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**Gil Jannes — CV**

# **Curriculum Vitae**

(including list of publications)

Name: **Gil Jannes**

Date: **March 24, 2025**

Total number of pages: 19

## PERSONAL DATA

**First Name:** Gil  
**Nationality:** Belgian  
**Gender:** Male  
**Tel.:** +34 674 537 195  
**Private address:** Calle del Enfriadero 21 – 28420 Galapagar (Spain)  
**Marital status:** Living together, two sons

**Family Name:** Jannes  
**Date of birth:** 09/01/1975 in Brussels, Belgium  
**Spanish document (NIE):** X6209588-W  
**E-mail:** gil.jannes@gmail.com, gil.jannes@ucm.es

## CURRENT PROFESSIONAL POSITION

**Rank:** Tenured professor (“Profesor Titular de Universidad”)  
**Centre:** Department of Financial and Actuarial Economics & Statistics  
**Area:** Statistics & Operational Research  
**Institution:** Universidad Complutense de Madrid (Spain)  
**Postal address:** Facultad de Ciencias Económicas y Empresariales, Campus de Somosaguas, 28223 Pozuelo de Alarcón (Madrid, Spain)  
**ORCID code:** 0000-0002-1072-3267

## ACADEMIC BACKGROUND

- **PHD IN THEORETICAL PHYSICS** – *Sobresaliente Cum Laude by unanimity*  
Universidad Complutense de Madrid, July 9th, 2009  
(PhD programme quality-certified by the MEC – Spanish Ministry of Education)  
**Thesis title:** “Emergent Gravity: the BEC paradigm”  
[arXiv:0907.2839 [gr-qc] - ISBN 978-84-692-8447-6].  
**Advisers:** Carlos Barceló (Instituto de Astrofísica de Andalucía, CSIC)  
Luis J. Garay (Universidad Complutense de Madrid)
- **M.SC. IN PHYSICS** – *Magna Cum Laude*  
Katholieke Universiteit Leuven (Belgium), September 16th, 2005  
**Thesis title:** “Acoustic Black Holes in Bose-Einstein Condensates”  
**Advisers:** Luis J. Garay (Universidad Complutense de Madrid)  
Antoine Van Proeyen (Katholieke Universiteit Leuven)  
Title homologated in Spain as “Licenciado en Física”
- **BACHELOR IN PHILOSOPHY** – *Magna Cum Laude*  
Katholieke Universiteit Leuven (Belgium), September 30th, 2004
- **M.SC. IN ELECTRONICAL ENGINEERING** – *Cum Laude*  
Katholieke Universiteit Leuven (Belgium), September 17th, 1999  
**Thesis title:** “Simulation of InGaAs/GaAs Quantum Well Lasers grown on (100) and (111) GaAs substrates”  
**Advisers:** José L. Sánchez de Rojas Aldavero (Universidad Politécnica de Madrid)  
Robert Mertens (IMEC / Kath. Universiteit Leuven)  
Title homologated in Spain as “Ingeniero en Electrónica”

## CONTRACTS AND GRANTS

- TENURED PROFESSOR (PTU)  
**Period:** Feb 2025 –  
Dept. of Financ. and Actuarial Economics & Statistics  
Universidad Complutense de Madrid
- ASSOCIATE PROFESSOR (PCD)  
**Period:** Mar 2022 – Feb 2025  
Dept. of Financ. and Actuarial Economics & Statistics  
Universidad Complutense de Madrid
- ASSISTANT PROFESSOR (PAD)  
**Period:** Nov 2017 – Mar 2022  
Dept. of Financ. and Actuarial Economics & Statistics  
Universidad Complutense de Madrid
- PRIVATE UNIVERSITY PROFESSOR  
**Period:** Oct 2015 – Oct 2017  
Department of Science and Technology  
Universidad Europea de Madrid
- POSTDOCTORAL FELLOW  
**Period:** Sep 2013 – Sep 2015  
Modelling and Numerical Simulation group,  
Universidad Carlos III de Madrid  
**Funding Organism:** Universidad Carlos III de Madrid
- POSTDOCTORAL RESEARCH CONTRACT  
**Period:** Apr 2013 – Sep 2013  
Valencia Nanophotonics Technology Center  
**Funding Organism:** Universidad Politécnica de Valencia
- POSTDOCTORAL RESEARCH CONTRACT  
**Period:** Sep 2010 – Jul 2012  
Low Temperature Laboratory, Aalto University (Finland)  
**Funding Organism:** Spanish Ministry for Science  
and Innovation (Sep 2010 – Apr 2012);  
Aalto University (May - Jul 2012)
- POSTDOCTORAL RESEARCH CONTRACT  
**Period:** April 2010 – Dec 2010  
Université de Nice Sophia Antipolis (France)  
**Funding Organism:** CNRS  
(Centre National de la Recherche Scientifique)
- PHD RESEARCH CONTRACT  
**Period:** Jan 2006 – Dec 2009  
Instituto de Astrofísica de Andalucía, CSIC  
**Funding Organism:** CSIC (“I3P” fellowship)
- POSTGRADUATE RESEARCH GRANT  
**Period:** Jan 2005 – Dec 2005  
Instituto de Estructura de la Materia, CSIC  
**Funding Organism:** CSIC (“I3P” grant)
- ACADEMIC REINTEGRATION GRANT  
**Period:** Jan 2004 – Jun 2004  
Katholieke Universiteit Leuven  
**Funding Organism:** Flemish Ministry of Education

## RESEARCH EVALUATION (Spanish “sexenios”)

- 3 research sexenios (6-year period) certified by Aneca (2005-2010; 2011-2016; 2017-2022)

## ACADEMIC MANAGEMENT

- VICE DEAN for International Relations, Faculty of Economics, UCM: 10/2021 - 04/2022
- ACADEMIC COORDINATOR for the Bachelor’s Degree in Business Administration, Faculty of Economics, UCM: 04/2020 - 10/2021
- DEAN’S DELEGATE: 04/2020 - 10/2021
- MEMBER OF COMMITTEE OF INTERNATIONAL RELATIONS: Erasmus coordinator for outgoing students to Nordic countries, Faculty of Economics, UCM: 04/2018 - 06/2021
- ACADEMIC COORDINATOR for the Bachelor’s Degree in Finances, Banking and Insurances, Faculty of Economics, UCM: 12/2018–06/2020

