reading: 09/2022

European doctorate: Yes

Type of entity: University

2 Project title: Study of non-equilibrium phenomena

Type of project: Erasmus+

Entity: University of Nottingham

Student: Damian Gil González

Date of reading: 01/09/2018

Date of award: 31/08/2018

Type of entity: University

3 Project title: Large deviations in the stationary dynamics of dissipative Rydberg gases

Type of project: 3rd year summer project

Entity: University of Nottingham

Student: Thomas Yates

Date of reading: 05/09/2017

Date of award: 05/09/2017

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:** Hydrodynamics and fluctuations in open quantum systems (Marie Curie Cofund)
Degree of contribution: Contratado Postdoctoral
Entity where project took place: Universidad de Granada **Type of entity:** University
City of entity: Granada, Andalusia, Spain
Name principal investigator (PI, Co-PI....): Carlos Pérez Espigares
Funding entity or bodies: Comisión Europea **Type of entity:** Comisión Europea
City funding entity: Madrid, Community of Madrid, Spain
Name of the programme: Athenea 3i (Grant Agreement No. 754446)
Code according to the funding entity: 754446
Start-End date: 01/09/2018 - 31/08/2021 **Duration:** 3 years
Total amount: 200.000 €
Dedication regime: Full time
- 2** **Name of the project:** Rydberg Quantum Simulators. H2020-FETPROACT-2014 grant No. 640378 (RYSQ)
Degree of contribution: Contratado Postdoctoral
Entity where project took place: University of Nottingham (Reino Unido)
City of entity: Nottingham, Derbyshire and Nottinghamshire, United Kingdom
Funding entity or bodies: Comisión Europea **Type of entity:** Comisión Europea
City funding entity: Madrid, Community of Madrid, Spain
Start-End date: 20/06/2016 - 15/08/2018
- 3** **Name of the project:** Stochastic Processes and Interacting Particle Systems
Degree of contribution: Researcher
Entity where project took place: Università di Modena e Reggio Emilia (Italia)
City of entity: Modena, Emilia-Romagna, Italy
Funding entity or bodies: MIUR - Ministero Italiano de Universidad e Investigación
Start-End date: 16/02/2014 - 19/06/2016
- 4** **Name of the project:** Duality and fluctuation relations in d-dimensional driven systems
Entity where project took place: University of Modena and Reggio Emilia **Type of entity:** University
City of entity: Modena, Emilia-Romagna, Italy
Name principal investigator (PI, Co-PI....): Carlos Pérez Espigares
Name of the programme: Progetti Giovani GNFM 2015
Start-End date: 27/02/2015 - 01/03/2016



Total amount: 2.000 €

- 5** **Name of the project:** FÍSICA ESTADÍSTICA, TEORÍA Y SIMULACIÓN DE SISTEMAS COMPLEJOS, Y SUS APLICACIONES MULTI-DISCIPLINARIAS (FIS2009-08451)
Degree of contribution: Researcher
Entity where project took place: Universidad de Granada **Type of entity:** University
City of entity: Granada, Andalusia, Spain
Start-End date: 01/01/2010 - 30/06/2014
Total amount: 252.890 €
- 6** **Name of the project:** Fenómenos colectivos en sistemas complejos: teoría y computación (P07-FQM-02725)
Degree of contribution: Contratado Postdoctoral
Entity where project took place: Universidad de Granada **Type of entity:** University
City of entity: Granada, Andalusia, Spain
Funding entity or bodies: Junta de Andalucía **Type of entity:** Consejería de innovación, ciencia y empresa
City funding entity: Sevilla, Andalusia, Spain
Start-End date: 01/02/2012 - 31/01/2013
- 7** **Name of the project:** Fenómenos colectivos en sistemas complejos: teoría y computación (P07-FQM-02725)
Degree of contribution: Contratado Predoctoral
Entity where project took place: Universidad de Granada **Type of entity:** University
City of entity: Granada, Andalusia, Spain
Funding entity or bodies: Junta de Andalucía **Type of entity:** Consejería de innovación, ciencia y empresa
City funding entity: Sevilla, Andalusia, Spain
Start-End date: 01/06/2008 - 31/05/2012
- 8** **Name of the project:** Beatriu de Pinos "Rare Events in Thermodynamics of Information" (rechazado por el candidato en favor de la Marie Curie)
Degree of contribution: Contratado Postdoctoral
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Catalonia, Spain
Name principal investigator (PI, Co-PI...): Carlos Pérez Espigares
Funding entity or bodies: Generalitat de Catalunya **Type of entity:** Organismo Público
City funding entity: Barcelona, Catalonia, Spain
Code according to the funding entity: 2017BP00230
Start date: 10/01/2019 **Duration:** 3 years
Total amount: 92.000 €
Dedication regime: Full time