## **PUBLICATIONS: PHYSICS**

### **• Original research articles in JCR-ranked journals**

- (1) C. Barceló, G. Jannes,  
*The Harmonic Background Paradigm, or why gravity is attractive*,  
Gen. Rel. Grav. **56**, 114 (2024)  
Impact Factor (IF): 2.1 Area: Physics, Multidisciplinary Ranking: 43/110 (Q2)
- (2) C. Barceló, J. Eguia Sánchez, G. García-Moreno & G. Jannes,  
*Chronology protection implementation in analogue gravity*,  
Eur. Phys. J. C **82**:299 (2022).  
DOI:10.1140/epjc/s10052-022-10275-3  
IF 4.4 Physics, Particles and Fields 8/29 (Q2)
- (3) A. Alonso-Serrano & G. Jannes,  
*Conceptual Challenges on the Road to the Multiverse*,  
Universe **5**, 10–212 (2019).  
DOI:10.3390/universe5100212  
IF 2.165 Astronomy & Astrophysics 34/69 (Q2)
- (4) L. C. Barbado, C. Barceló, L. J. Garay & G. Jannes,  
*Hawking versus Unruh effects, or the difficulty of slowly crossing a black hole horizon*,  
JHEP **2016**, 161 (2016).  
DOI:10.1007/JHEP10(2016)161  
IF 6.063 Physics, Particles and Fields 3/29 (Q1 & D1)
- (5) L. C. Barbado, C. Barceló, L. J. Garay & G. Jannes,  
*A tensorial description of particle perception in black-hole physics*,  
Phys. Rev. D **94**, 064004 (2016).  
DOI:10.1103/PhysRevD.94.064004  
IF 4.557 Astronomy & Astrophysics 14/63 (Q1)
- (6) G. Jannes & G. Volovik,  
*Emergent physics on Mach principle and the rotating vacuum*  
JETP Lett. **102**, 73 (2015).  
DOI:10.1134/S0021364015140052  
IF 1.557 Physics, Multidisciplinary 37/78 (Q2)
- (7) G. Jannes,  
*Condensed matter lessons about the origin of time*,  
Found. Phys. **45**, 279 (2015).  
DOI:10.1007/s10701-014-9864-3  
IF 1.144 Physics, Multidisciplinary 40/84 (Q2)
- (8) C. Barceló, R. Carballo-Rubio, L. J. Garay & G. Jannes  
*The lifetime problem of evaporating black holes: Mutiny or resignation*  
Class. & Quant. Grav. **32**, 035012 (2015).  
DOI:10.1088/0264-9381/32/3/035012  
IF 3.168 Physics, Multidisciplinary 11/78 (Q1)
- (9) C. Barceló, R. Carballo-Rubio, L. J. Garay & G. Jannes  
*Electromagnetism as an emergent phenomenon: a step-by-step guide*  
New J. Phys. **16**, 123028 (2014).  
DOI:10.1088/1367-2630/16/12/123028  
IF 3.671 Physics, Multidisciplinary 10/78 (Q1)

- (10) C. García Meca, C. Barceló, S. Carloni, G. Jannes, J. Sánchez Dehesa & A. Martínez, *Transformational acoustic metamaterials based on pressure gradients*, Phys. Rev. B **90**, 024310 (2014).  
DOI:10.1103/PhysRevB.90.024310  
IF 3.736 Physics, Condensed Matter 14/67 (Q1)
- (11) C. García Meca, C. Barceló, S. Carloni, G. Jannes, J. Sánchez Dehesa & A. Martínez, *Analogue transformation acoustics and the compression of spacetime*, Photon. Nanostruct. Fundam. Appl. **12**, 312 (2014).  
DOI:10.1016/j.photonics.2014.05.001  
IF 1.792 Physics, Applied 46/128 (Q2)
- (12) C. García Meca, C. Barceló, S. Carloni, G. Jannes, J. Sánchez Dehesa & A. Martínez, *Spacetime transformation acoustics*, Wave Motion **51**, 785 (2014).  
DOI:10.1016/j.wavemoti.2014.01.008  
IF 1.513 Physics, Multidisciplinary 33/78 (Q2)
- (13) C. García Meca, C. Barceló, S. Carloni, G. Jannes, J. Sánchez Dehesa & A. Martínez, *Analogue Transformations in Physics and their Application to Acoustics*, Nature Sci. Rep. **3**, 2009 (2013).  
DOI:10.1038/srep02009  
IF 5.078 Science, Multidisciplinary 5/55 (Q1 & D1)
- (14) G. Jannes & G. E. Volovik, *The cosmological constant: A lesson from the effective gravity of topological Weyl media*, JETP Lett. **96**, 215 (2012).  
DOI:10.1134/S0021364012160035  
IF 1.557 Physics, Multidisciplinary 37/78 (Q2)
- (15) L. C. Barbado, C. Barceló, L. J. Garay & G. Jannes, *The trans-Planckian problem as a guiding principle*, JHEP **2011**, 112 (2011).  
DOI:10.1007/JHEP11(2011)112  
IF 5.831 Physics, Particles and Fields 3/27 (Q1)
- (16) G. Jannes, *Hawking radiation of  $E < m$  massive particles in the tunneling formalism*, JETP Lett. **94**, 18 (2011).  
DOI:10.1134/S0021364011130091  
IF 1.557 Physics, Multidisciplinary 37/78 (Q2)
- (17) C. Barceló, L.J. Garay & G. Jannes, *Quantum Non-Gravity and Stellar Collapse*, Found. Phys. **41**, 1532 (2011).  
DOI:10.1007/s10701-011-9577-9  
IF 1.144 Physics, Multidisciplinary 40/84 (Q2)
- (18) G. Jannes, P. Maïssa, T. G. Philbin & G. Rousseaux, *Hawking radiation and the boomerang behaviour of massive modes near a horizon*, Phys. Rev. D **83**, 104028 (2011).  
DOI:10.1103/PhysRevD.83.104028  
IF 4.964 Physics, Particles and Fields 5/27 (Q1)
- (19) G. Jannes, R. Piquet, P. Maïssa, C. Mathis & G. Rousseaux, *Experimental demonstration of the supersonic-subsonic bifurcation in the circular jump: A*

- hydrodynamic white hole*,  
 Phys. Rev. E **83**, 056312 (2011).  
 DOI:10.1103/PhysRevE.83.056312  
 IF 2.352 Physics, Mathematical 4/54 (Q1 & D1)
- (20) C. Barceló, L. J. Garay & G. Jannes,  
*Two faces of quantum sound*,  
 Phys. Rev. D **82**, 044042 (2010).  
 DOI:10.1103/PhysRevD.82.044042  
 IF 4.964 Physics, Particles and Fields 5/27 (Q1)
- (21) G. Jannes,  
*Some comments on 'The Mathematical Universe'*,  
 Found. Phys. **39**, 397 (2009).  
 DOI:10.1007/s10701-009-9286-9  
 IF 1.144 Physics, Multidisciplinary 40/84 (Q2)
- (22) C. Barceló, L. J. Garay & G. Jannes,  
*Sensitivity of Hawking radiation to superluminal dispersion relations*,  
 Phys. Rev. D **79**, 024016 (2009).  
 DOI:10.1103/PhysRevD.79.024016  
 IF 4.964 Physics, Particles and Fields 5/27 (Q1)
- (23) C. Barceló & G. Jannes,  
*A real Lorentz-FitzGerald contraction*,  
 Found. Phys. **38**, 191 (2008).  
 DOI:10.1007/s10701-007-9196-7  
 IF 1.144 Physics, Multidisciplinary 40/84 (Q2)
- (24) C. Barceló, A. Cano, L. J. Garay & G. Jannes,  
*Quasi-normal mode analysis in BEC acoustic black holes*,  
 Phys. Rev. D **75**, 084024 (2007).  
 DOI:10.1103/PhysRevD.75.084024  
 IF 4.964 Physics, Particles and Fields 5/27 (Q1)
- (25) C. Barceló, A. Cano, L. J. Garay & G. Jannes,  
*Stability analysis of sonic horizons in Bose–Einstein condensates*,  
 Phys. Rev. D **74**, 024008 (2006).  
 DOI:10.1103/PhysRevD.74.024008  
 IF 4.964 Physics, Particles and Fields 5/27 (Q1)

• **Book contributions: original research**

- (1) G. Jannes & G. Rousseaux,  
 “The circular jump as a hydrodynamic white hole.”  
 In: V. Cardoso et al. (eds.), *Analogue spacetimes: The first thirty years*, Livraria da Física Editora, São Paulo, Brazil, ISBN: 978-85-7861-231-3 (2013).
- (2) J. Chaline, G. Jannes, P. Maïssa & G. Rousseaux,  
 “Some aspects of dispersive horizons: lessons from surface waves”  
 In: D. Faccio et al. (eds.), *Analogue Gravity Phenomenology*, Springer, ISBN: 978-3-319-00265-1 (2013).
- (3) G. Jannes,  
 “On the condensed matter scheme for emergent gravity and interferometry.”  
 In: D. Halsey & W. Raynor (eds.), *Handbook of Interferometers; Research, Technology*

and Applications, Nova Science, ISBN 978-1-60741-050-8 (2009).

- **Conference Proceedings**

*Indexed in SCImago (SJR):*

- (1) C. Barceló, R. Carballo-Rubio, L. J. Garay & G. Jannes,  
*Do transient white holes have a place in Nature?*,  
J. Phys. Conf. Ser. **600**, 012033 (2015).  
SJRI 0.252, Area: Physics and Astronomy (misc.), 188/280 (Q3)
- (2) C. Barceló, L. C. Barbado, L. J. Garay & G. Jannes,  
*Avoiding the trans-Planckian problem in black hole physics*,  
Springer Proc. Math. & Stat. **60**, 129 (2014).  
SJRI 0.17, Area: Mathematics (misc.), 339/418 (Q4)
- (3) G. Jannes, T. G. Philbin & G. Rousseaux,  
*Hawking tunneling and boomerang behaviour of massive particles with  $E < m$* ,  
AIP Conf. Proc. **1458**, 435 (2012).  
SJRI 0.161, Area: Physics and Astronomy (misc.), 212/275 (Q4)
- (4) G. Jannes, R. Piquet, J. Chaline, P. Maïssa, C. Mathis & G. Rousseaux,  
*Horizon effects for surface waves in wave channels and circular jumps*,  
J. Phys. Conf. Ser. **314**, 012031 (2011).  
SJRI 0.293, Area: Physics and Astronomy (misc.), 151/275 (Q3)
- (5) C. Barceló, L. J. Garay & G. Jannes,  
*The two faces of sound in BECs*,  
AIP Conf. Proc. **1318**, 136 (2010).  
SJRI 0.166, Area: Physics and Astronomy (misc.), 198/270 (Q3)
- (6) G. Jannes, C. Barceló & L. J. Garay,  
*How sensitive is Hawking radiation to superluminal dispersion relations?*,  
AIP Conf. Proc. **1122**, 304 (2009).  
SJRI 0.163, Area: Physics and Astronomy (misc.), 185/266 (Q3)
- (7) G. Jannes, C. Barceló, A. Cano & L. J. Garay,  
*QNM spectrum in (1+1)-dimensional BEC black holes*,  
PoS Qg-Ph: 021 (2007).  
SJRI 0.101, Area: Multidisciplinary, 85/101 (Q4)
- (8) C. Barceló, A. Cano, G. Jannes & L. J. Garay,  
*Probing effects of modified dispersion relations with Bose-Einstein condensates*,  
PoS Qg-Ph: 007 (2007).  
SJRI 0.101, Area: Multidisciplinary, 85/101 (Q4)

*Others:*

- (9) L. J. Garay, C. Barceló, R. Carballo-Rubio, & G. Jannes,  
*Do stars die too long?*,  
WSPC Proceedings of the 14th Marcel Grossmann meeting, 1718 (2015).
- (10) C. García Meca, S. Carloni, C. Barceló, G. Jannes, J. Sánchez Dehesa & A. Martínez,  
*Analogue transformation acoustics: Generalizing transformation techniques to non-form-invariant equations*,  
IEEE Conf. Proc., 7th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (METAMATERIALS) pp. 235–237 (2013).