9 **Name of the project:** Influencia del tratamiento térmico en la capacidad impermeabilizante de las emulsiones de parafina (PET2005-0548-00)

Degree of contribution: Contratado de Investigación

Entity where project took place: Universidad de Granada **Type of entity:** University

City of entity: Granada, Andalusia, Spain

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

Funding entity or bodies:

MINISTERIO DE EDUCACION Y CIENCIA

City funding entity: Spain

Start date: 01/09/2007

Total amount: 103.530 €

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

1 Carlos Perez Espigares; Federico Carollo; Juan Pedro Garrahan; Pablo Hurtado Fernández. Dynamical criticality in open systems: Nonperturbative physics, microscopic origin, and direct observation. PHYSICAL REVIEW E 98, 060102(R) (2018). 98 - 060102(R), pp. 060102-1 - 060102-6. American Physical Society, 10/12/2018. Available on-line at: <<https://doi.org/10.1103/PhysRevE.98.060102>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

2 Carlos Perez Espigares; Igor Lesanovsky; Juan Pedro Garrahan; Ricardo Gutiérrez Díez. Glassy dynamics due to a trajectory phase transition in dissipative Rydberg gases. PHYSICAL REVIEW A 98, 021804(R) (2018). 98 - 021804(R), pp. 021804-1 - 021804-6. American Physical Society, 30/08/2018. Available on-line at: <<https://doi.org/10.1103/PhysRevA.98.021804>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Source of citations: WOS

Citations: 1

3 Federico Carollo; Juan Pedro Garrahan; Igor Lesanovsky; Carlos Perez Espigares. Making rare events typical in Markovian open quantum systems. PHYSICAL REVIEW A 98, 010103(R) (2018). 98 - 010103(R), pp. 010103-1 - 010103-6. American Physical Society, 10/07/2018. Available on-line at: <<https://doi.org/10.1103/PhysRevA.98.010103>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Source of citations: WOS

Citations: 6

4 Federico Carollo; Juan Pedro Garrahan; Igor Lesanovsky; Carlos Perez Espigares. Fluctuating hydrodynamics, current fluctuations, and hyperuniformity in boundary-driven open quantum chains. PHYSICAL REVIEW E 96, 052118 (2017). 96 - 052118, pp. 052118-1 - 052118-12. American Physical Society, 13/11/2017. Available on-line at: <<https://doi.org/10.1103/PhysRevE.96.052118>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

**Source of citations:** WOS**Citations:** 6

- 5** Carlos Perez Espigares; Matteo Marcuzzi; Ricardo Gutierrez; Igor Lesanovsky. Epidemic dynamics in open quantum spin systems. PHYSICAL REVIEW LETTERS 119, 140401 (2017). 119 - 140401, pp. 140401-1 - 140401-6. American Physical Society, 04/10/2017. Available on-line at: <<https://doi.org/10.1103/PhysRevLett.119.140401>>.

Type of production: Scientific paper**Format:** Journal**Corresponding author:** Yes**Source of citations:** WOS**Citations:** 3

- 6** Nicolas Tizon Escamilla; Carlos Perez Espigares; Pedro L. Garrido; Pablo I. Hurtado. Order and Symmetry Breaking in the Fluctuations of Driven Systems. PHYSICAL REVIEW LETTERS 119, 090602 (2017). 119 - 090602, pp. 090602-1 - 090602-6. American Physical Society, 31/08/2017. Available on-line at: <<https://doi.org/10.1103/PhysRevLett.119.090602>>.

Type of production: Scientific paper**Format:** Journal**Corresponding author:** No**Source of citations:** WOS**Citations:** 9

- 7** Carlos Perez Espigares; Pedro L. Garrido; Pablo I. Hurtado. Weak additivity principle for current statistics in d dimensions. PHYSICAL REVIEW E 93, 040103(R) (2016). 93, pp. 040103-1 - 040103-6. American Physical Society, 14/04/2016. Available on-line at: <<https://doi.org/10.1103/PhysRevE.93.040103>>.