- **Technical reports**

- (1) C. García Meca, C. Barceló, S. Carloni, G. Jannes, J. Sánchez Dehesa & A. Martínez, *Analogue Transformation Acoustics, An alternative theoretical framework for acoustic meta-materials*.  
Final report for ESA project Ariadna 11-1301b ([link](#))
- (2) C. García Meca, C. Barceló, S. Carloni, G. Jannes, J. Sánchez Dehesa & A. Martínez, *Time transformations, anisotropy and analogue transformation elasticity*.  
Final report for ESA project Ariadna 11-1301bCCN ([link](#))

## **PUBLICATIONS: APPLIED STATISTICS & ECONOMETRICS**

### • **Original research articles in JCR-ranked journals**

- (1) M.A. Lorain, J.Barreal, G. Jannes, E. Urquia-Grande, P. López-Sánchez & J. Sierra, *Unraveling financial exclusion during the COVID-19 pandemic: A gender perspective in Latin American countries*  
World Development 188, 106924 (2025).  
DOI:10.1016/j.worlddev.2025.106924  
IF 5.4 Area: Economics Ranking: 45/600 (Q1 & D1)
- (2) G. Jannes & J. Barreal, *Attraction opportunities for enotourism among international travellers to Spanish wine PDO regions*  
GeoJournal 89, 2 (2024).  
DOI:10.1007/s10708-024-11055-0  
IF 2.0 Area: Geography Ranking: 54/171 (Q2)
- (3) J. Barreal & G. Jannes, *Spatial Dependencies and Neighbour Interactions of Wildfire Patterns in Galician Mountain Areas (NW Spain)*  
Fire 2021, 6, 165 (2023).  
DOI:10.3390/fire6040165  
IF 3.0 Area: Forestry Ranking: 11/89 (Q1)
- (4) L.I. Saldivia-Gonzatti, G. Jannes & J. Barreal, *Factors influencing the rate of sorted solid waste collection: An empirical analysis toward local management in Catalonia (NE Spain),*  
Cities 131, 104038 (2022).  
DOI:10.1016/j.cities.2022.104038  
IF 6.7 Area: Urban Studies Ranking: 3/43 (Q1 & D1)
- (5) J. Barreal, B. Ferrer-Rosell, E. Cristobal-Fransi & G. Jannes, *Influence of Service Valuation and Package Cost on Market Segmentation: The Case of Online Demand for Spanish and Andorra Ski Resorts,*  
Sustainability 13(5), 2938 (2021).  
DOI:10.3390/su13052938  
IF 3.889 Area: Environmental Studies Ranking: 57/128 (Q2)
- (6) J. Barreal & G. Jannes, *Spatial and Temporal Wildfire Decomposition as a Tool for Assessment and Planning of an Efficient Forest Policy in Galicia (Spain),*  
Forests 11(8), 811 (2020).  
DOI:10.3390/f11080811  
IF 2.634 Area: Forestry Ranking: 13/67 (Q1)

- **Book contributions: original research**

- (1) J. Barreal & G. Jannes,  
 “Comparison of International Tourist Profiles in the Spanish Wine and Olive Oil PDOs.”  
 In: N. Boukas & D. Stylidis (eds.), *Tourism Marketing in Western Europe*, CAB International, ISBN: 978-178924875-3 (2021).

- **Conference Proceedings**

- (1) J. Barreal & G. Jannes,  
*Análisis cualitativo de la relación entre política agro-forestal y los grupos de interés en España como herramienta de control de los incendios*,  
 8º Congreso Forestal Español, Sociedad Española de Ciencias Forestales, 8CFE 234 (2022).  
 ISBN 978-84-941695-6-4
- (2) G. Jannes & J. Barreal,  
*Análisis de la desigualdad entre la distribución de causas y su ocurrencia mensual en los incendios forestales por negligencia en España*,  
 8º Congreso Forestal Español, Sociedad Española de Ciencias Forestales, 8CFE 233 (2022).  
 ISBN 978-84-941695-6-4
- (3) J. Barreal & G. Jannes,  
*Análisis clúster del gasto del turista internacional en las denominaciones de origen de aceite de oliva en España*,  
 Expoliva XIXth Scientific-Technical Symposium, ECO-12 (2019).  
 ISBN 978-84-946839-2-3
- (4) G. Jannes & J. Barreal,  
*Análisis temporal del gasto del turista internacional en la DOP “Sierra de Cádiz”*,  
 Expoliva XIXth Scientific-Technical Symposium, ECO-08 (2019).  
 ISBN 978-84-946839-2-3

**BIBLIOMETRIC DATA (as of 24/03/2025)**

Source	Total citations	h-index	i10-index
Google scholar	960	18	29
Scopus	543	12	

Most cited article:

C. Barceló, R. Carballo-Rubio, L. J. Garay & G. Jannes, *The lifetime problem of evaporating black holes: Mutiny or resignation*, CQG (2015):  
 129/87 citations (Google Scholar/Scopus)

**PRESENTATIONS IN SEMINARS AND CONGRESSES**

- **Congresses**

- (1) “Underdetermination towards the Planck scale”  
**Invited talk**, II<sup>nd</sup> “JUGAR” workshop on Quantum Gravity, QFT in curved backgrounds, Gravitational Waves and Cosmology, Instituto de Estructura de la Materia (IEM–CSIC), *Madrid (Spain)*, 03–05/12/24.
- (2) “Underdetermination towards the Planck scale”

- Plenary talk**, III<sup>rd</sup> workshop on Quantum Field Theory in Curved Spacetimes, *Lisbon (Portugal)*, 18/06–21/06/24.
- (3) “Does underdetermination pose a challenge for quantum gravity?”  
Oral contribution, Spanish-Portuguese Relativity Meeting (EREP2023), *Bilbao (Spain)*, 17/07–21/07/23.
  - (4) “Rotating fluid analogue of Gödel Universe”  
Oral contribution, Spanish-Portuguese Relativity Meeting (EREP2022), *Salamanca (Spain)*, 29/08–02/09/22.
  - (5) “Cluster Analysis of International Tourism Demand in Spanish wine Protected Denominations of Origin (PDO) Areas”  
Oral contribution, 9th International Conference on Tourism (ICOT 2019). *Braga (Portugal)*, June 2019
  - (6) “Panel Data Analysis of International Tourist Expenditure Flows in Key Destination Countries through Macroeconomic Magnitudes.”  
Oral contribution, 9th International Conference on Tourism (ICOT 2019). *Braga (Portugal)*, June 2019
  - (7) “Socioeconomic and environmental factor analysis of international tourism expenditure in Spain”  
Oral contribution, XXth Congress AECIT (Spanish Association of Scientific Experts in Tourism), *Roquetas del Mar (Spain)*, 21-23/11/2018
  - (8) “Autoregressive and volatility analysis of the international tourist expenditure in Spain”  
Oral contribution, XXth Congress AECIT (Spanish Association of Scientific Experts in Tourism), *Roquetas del Mar (Spain)*, 21-23/11/2018
  - (9) “Mach’s principle in Emergent Gravity”  
Oral contribution, Spanish-Portuguese Relativity Meeting (EREP2018), *Palencia (Spain)*, 02–06/09/18.
  - (10) “A robustness condition for ultra-compact alternatives to black holes”  
Oral Contribution, 10th Jerte Advanced Relativity Meeting, *Navaconcejo (Spain)*, 12–15/04/18.
  - (11) “Perception tensor and Hawking versus Unruh effect near a black hole”  
Oral contribution, Spanish-Portuguese Relativity Meeting (EREP2017), *Málaga (Spain)*, 12–15/09/17.
  - (12) “Friedmann equations: Relativistic versus Newtonian derivation”  
Oral Contribution, 8th Jerte Advanced Relativity Meeting, *Navaconcejo (Spain)*, 23–26/05/16.
  - (13) “Towards Analogue Transformation Elasticity”  
**Invited speaker**, ESA (European Space Agency) workshop on Analogue Transformation Acoustics, *Noordwijk (Netherlands)*, 24/09/2014.
  - (14) “Cosmological constant: lessons from condensed matter?”  
Oral contribution, VIIIth Iberian Cosmology Meeting, *Granada (Spain)*, 24–26/04/13.
  - (15) “From analogue gravity to acoustic cloaking”  
Oral contribution, 5th Jerte Advanced Relativity Meeting, *Navaconcejo (Spain)*, 21–24/03/13.
  - (16) “Hydrodynamic black/white hole analogues and the trans-Planckian problem”  
**Invited speaker**, ICTP Workshop on Effective Gravity in Fluids and Superfluids, *Trieste (Italy)*, 9–13/07/12.

- (17) "Hydrodynamic black hole analogues and the trans-Planckian problem"  
**Invited speaker**, Microkelvin workshop, *Smolenice (Slovakia)*, 19–23/03/12.
- (18) "Hawking tunneling and boomerang behaviour of massive particles with  $E < m$ "  
Oral contribution + proceeding, Spanish Relativity Meeting (ERE2011), *Madrid (Spain)*, 29/08–02/09/11.
- (19) "Horizon effects for surface waves in wave channels and circular jumps"  
Oral contribution + proceeding, Spanish Relativity Meeting (ERE2010), *Granada (Spain)*, 6–10/09/10.
- (20) "The two faces of quantum sound"  
**Invited speaker**, 2<sup>nd</sup> Nice Colloquium on Analogue Gravity, Laboratoire Dieudonné, *Nice University (France)*, 17–18/06/10.
- (21) "How sensitive is Hawking radiation to superluminal dispersion relations?"  
Oral contribution + proceeding, Spanish Relativity Meeting (ERE2008), *Salamanca (Spain)*, 15–19/09/08.
- (22) "Relativity for Newtonian Minds"  
Oral contribution, 18th International Conference on General Relativity and Gravitation (GRG18), *Sydney (Australia)*, 8–13/07/07.
- (23) "QNM spectrum in (1+1)-dimensional BEC black holes"  
Oral contribution + proceeding, Congress "From Quantum to Emergent Gravity: Theory and Phenomenology", SISSA, *Trieste (Italy)*, 11–15/06/2007.
- (24) "Stability of acoustic black holes in Bose-Einstein condensates"  
Oral contribution, 2nd workshop "Aspects of Quantum Gravity", Universidade da Beira Interior, *Covilhã (Portugal)*, 23–24/09/05.

- **Seminars (selection)**

- (1) "Stellar evolution, black holes, and their relation to statistics"  
Instituto de Matemática Interdisciplinar (IMI) & Departamento de Economía Financiera y Actuarial y Estadística, Universidad Complutense, *Madrid (Spain)*, 14/03/2018.
- (2) "The cosmological constant problem: a lesson from Helium-3"  
De Madrid al Cosmos Seminar Cycle, Universidad Complutense, *Madrid (Spain)*, 03/06/2014.
- (3) "From Analogue Gravity to Acoustic Cloaking"  
Fluid Dynamics Seminars, Institut Pprime, *Poitiers (France)*, 14/01/14.
- (4) "From Analogue Gravity to Elastic Cloaking"  
Modelling & Numerical Simulation seminars, Universidad Carlos III de Madrid, *Madrid (Spain)*, 08/10/13.
- (5) "Horizon effects for surface waves: the wave channel and the circular jump"  
Theoretical Physics Seminars, Instituto de Estructura de la Materia – CSIC, *Madrid (Spain)*, 02/11/10.
- (6) "Horizon effects for surface waves"  
Low Temperature Seminar, Low Temperature Laboratory – Aalto University, *Helsinki (Finland)*, 27/10/10.
- (7) "Analogue gravity in Bose-Einstein condensates"  
Dynamical Systems Seminars, Laboratoire Dieudonné, *Nice University (France)*, 21/05/10.
- (8) "Sensitivity of Hawking radiation to superluminal dispersion relations"  
General Physics seminar, University of Canterbury, *Christchurch (New Zealand)*, 20/03/09.
- (9) "Sensitivity of Hawking radiation to superluminal dispersion relations"

- Mathematics and Physics seminars, Victoria University, *Wellington (New Zealand)*, 12/03/09.
- (10) “Quasinormal Modes in BEC Acoustic Black Holes”  
Mathematics and Physics seminars, Victoria University, *Wellington (New Zealand)*, 05/03/09.
- (11) “Sensitivity of Hawking radiation to superluminal dispersion relations”  
Relativity and Cosmology Seminars, Instituto de Física Fundamental – CSIC, *Madrid (Spain)*, 07/11/08.
- (12) “Black holes in Bose–Einstein condensates”  
Gravity Conferences, Instituto de Estructura de la Materia - CSIC, *Madrid (Spain)*, 26/04/07.
- (13) “The Brout-Englert-Higgs mechanism”  
Theoretical Physics Seminars, Instituto de Estructura de la Materia - CSIC, *Madrid (Spain)*, 19/02/07.
- (14) “The Brout-Englert-Higgs mechanism”  
Colloquia on Gravitation and Cosmology, Instituto de Astrofísica de Andalucía - CSIC, *Granada (Spain)*, 26/01/07.

## PARTICIPATION IN SELECTED RESEARCH PROJECTS

### A. International Projects

1. TIME TRANSFORMATIONS, ANISOTROPY AND ANALOGUE TRANSFORMATION ELASTICITY (Ariadna project 11-1301b - Ref. CCN-4000104572/12/NL/KML)  
**Period:** 01/04/2013 – 31/03/2014 (12 months)  
**Funding Entity:** European Space Agency (ESA)  
**Amount funded:** 35 000€  
**Centre:** Nanophotonics Technology Center (Polytechnic University of Valencia)  
**Figure:** Participating researcher  
**Scientist in charge:** Prof. Alejandro Martínez (UPV)
2. ANALOGUE TRANSFORMATIONAL ACOUSTIC: AN ALTERNATIVE THEORETICAL FRAMEWORK FOR ACOUSTIC METAMATERIALS (Ariadna project 11-1301b - Ref. 4000104572/11/NL/KML)  
**Period:** 15/11/2011 – 15/07/2012 (8 months)  
**Funding Entity:** European Space Agency (ESA)  
**Amount funded:** 16 200€  
**Centre:** Aalto University (subcontracted by Polytechnic University of Valencia)  
**Figure:** Participating researcher  
**Scientist in charge:** Prof. Alejandro Martínez (UPV)
3. MICROKELVIN (FP7/2007-2013 grant 228464)  
**Period:** 01/04/2009 – 30/09/2013 (4 years & 6 months)  
**Funding Entity:** European Union (FP7 Framework Programme)  
**Amount funded:** 4.2M€  
**Centre:** Aalto University (Finland) + 10 other European Universities  
**Figure:** Participating researcher  
**Overall coordinator:** Prof.em. Matti Krusius (Aalto Univ.)