Type of production: Scientific paper**Format:** Journal**Corresponding author:** Yes**Source of citations:** WOS**Citations:** 5

- 8** Carlos Pérez-Espigares; Frank Redig; Cristian Giardinà. Spatial fluctuation theorem. Journal of Physics A: Mathematical and Theoretical 48 (2015) 35FT01. 48 - 35FT01, pp. 1 - 9. IOP Publishing, 11/08/2015. Available on-line at: <<http://iopscience.iop.org/article/10.1088/1751-8113/48/35/35FT01/meta>>.

Type of production: Scientific paper**Format:** Journal**Corresponding author:** Yes**Source of citations:** WOS**Citations:** 5

- 9** Pablo I. Hurtado Fernández; Carlos Pérez Espigares; Jesús J. del Pozo Mellado; Pedro L. Garrido Galera. Thermodynamics of Currents in Nonequilibrium Diffusive Systems: Theory and Simulation. Journal of Statistical Physics (2014) 154:214–264. 154 - 1, pp. 214 - 264. Springer, 06/12/2013. Available on-line at: <<http://dx.doi.org/10.1007/s10955-013-0894-6>>. ISSN 1572-9613

Type of production: Scientific paper**Format:** Journal**Source of citations:** WOS**Citations:** 40

- 10** Carlos P. Espigares; Pedro L. Garrido; Pablo I. Hurtado. Dynamical phase transition for current statistics in a simple driven diffusive system. PHYSICAL REVIEW E 87, 032115 (2013). 87 - 032115, pp. 032115 - 032115. American Physical Society, 07/03/2013. Available on-line at: <<http://link.aps.org/doi/10.1103/PhysRevE.87.032115>>.

Type of production: Scientific paper**Format:** Journal**Corresponding author:** Yes**Source of citations:** WOS**Citations:** 33

- 11** Carlos Pérez-Espigares; Alejandro B. Kolton; Jorge Kurchan. Infinite family of second-law-like inequalities. PHYSICAL REVIEW E 85, 031135 (2012). 85 - 031135, pp. 031135 - 031135. American Physical Society, 22/03/2012. Available on-line at: <<http://link.aps.org/doi/10.1103/PhysRevE.85.031135>>.



Type of production: Scientific paper
Corresponding author: Yes
Source of citations: WOS
Format: Journal
Citations: 11

- 12** Pablo I. Hurtado; Carlos Pérez-Espigares; Jesús J. del Pozo; Pedro L. Garrido. Symmetries in fluctuations far from equilibrium. Proc. Natl. Acad. Sci. U.S.A. 108, 7704 (2011). 108 - 19, pp. 7704 - 7709. 10/05/2011. Available on-line at: <<https://doi.org/10.1073/pnas.1013209108>>.
Type of production: Scientific paper
Source of citations: WOS
Format: Journal
Citations: 51

- 13** Carlos Perez Espigares; Jesús Javier del Pozo Mellado; Pedro Luis Garrido Galera; Pablo Ignacio Hurtado Fernández. Large deviations of the current in a two-dimensional diffusive system. NON-EQUILIBRIUM STATISTICAL PHYSICS TODAY - Proceedings of the 11th Granada Seminar on Computational and Statistical Physics. 1332 - 1, pp. 204 - 211. American Institute of Physics, 24/03/2011. Available on-line at: <<https://doi.org/10.1063/1.3569502>>.
Type of production: Scientific paper
Corresponding author: Yes
Source of citations: WOS
Format: Book
Citations: 7

- 14** Carlos Perez Espigares; Pablo Hurtado Fernández. Sampling rare events across dynamical phase transitions. Accepted in the Journal "Chaos" (preprint in arXiv 1902.01276). American Institute of Physics,
Type of production: Scientific paper
Corresponding author: Yes
Format: Journal

Works submitted to national or international conferences

- 1** **Title of the work:** The role of rare events in open quantum systems
Name of the conference: Granada Summer School on Quantum Matter Out of Equilibrium
Type of event: Summer School
Type of participation: Participatory - invited/keynote talk
City of event: Granada, Spain
Date of event: 01/09/2019
End date: 05/09/2019
Organising entity: Centre for the Mathematics and Theoretical Physics of Quantum Non-Equilibrium Systems (CQNE)
City organizing entity: Nottingham, United Kingdom
- 2** **Title of the work:** Fluctuating hydrodynamics and current fluctuations in boundary-driven open quantum chains
Name of the conference: EMERGENT HYDRODYNAMICS IN LOW DIMENSIONAL QUANTUM SYSTEMS
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Natal, Brazil
Date of event: 13/05/2019
End date: 19/05/2019
Organising entity: International Institute of Physics
City organizing entity: Natal, Brazil



- 3** **Title of the work:** Física estadística del no-equilibrio: La importancia de lo improbable
Name of the conference: Conferencia del ic1 Fronteras de la Física
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Granada, Spain
Date of event: 15/02/2019
End date: 15/02/2019
Organising entity: Instituto Carlos I de Física Teórica y Computacional
Type of entity: University Research Institute
City organizing entity: Granada, Spain
- 4** **Title of the work:** Critical phenomena and their microscopic origin in the current fluctuations of driven diffusive systems
Name of the conference: XXII Congreso de Física Estadística FisEs'18
Type of event: Conference
City of event: Madrid, Spain
Date of event: 18/10/2018
End date: 20/10/2018
Organising entity: Universidad Autónoma de Madrid
- 5** **Title of the work:** Symmetry-breaking in the dynamical fluctuations of driven diffusive systems
Name of the conference: Internal Seminars of the Statistical Physics Group
Type of event: Seminar
Type of participation: Participatory - oral communication
City of event: Granada, Spain
Date of event: 11/10/2018
Organising entity: Universidad de Granada
Type of entity: University
- 6** **Title of the work:** Critical phenomena and their microscopic origin in the dynamical fluctuations of driven diffusive systems
Name of the conference: Conference on Non-Equilibrium Systems "CONES 2018"
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Londres, United Kingdom
Date of event: 25/06/2018
End date: 27/06/2018
Organising entity: King's College London
- 7** **Title of the work:** Making rare events typical in Markovian open quantum systems
Name of the conference: Official seminar shared by the Dynamical Systems & Statistical Physics and the Complex Systems & Networks research groups.
Type of event: Seminar
Type of participation: Participatory - oral communication
City of event: Londres, United Kingdom
Date of event: 13/02/2018
Organising entity: School of Mathematical Sciences. Queen Mary University of London
- 8** **Title of the work:** Fluctuating hydrodynamics, current fluctuations and hyperuniformity in boundary-driven open quantum chains
Name of the conference: 9th Nottingham Symposium on Quantum Systems
Type of event: Workshop



Type of participation: Participatory - oral communication
City of event: Nottingham, United Kingdom
Date of event: 27/09/2017
Organising entity: School of Physics and Astronomy. University of Nottingham

- 9** **Title of the work:** Dynamical fluctuations in classical and quantum systems far from equilibrium
Name of the conference: Workshop on Large Deviation Theory in Statistical Physics: Recent Advances and Future
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Bangalore, India
Date of event: 11/09/2017
End date: 20/09/2017
Organising entity: ICTS
- 10** **Title of the work:** Fluctuating hydrodynamics, current fluctuations and hyperuniformity in boundary-driven open quantum chains
Name of the conference: 14th Granada Seminar: Quantum Systems In and Out of Equilibrium: Fundamentals, dynamics and applications
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Granada, Spain
Date of event: 20/06/2017
End date: 23/06/2017
Organising entity: Universidad de Granada **Type of entity:** University
- 11** **Title of the work:** Dynamical fluctuations in classical and quantum non-equilibrium systems
Name of the conference: Seminars of the Mathematics Department
Type of event: Seminar
Type of participation: Participatory - oral communication
City of event: Modena, Italy
Date of event: 29/05/2017
Organising entity: Department of Physics, Informatics and Mathematics
- 12** **Title of the work:** Current fluctuations in classical and quantum systems far from equilibrium
Name of the conference: Statistical Mechanics of Complex, Glassy and Non-Equilibrium Systems
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Londres, United Kingdom
Date of event: 22/05/2017
End date: 23/05/2017
Organising entity: King's College London
- 13** **Title of the work:** Current fluctuations in classical and quantum systems far from equilibrium
Name of the conference: Complexity Forum
Type of event: Seminar
Type of participation: Participatory - oral communication
City of event: Warwick, United Kingdom
Date of event: 22/02/2017
Organising entity: Mathematics Institute