### B. National Projects (Spain) – (co-)PI marked with (\*)

- 4.(\*)QUANTUM FABRIC OF THE GRAVITATIONAL UNIVERSE: EMERGENT AND SEMICLASSICAL GRAVITY (PID2023-149018NB-C43)  
**Duration:** 4 years (as of 01/09/2024)  
**Funding Entity:** Spanish Ministry for Science and Innovation (MICINN)  
**Amount funded:** 46 750€  
**Centre:** Instituto de Astrofísica de Andalucía (CSIC)  
**(\*)Figure:** co-PI (with Carlos Barceló Serón, IAA-CSIC)
5. QUANTUM GRAVITATIONAL UNIVERSE: FIELDS, LOOPS AND WEYL GRAVITY (PID2020-118159GB-C44)  
**Duration:** 3 years (as of 01/09/2021)  
**Funding Entity:** Spanish Ministry for Science and Innovation (MICINN)  
**Amount funded:** 42 350€  
**Centre:** Universidad Complutense de Madrid  
**Figure:** Participating researcher
- 6.(\*)QUANTUM UNIVERSE & QUANTUM VACUUM: EMERGENT GRAVITY, BLACK HOLES AND QUANTUM FRICTION (FIS2017-86497-C2-1-P)  
**Period:** 01/01/2018 – 30/09/2021 (3 years & 9 months)  
**Funding Entity:** Spanish Ministry for Science and Innovation (MICINN)  
**Amount funded:** 20 000€  
**Centre:** Instituto de Astrofísica de Andalucía, CSIC  
**(\*)Figure:** co-PI (with C. Barceló Serón – IAA, CSIC)
7. GRAVITY AND THE QUANTUM UNIVERSE: EMERGENCE, GRAVITATIONAL COLLAPSE AND TRANSFORMATION PHYSICS (FIS2014-54800-C2-1)  
**Period:** 01/01/2015 – 31/12/2017 (3 years)  
**Funding Entity:** Spanish Ministry for Science and Innovation (MICINN)  
**Amount funded:** 12 000€  
**Centre:** Instituto de Astrofísica de Andalucía, CSIC  
**Figure:** Participating researcher  
**Scientist in charge:** Dr. Carlos Barceló Serón (IAA, CSIC)
8. ANALOGUE GRAVITY AND BLACK HOLE PHYSICS (FIS2011-30145-C03-01)  
**Period:** 01/01/2012 – 31/12/2014 (3 years)  
**Funding Entity:** Spanish Ministry for Science and Innovation (MICINN)  
**Amount funded:** 50 000€  
**Centre:** Instituto de Astrofísica de Andalucía, CSIC  
**Figure:** Participating researcher  
**Scientist in charge:** Dr. Carlos Barceló Serón (IAA, CSIC)
9. SYMMETRY, NUMERICAL METHODS AND ANALOGUE MODELS IN CLASSICAL AND QUANTUM GRAVITY (FIS2008-06078-C03-01)  
**Period:** 01/01/2009 – 31/12/2011 (3 years)  
**Funding Entity:** Spanish Ministry for Science and Innovation (MICINN)  
**Amount funded:** 98 000€  
**Centre:** Instituto de Astrofísica de Andalucía, CSIC  
**Figure:** Participating researcher  
**Scientist in charge:** Dr. Carlos Barceló Serón (IAA, CSIC)
10. GRAVITATION: ANALOGUE MODELS, NUMERICAL METHODS AND UNIFICATION WITH OTHER INTERACTIONS (FQM 2288)

- Period:** 01/03/2007 – 01/03/2010 (3 years)  
**Funding Entity:** Andalusian Regional Council  
**Amount funded:** 73,900€  
**Centre:** Instituto de Astrofísica de Andalucía, CSIC  
**Figure:** Participating researcher  
**Scientist in charge:** Dr. Carlos Barceló Serón (IAA, CSIC)
11. NON-PERTURBATIVE GRAVITY AND BLACK HOLES: SYMMETRIES, NUMERICAL METHODS AND CONDENSED MATTER ANALOGIES (FIS2005-05736-C03-02)  
**Period:** 31/12/2005 – 31/12/2008 (3 years)  
**Funding Entity:** Spanish Ministry of Education and Science (MEC)  
**Amount funded:** 60 000€  
**Centre:** Instituto de Astrofísica de Andalucía, CSIC  
**Figure:** Participating researcher  
**Scientist in charge:** Dr. Guillermo Mena Marugán (IEM, CSIC)
12. CONSTRUCTION OF QUANTUM GRAVITY THEORIES FROM ANALOGUE MODELS (FIS2006-26387-E)  
**Period:** 01/07/2007 – 29/09/2008 (1 year & 3 months)  
**Funding Entity:** Spanish Ministry of Education and Science (MEC)  
**Amount funded:** 19 600€  
**Centre:** Instituto de Astrofísica de Andalucía, CSIC  
**Figure:** Participating researcher  
**Scientist in charge:** Prof. Luis J. Garay Elizondo (Univ. Complutense de Madrid)
13. BLACK HOLES AND GRAVITATIONAL WAVES: QUANTUM AND SEMICLASSICAL ASPECTS (BFM2002-04031-C02-02)  
**Period:** 01/10/2002 – 30/09/2005 (3 years)  
**Funding Entity:** Spanish Ministry of Education and Science (MEC)  
**Amount funded:** 25 000€  
**Centre:** Instituto de Estructura de la Materia, CSIC  
**Figure:** Participating researcher  
**Scientist in charge:** Dr. Jesús Fernando Barbero González (IEM, CSIC)

## RESEARCH SUPERVISION

- MASTER'S THESIS, SUPERVISOR  
**Programme:** Master in Astronomy and Astrophysics  
**Centre:** International University of Valencia  
**Student:** Jokin Eguia Sánchez      **Period:** 01–07/2021  
**Title:** Study of the properties of Gödel's universe in condensed matter analogues  
**Grade:** 7.0/10  
**Output:** Results published in Eur. Phys. J. C
- MASTER'S THESIS, SUPERVISOR  
**Programme:** Master in Astronomy and Astrophysics  
**Centre:** International University of Valencia  
**Student:** Cristian Ariza Beltrán      **Period:** 06–12/2017  
**Title:** A robustness condition for ultra-compact alternatives to black holes  
**Grade:** 8.0/10
- MASTER'S THESIS, SUPERVISOR

**Programme:** Master in Astronomy and Astrophysics

**Centre:** International University of Valencia

**Student:** Claudio Patricio Rogel Cárdenas      **Period:** 01–12/2017

**Title:** Lorentz Invariance Violations based on simulations of the observation of GRB neutrinos

**Grade:** 8.0/10

- MASTER'S THESIS, SUPERVISOR

**Programme:** Master in Astronomy and Astrophysics

**Centre:** International University of Valencia

**Student:** Julio Hidalgo      **Period:** 06–12/2015

**Title:** Pre-relativistic limits of the Friedmann equations

**Grade:** 8.5/10

- MASTER INTERNSHIP, 1ST YEAR, CO-SUPERVISOR

**Programme:** Fluid Mechanics Engineering

**Centre:** Université Pierre et Marie Curie Paris VI & Université de Nice Sophia Antipolis

**Student:** Romain Piquet      **Period:** 05–07/2010

**Title:** The circular jump: application to black-hole physics

**Output:** Results published in Phys. Rev. E

#### TEACHING (updated until 2023/24)

##### Université de Nice Sophia Antipolis (2010)

- **Degree:** PhD in Theoretical Physics
- **Course:** Quantum Field Theory: from Minkowski spacetime to analogue Hawking radiation → (10 hours, French)

##### Universidad Carlos III de Madrid (2013-2015)

- **Degrees:**
  - Bachelor's Degree in Telecommunications Engineering
  - Bachelor's Degree in Computer Science Engineering
- **Courses:**
  - Applied Numerical Methods → (85h, Spanish)
  - Calculus → (140h, Spanish)
  - Discrete Mathematics → (100h, English)
- **Total:** 325h (225h Spanish, 100h English)

##### Universidad Europea de Madrid (2015-2017)

- **Degrees:**
  - Bachelor's Degree in Computer Science; Industrial Technologies Engineering; Biomedical Engineering; Aerospace Engineering (and related)
  - Bachelor's Degree in Business Administration and Entrepreneurship (and related)
  - Bachelor's Degree in Architecture
- **Courses:**
  - Mathematical Analysis → (57h, Spanish)
  - Algebra (and Discrete Mathematics) → (135h, Spanish)
  - Statistics (and Optimization) for Engineers → (139h, Spanish; 132h, English)
  - Calculus II → (63h, Spanish)

- Business Mathematics → (73h, Spanish; 136h, English)
- Applied Mathematics for Architecture → (77h; English)
- **Total:** 812h (467h in Spanish, 345h in English)

### Universidad Complutense de Madrid

- **Degrees:**
  - Bachelor's Degree in Economics
    - + Double Degree in Economics – International Relations
  - Bachelor's Degree in Business Administration
    - + Double Degree in Law – Business Administration
  - Double Degree in Economics – Mathematics and Data Science
- **Courses:**
  - Statistics I, Bachelor's Degree in Economics → (30h, Spanish; 90h, English)
  - Statistics II, Bachelor's Degree in Economics + Double Degree Eco-IR → (120h, Spanish; 482.9h, English)
  - Business Statistics II, Bachelor's Degree in Business Administration + Double Degree Law-Business Administration → (532.2h, English)
  - Probability, Double Degree in Eco-Mathematics → (60h, Spanish)
  - Tutoring Final Year Projects, Bachelor's Degree in Commerce; Double Degree in Eco-Math → (25h)
- **Total** (by the end of the 2023-24 academic year): 1340.1h  
(240h in Spanish, 1015.1h in English, plus 25h tutoring final year projects)

### Faculdade de Ciências Naturais e Matemática, Universidade Pedagógica, Mozambique (2018)

- **Degree:** Master's in Statistics
- **Course:** Numerical Methods → (45h; Portuguese)

### Teaching Quality Evaluation

Teaching evaluations at the Spanish universities where I have taught:

1. Universidad Carlos III de Madrid:  $\geq 4.0/5$  in 3 out of 4 groups.
2. Universidad Europea de Madrid:  $\geq 4.0/5$  in almost all (sub)groups, with several maximum scores of 5.0/5.
3. Universidad Complutense de Madrid: Docentia-UCM programme
  - Triannual evaluation 2017/18–2019/20 *excellent* (95.83/100)
  - Triannual evaluation 2020/21–2022/23 *excellent* (96.01/100)

## EDUCATIONAL INNOVATION

### A. Participation in Educational Innovation Projects

Participation in 7 teaching innovation projects at the Universidad Complutense de Madrid, 2 of them as Principal Investigator (PI):

- Member of the Innova-Docencia 2017/245 team (PI: Adolfo Hernández Estrada)
- Member of the Innova-Docencia 2018/301 team (PI: Jesús Barreal Pernas)
- PI of the Innova-Docencia 2019/302 project
- PI of the Innova-Docencia 2020/416 project
- Member of the Innova-Docencia 2021/160 team (PI: Marina Segura Maroto)

- Member of the Innova-Docencia 2023/221 team (PI: Marina Segura Maroto)
- Member of the Innova-Docencia 2024/213 team (PI: Marina Segura Maroto)

## **B. Publications**

- LA NARRATIVA COMO HERRAMIENTA DOCENTE DENTRO DE LA GAMIFICACIÓN DE LA ESTADÍSTICA EN EL GRADO EN TURISMO (with J. Barreal Pernas); *Digital Education Review* 36, 152-170 (2019)  
Journal indexed in JCR - IF 0.54 - Area: Education; Ranking: 424/723 (Q3)

## **C. Seminars and presentations in congresses**

- “Proposal of Gamification project applied to statistical methods in the Bachelor’s Degree of Tourism”  
Oral contribution, XXth Congress AECIT (Spanish Association of Scientific Experts in Tourism), Roquetas del Mar (Spain), 21-23/11/2018
- “Gamification applied to statistical methods in tourism education”  
Oral contribution, Gamification workshop, Faculty of Economics, UCM (06/11/2018)