- 14** **Title of the work:** Weak additivity principle for current statistics in d-dimensions
Name of the conference: Seminars of the Mathematics Department
Type of event: Seminar
Type of participation: Participatory - oral communication
City of event: Roma, Italy
Date of event: 20/05/2016
Organising entity: University of La Sapienza
- 15** **Title of the work:** A weak additivity principle for current statistics in d-dimensions
Name of the conference: Workshop on Large Deviations for Interacting Particle Systems and Partial Differential Equations
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Eindhoven, Holland
Date of event: 07/03/2016
End date: 11/03/2016
Organising entity: EURANDOM
- 16** **Title of the work:** The spatial fluctuation theorem
Name of the conference: National meeting of the “National Group of Mathematical Physics” (GNFM - Italy)
Type of event: Workshop
Type of participation: Participatory - invited/keynote talk
City of event: Montecatini Terme, Italy
Date of event: 10/2015
Organising entity: GNFM - Indam
- 17** **Title of the work:** The spatial fluctuation theorem
Name of the conference: Workshop on Fluctuation driven phenomena in non-equilibrium statistical mechanics
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Warwick, United Kingdom
Date of event: 21/09/2015
End date: 25/09/2015
Organising entity: Mathematics Institute
City organizing entity: Warwick, United Kingdom
- 18** **Title of the work:** The spatial fluctuation theorem
Name of the conference: Workshop on Stochastic Processes in Random Media
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Singapur, Singapore
Date of event: 04/05/2015
End date: 15/05/2015
Organising entity: Institute for Mathematical Sciences
- 19** **Title of the work:** The spatial fluctuation theorem
Name of the conference: Interacting Particles Systems and Non-equilibrium Dynamics
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Paris, France



Date of event: 09/03/2015
End date: 13/03/2015
Organising entity: Institut Henri Poincare

- 20** **Title of the work:** Microscopic approach to fluctuation relation beyond one dimension
Name of the conference: Workshop on Large Deviations in Statistical Physics
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Stellenbosch, South African Republic
Date of event: 03/11/2014
End date: 14/11/2014
Organising entity: National Institute for Theoretical Physics (NITheP)
- 21** **Title of the work:** Symmetries in fluctuations far from equilibrium
Name of the conference: XXXIX Scuola estiva di Fisica Matematica
Type of event: Summer School
Type of participation: Participatory - oral communication
City of event: Ravello, Italy
Date of event: 09/2014
Organising entity: GNFM - Indam
- 22** **Title of the work:** Fluctuations out of equilibrium in diffusive systems
Name of the conference: Seminars of the Mathematics Department
Type of event: Seminar
Type of participation: Participatory - oral communication
City of event: Bologna, Italy
Date of event: 09/07/2014
Organising entity: Mathematics Department. University of Bologna
- 23** **Title of the work:** Isometric fluctuation relation in a symmetry broken fluctuating phase
Name of the conference: Imperial Workshop on Large Deviations Theory
Type of event: Workshop
Type of participation: Participatory - oral communication
City of event: Londres, United Kingdom
Date of event: 07/2014
Organising entity: Imperial College
- 24** **Title of the work:** Symmetries in fluctuations far from equilibrium
Name of the conference: Computation of Transition Trajectories and Rare Events in Non-Equilibrium Systems
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Lyon, France
Date of event: 06/2012
Organising entity: Centre Blaise Pascal - ENS
- 25** **Title of the work:** Symmetries in fluctuations far from equilibrium
Name of the conference: Large Fluctuations in Non-Equilibrium Systems.
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Dresden, Germany



Date of event: 04/07/2011
End date: 15/07/2011
Organising entity: Max Planck Institute

26 Title of the work: Additivity of current fluctuations in two dimensions and its breakdown

Name of the conference: XVII Congreso de Física Estadística.