## **SELECTED STAYS IN OTHER CENTRES**

- UNIVERSIDADE PEDAGÓGICA (MAPUTO, MOÇAMBIQUE)  
**Year:** 2018      **Period:** 3 weeks  
**Objective:** Teaching of “Numerical methods” module in Master of Statistics programme  
**Funding:** Universidad Complutense de Madrid mobility grant
- LOW TEMPERATURE LABORATORY, AALTO UNIVERSITY (HELSINKI, FINLAND)  
**Year:** 2010-2012      **Period:** 22 months  
**Objective:** Postdoctoral Research Contract  
**Funding:** Aalto University & Spanish Ministry for Economy and Competitivity (MEC)
- LABORATOIRE J.A. DIEUDONNÉ, UNIVERSITÉ DE NICE SOPHIA ANTIPOLIS (FRANCE)  
**Year:** 2010      **Period:** 9 months  
**Objective:** Postdoctoral Research Contract  
**Funding:** CNRS (Centre National de la Recherche Scientifique)
- VICTORIA UNIVERSITY OF WELLINGTON (WELLINGTON, NEW ZEALAND)  
**Year:** 2009      **Period:** 5 weeks  
**Objective:** Collaboration with prof. Matt Visser  
**Funding:** CSIC (I3P)
- TKK - HELSINKI UNIVERSITY OF TECHNOLOGY (HELSINKI, FINLAND)  
**Year:** 2008      **Period:** 1 month  
**Objective:** Collaboration with prof. Grigory E. Volovik  
**Funding:** CSIC (I3P)
- SISSA – INTERNATIONAL SCHOOL FOR ADVANCED STUDIES (TRIESTE, ITALY)  
**Year:** 2008      **Period:** 1 month  
**Objective:** Collaboration with prof. Stefano Liberati  
**Funding:** CSIC (I3P)
- UNIVERSIDAD COMPLUTENSE DE MADRID  
**Year:** 2003-2004      **Period:** 10 months  
**Objective:** Erasmus/Socrates Exchange
- UNIVERSIDAD POLITÉCNICA DE MADRID

**Year:** 1999      **Period:** 6 months  
**Objective:** Research for M.Sc. thesis (see above)

**LANGUAGES** – N=Native, P=Perfect, F=Fluent, B=Basic

Language	Spoken	Read	Written
Dutch	N	N	N
French	N	N	N
English	P	P	P
Spanish	P	P	P
Portuguese	F	F	B
Italian	F	F	B
German	B	F	B
Finnish	B	B	–

**NON-ACADEMIC PROFESSIONAL EXPERIENCE**

- **PROJECT MANAGER**  
**Period:** May 2001 – Apr 2002      **Company:** Alcatel (Antwerp, Belgium)  
**Description:** Global pre-sales responsible for “next-generation” telecommunication networks: reception and evaluation of the requests, network design, detailed technical offer, cost and revenue estimation, global presentation and defence to customer.  
**Region of responsibility:** EMEA (Europe, Middle-East, Africa)
- **TECHNOLOGY CONSULTANT**  
**Period:** May 2000 – Apr 2001      **Company:** Alcatel (Antwerp, Belgium)  
**Description:** Expert in data networks based on ATM and IP technology, detailed knowledge of associated products (switches & routers), preparation of technical documents, technical support for tenders.  
**Region of responsibility:** EMEA (Europe, Middle-East, Africa)

**OTHER MERITS**

- **Prizes and awards**
  - 4th prize from FQXi Foundation (Foundational Questions in Physics and Cosmology Institute) in essay contest on “The Nature of Time” (2008)  
see <http://fqxi.org/community/essay/winners/2008.1#Jannes>
- **Refereeing**
  - referee for Phys. Rev. D and Phys. Rev. Lett.
  - occasional referee for Sigma, J. Low Temp. Phys., Found. Phys., Universe and Gen. Rel. & Grav.
- **Evaluation committees**
  - PhD thesis jury, Vocal member. Universidad de Granada, PhD in physics.  
Luis Cortés Barbado, “Perception of Hawking and Unruh radiation by different observers: applications of the effective temperature function”, 04/2014
  - PhD thesis jury, Vocal member. Universidad Complutense de Madrid, PhD in physics.  
Beatriz Elizaga de Navascués, “Loop quantum cosmology and fermionic fields”, 06/2017

- **Popularisation of science and outreach (selected conferences)**

- (1) *"Stellar evolution and black holes"*  
Public conference for "Semana de la ciencia" (week of science), Madrid (11/2017 and 11/2018)
- (2) *"Stellar evolution & black holes"*  
Invited conference, Universidad Europea de Madrid, *Madrid (Spain)*, 10/10/2018.
- (3) *"The life and death of stars"*  
Popular science class taught to primary and secondary school children, Madrid (2013–2023)
- (4) *"Perspectives on quantum gravity"*  
Public conference for "Semana de la ciencia" (week of science), Madrid (11/2009 and 11/2016)
- (5) *"Origin of time: relativity vs emergence"*  
Public conference for "Semana de la ciencia" (week of science), Madrid (11/2015)
- (6) *"Dreams of Unification"*  
Public conference for "Primavera Cinemística 2015: El año de la luz" (Cinemystic Spring 2015: the year of light), Granada (06/2015)
- (7) *"Emergent time"*  
Public conference for "II Ciclo de Filocosmología: Tiempo al tiempo" (2nd cycle of Philocosmology – Philosophy meets Cosmology: Time for time), Madrid (05/2014)

- **Highlights in scientific and general press**

- A. Alonso-Serrano & G. Jannes, *Universe* 5 (2019): selected for Universe Issue Cover & Editor's Choice Articles
- Highlight in "Revista Española de Física" (Spanish Journal of Physics), oct-dec 2019, about the same article with A. Alonso-Serrano on the multiverse
- C. García Meca, C. Barceló, S. Carloni, GJ, J. Sánchez Dehesa & A. Martínez, *PRB* 90 (2014): selected for Phys. Rev. B front page
- D. Shiga, *"Kitchen sink experiment simulates exotic white holes"*, *New Scientist* 2783 (2010).  
Hydrodynamic white-hole experiment also covered in *Wired Science*; *MIT Technology Review*; *Mad Science*; *Softpedia* as well as in, amongst others, Danish, Dutch, French, Hungarian, Italian, Japanese, Persian, Russian, Spanish.
- *"¡No tenemos tiempo!"* (We don't have time!), *Gente Digital* (Spanish online newspaper), 24/05/2009 – see link (about FQXi essay)