Type of event: Conference

Type of participation: 'Participatory - poster

City of event: Barcelona, Catalonia, Spain

Date of event: 02/06/2011

End date: 04/06/2011

Organising entity: Universitat de Barcelona

Type of entity: University

27 Title of the work: Current fluctuations in a two dimensional model of heat conduction

Name of the conference: 11th Granada Seminar on Computational and Statistical Physics: Foundations of Nonequilibrium Statistical Physics - from basic science to future challenges

Type of event: Conference

Type of participation: 'Participatory - poster

City of event: La Herradura, Spain

Date of event: 13/09/2010

End date: 17/09/2010

Organising entity: Universidad de Granada

Type of entity: University

Type of contribution: Scientific book or monograph

Carlos Pérez-Espigares; Pedro L Garrido; Pablo I Hurtado. "NONEQUILIBRIUM STATISTICAL PHYSICS TODAY: Proceedings of the 11th Granada Seminar on Computational and Statistical Physics". 1332 - 1, pp. 290 - 290. 2011.

28 Title of the work: Large deviations of the current in a two-dimensional diffusive system

Name of the conference: 11th Granada Seminar on Computational and Statistical Physics: Foundations of Nonequilibrium Statistical Physics - from basic science to future challenges

Type of event: Conference

Corresponding author: Yes

City of event: La Herradura, Spain

Date of event: 13/09/2010

End date: 17/09/2010

Organising entity: Universidad de Granada

Type of entity: University

Type of contribution: Scientific book or monograph

C Pérez Espigares; JJ del Pozo; PL Garrido; PI Hurtado; Pedro L Garrido; Joaquín Marro; F de los Santos. "NONEQUILIBRIUM STATISTICAL PHYSICS TODAY: Proceedings of the 11th Granada Seminar on Computational and Statistical Physics". 1332 - 1, pp. 204 - 204. 2011.

29 Title of the work: New insights in a 2-D hard disk system under a temperature gradient

Name of the conference: 11th Granada Seminar on Computational and Statistical Physics: Foundations of Nonequilibrium Statistical Physics - from basic science to future challenges

Type of event: Conference

City of event: La Herradura,

Date of event: 13/09/2010

End date: 17/09/2010

Organising entity: Universidad de Granada

Type of entity: University

Type of contribution: Scientific book or monograph



JJ del Pozo; C Pérez-Espigares; PI Hurtado; PL Garrido. "NONEQUILIBRIUM STATISTICAL PHYSICS TODAY: Proceedings of the 11th Granada Seminar on Computational and Statistical Physics". 1332 - 1, pp. 272 - 272. 2011.

- 30** **Title of the work:** Current fluctuations in a two-dimensional model of heat conduction
Name of the conference: Fundamental Problems in Statistical Physics XII
Type of event: Summer School
Type of participation: 'Participatory - poster
City of event: Leuven, Belgium
Date of event: 31/08/2009
End date: 11/09/2009
Organising entity: Fonds de la Recherche Scientifique (FNRS)
- 31** **Title of the work:** Network effects on game dynamics
Name of the conference: Santa Fe Institute Complex Systems Summer School: "Foundations and Frontiers of Complex Systems"
Type of event: Summer School
Type of participation: 'Participatory - poster
City of event: Bariloche, Argentina
Date of event: 12/2008
Organising entity: Santa Fe Institute

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1** **Committee title:** Referee externo de Tesis doctoral de la doctoranda Elena Magnanini
Affiliation entity: University of Ferrara (Italy)
City affiliation entity: Ferrara, Emilia-Romagna, Italy
Start date: 01/12/2018
- 2** **Committee title:** Co-editor del número especial "Broken Symmetries, Hydrodynamics and Rare Fluctuations" para la revista "Symmetry".
Start date: 01/10/2018
- 3** **Committee title:** Referee para la revista Europhysics Letters
Start date: 28/11/2016
- 4** **Committee title:** Referee para la revista Journal of Physics A: Mathematical and General (Elsevier)
Start date: 19/04/2016
- 5** **Committee title:** Referee para la revista Physica A: Statistical Mechanics and its Applications
Start date: 01/03/2015

R&D management

Name of the activity: Investigador Principal del Proyecto Marie Curie Cofund Athenea3i "HyfOQS" (Grant Agreement No. 754446)

Type of management: Programme management

Performed tasks: Responsable del proyecto y gestión de gastos

Entity: Universidad de Granada

Type of entity: University

Start date: 01/09/2018

Duration: 3 years

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** University of Nottingham (United Kingdom)
City of entity: Nottingham, Derbyshire and Nottinghamshire, United Kingdom
Start-End date: 01/08/2019 - 31/01/2020 **Duration:** 6 months
Goals of the stay: Post-doctoral
- 2** **Entity:** University of Nottingham (United Kingdom)
City of entity: Nottingham, Derbyshire and Nottinghamshire, United Kingdom
Start-End date: 20/06/2016 - 15/08/2018 **Duration:** 2 years - 1 month - 25 days
Goals of the stay: Post-doctoral
- 3** **Entity:** University of Modena and Reggio Emilia (Italy) **Type of entity:** University
Faculty, institute or centre: Department of Physics, Informatics and Mathematics
City of entity: Modena, Italy
Start-End date: 26/03/2015 - 19/06/2016 **Duration:** 1 year - 2 months - 23 days
Goals of the stay: Post-doctoral
- 4** **Entity:** Institut Henri Poincare (France)
City of entity: Paris, France
Start-End date: 25/01/2015 - 25/03/2015 **Duration:** 2 months
Goals of the stay: Post-doctoral
- 5** **Entity:** University of Modena and Reggio Emilia (Italy) **Type of entity:** University
Faculty, institute or centre: Department of Physics, Informatics and Mathematics
City of entity: Modena, Italy
Start-End date: 16/02/2014 - 24/01/2015 **Duration:** 11 months - 8 days
Goals of the stay: Post-doctoral
- 6** **Entity:** Laboratoire de Physique et Mécanique des Milieux Hétérogènes (France)
City of entity: Paris, France
Start-End date: 26/01/2011 - 25/04/2011 **Duration:** 3 months
Goals of the stay: Doctorate



Obtained grants and scholarships

- 1** **Name of the grant:** Marie Curie Cofund fellowship (Athenea 3i programme)
City awarding entity:
Aims: Post-doctoral
Awarding entity: European Commission and University of Granada
Amount of the grant: 200.000 €
Conferral date: 07/2018 **Duration:** 3 years
End date: 31/08/2021
Entity where activity was carried out: Universidad de Granada
- 2** **Name of the grant:** Contrato de investigación postdoctoral
Aims: Post-doctoral
Awarding entity: University of Nottingham
Conferral date: 20/06/2016 **Duration:** 2 years - 2 months - 25 days
End date: 15/08/2018
Entity where activity was carried out: University of Nottingham
Faculty, institute or centre: School of Physics and Astronomy
- 3** **Name of the grant:** Contrato de investigación postdoctoral
Aims: Post-doctoral
Awarding entity: Ministerio Italiano de Investigación y Universidades (MIUR). Proyecto FIRB n. RBF10N90W
Conferral date: 16/02/2015 **Duration:** 1 year - 4 months - 3 days
End date: 19/06/2018
Entity where activity was carried out: University of Modena and Reggio Emilia (Italy)
- 4** **Name of the grant:** Progetti Giovani GNFM 2015
City awarding entity:
Aims: Post-doctoral
Awarding entity: Istituto Nazionale di Alta Matematica (Indam) "Francesco Severi" **Type of entity:** Public Research Body
Amount of the grant: 2.000 €
Conferral date: 27/02/2015
End date: 01/03/2016
Entity where activity was carried out: University of Modena and Reggio Emilia
Faculty, institute or centre: Department of Physics, Informatics and Mathematics
- 5** **Name of the grant:** Contrato de investigación postdoctoral
Aims: Post-doctoral
Awarding entity: Ministerio Italiano de Investigación y Universidades (MIUR). Proyecto FIRB n. RBF10N90W
Conferral date: 16/02/2014 **Duration:** 1 year
End date: 15/02/2015
Entity where activity was carried out: University of Modena and Reggio Emilia (Italy)



- 6** **Name of the grant:** Becas de formación del personal docente e investigador (F.P.D.I.)
Aims: Post-doctoral
Awarding entity: Junta de Andalucía **Type of entity:** Consejería de innovación, ciencia y empresa
Conferral date: 01/02/2013 **Duration:** 1 year
End date: 31/01/2014
Entity where activity was carried out: Universidad de Granada
Faculty, institute or centre: Departamento de electromagnetismo y física de la materia
- 7** **Name of the grant:** Becas de formación del personal docente e investigador (F.P.D.I.)
Aims: Pre-doctoral
Awarding entity: Junta de Andalucía **Type of entity:** Consejería de innovación, ciencia y empresa
Conferral date: 01/06/2008 **Duration:** 4 years
End date: 31/05/2012
Entity where activity was carried out: Universidad de Granada
Faculty, institute or centre: Departamento de electromagnetismo y física de la materia
- 8** **Name of the grant:** Contrato de investigación
Aims: Pre-doctoral
Awarding entity: Universidad de Granada **Type of entity:** University
Conferral date: 01/09/2007 **Duration:** 9 months
End date: 31/05/2008
Entity where activity was carried out: Universidad de Granada
Faculty, institute or centre: Departamento de Física Aplicada
- 9** **Name of the grant:** Beatriu de Pinos fellowship (rechazada por el candidato en favor de la Marie Curie)
City awarding entity:
Aims: Post-doctoral
Awarding entity: Generalitat de Catalunya **Type of entity:** Organismo Público
Amount of the grant: 92.000 €
Conferral date: 01/2019 **Duration:** 2 years
Entity where activity was carried out: Universitat de Barcelona
- 10** **Name of the grant:** Beca de Doctorado de Formación del Profesorado Universitario (FPU) (rechazada por el candidato)
Aims: Pre-doctoral
Awarding entity: MINISTERIO DE EDUCACION Y CIENCIA
Conferral date: 05/07/2008
Entity where activity was carried out: Universidad de Granada
- 11** **Name of the grant:** Beca de Colaboración
Aims: Pre-doctoral
Awarding entity: MINISTERIO DE EDUCACION Y CIENCIA
Conferral date: 01/2007 **Duration:** 1 year
- 12** **Name of the grant:** Beca de Iniciación a la investigación
Aims: Pre-doctoral
Awarding entity: Universidad de Granada **Type of entity:** University
Conferral date: 05/06/2006 **Duration:** 9 months



Scientific societies and professional associations

- 1** **Name of the society:** Gruppo Nazionale per la Fisica Matematica (GNFM)
Affiliation entity: Istituto Nazionale di Alta Matematica (Indam) "Francesco Severi" **Type of entity:** Public Research Body
City affiliation entity: Roma, Italy
Start-End date: 01/2015 - 12/2015
- 2** **Name of the society:** Instituto Carlos I de Física Teórica y Computacional
Affiliation entity: Instituto Carlos I de Física Teórica y Computacional **Type of entity:** University Research Institute
City affiliation entity: Granada, Andalusia, Spain
Start date: 26/06/2019

Prizes, mentions and distinctions

- 1** **Description:** Seal of excellence for the Marie Curie project proposal ReOQS
Awarding entity: European Commission
Conferral date: 24/04/2017
- 2** **Description:** Progetto Giovani 2015
Awarding entity: Istituto Nazionale di Alta Matematica (Indam) "Francesco Severi"
City awarding entity: Roma, Italy
Conferral date: 15/04/2015
- 3** **Description:** Mención de doctor internacional
Awarding entity: Universidad de Granada **Type of entity:** University
City awarding entity: Granada, Spain
Conferral date: 21/11/2012

Obtained accreditations/recognitions

- 1** **Description:** Acreditación italiana como profesor titular
Accrediting entity: Abilitazione Scientifica Nazionale (Fisica Matematica II Fascia)
Date of recognition: 02/05/2019
- 2** **Description:** Acreditación como profesor ayudante doctor
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA) **Type of entity:** State agency
Date of recognition: 03/2014



Summary of other achievements

- 1** **Description of the achievement:** Curso de formación: "Cómo enfrentarse a una entrevista en prensa, radio y TV: Taller de divulgación científica para investigadores de la UGR"
Accrediting entity: Universidad de Granada **Type of entity:** University
Conferral date: 26/11/2018
- 2** **Description of the achievement:** Artículo elegido como "Sugerencia del Editor": Glassy dynamics due to a trajectory phase transition in dissipative Rydberg gases, PHYSICAL REVIEW A 98, 021804(R) (2018)
Accrediting entity: American Physical Society
Conferral date: 30/08/2018
- 3** **Description of the achievement:** Carlos Pérez-Espigares has taken part in the Dissemination Committee of Nottingham section at the project: H2020-FETPROACT-2014 Grant No. 640378 (Rydberg Quantum Simulations - RySQ), 20/06/2016-20/10/2017