Curriculum Vitae

João G. Rosa

October 2014

Summary of Curriculum Vitae

PERSONAL INFORMATION

Name:	João Pedro Trancoso Gomes Rosa
Date of Birth:	30/10/1982
Address:	Departamento de Física, Universidade de Aveiro, Campus de Santiago, 3810-183 Aveiro
Contacts:	Tel: +351 916284418 email: joao.rosa@ua.pt homepage: http://gravitation.web.ua.pt/jrosa

EDUCATION

October 2010	**Doctor of Philosophy in Theoretical Physics** Rudolf Peierls Centre for Theoretical Physics, University of Oxford, United Kingdom. Supervisor: Prof. John March-Russell
June 2006	**Masters of Advanced Studies in Mathematics** (*Distinction*) DAMTP, University of Cambridge, United Kingdom.
June 2005	**Licenciatura in Physical and Technological Engineering** (*GPA 18/20*) Instituto Superior Técnico, Universidade Técnica de Lisboa, Portugal.

RESEARCH AND TEACHING POSITIONS

From Sep. 2014	**Professor Auxiliar Convidado a 25% (***Guest Lecturer***)** Department of Physics and Astronomy, University of Porto, Portugal.
From Oct. 2012	**Postdoctoral Research Fellow** Gr@v group, Physics Department, University of Aveiro, Portugal.
Oct. 2010 - Sep. 2012	**Postdoctoral Research Associate** Particle Theory Group, University of Edinburgh, United Kingdom.
Sep. 2009 - Sep. 2010	**Graduate Teaching Assistant in Physics** Oriel College, Oxford, United Kingdom.

AWARDS

May 2010	**Vice-Chancellors' Fund Award** (U. Oxford, UK).
June 2006	**E. M. Burnett Prize** (Hughes Hall, Cambridge, UK).
June 2006	**Tyson Medal in Astrophysics and Cosmology** (U. Cambridge, UK).
September 2004	**Merit Diploma** (IST, U.T. Lisbon, Portugal).

PUBLICATIONS (ISI Web of Science)

Scientific Articles:	19
Books:	1
Number of citations:	240 (exc. self-citations)
h-index	9

TEACHING

Courses taught:	Introduction to Cosmology, Mathematical Methods in Physics (lectures); Quantum Mechanics, Nuclear Physics, Particle Physics and Special Relativity (problem classes).
Student supervision:	1 undergraduate student; 2 PhD students

Detailed Curriculum Vitae
João G. Rosa

Contents

1 Personal information

1.1 Personal details

Name:	João Pedro Trancoso Gomes Rosa
Date of Birth:	30/10/1982
Address:	Departamento de Física, Universidade de Aveiro, Campus de Santiago, 3810-183 Aveiro, Portugal
Contacts:	Tel: +351 916284418 email: `joao.rosa@ua.pt` homepage: `http://gravitation.web.ua.pt/jrosa`
Foreign languages:	English (full proficiency), French and Spanish (elementary proficiency)

1.2 Education

October 2010	**Doctor of Philosophy in Theoretical Physics** Rudolf Peierls Centre for Theoretical Physics, University of Oxford, United Kingdom. Supervisor: Prof. John March-Russell Thesis: *Aspects of beyond the Standard Model string phenomenology.*
June 2006	**Masters of Advanced Studies in Mathematics** (*Distinction*) Department of Applied Mathematics and Theoretical Physics, University of Cambridge, United Kingdom. Supervisor: Prof. Neil Turok Essay: *Primordial gravitational waves.*
June 2005	**Licenciatura in Physical and Technological Engineering** (*GPA 18/20*) Instituto Superior Técnico, Universidade Técnica de Lisboa, Portugal. Supervisor: Prof. Orfeu Bertolami Thesis: *Aspects of Lorentz invariance violation and noncommutative quantum mechanics.*

1.3 Research and teaching positions

From Sep. 2014	**Professor Auxiliar Convidado (***Guest Lecturer***)** Department of Physics and Astronomy, University of Porto, Portugal. (Part time position: 25%)
From Oct. 2012	**Postdoctoral Research Fellow** Gr@v group, Physics Department, University of Aveiro, Portugal.
Oct. 2010 - Sep. 2012	**Postdoctoral Research Associate** Particle Theory Group, University of Edinburgh, United Kingdom.
Sep. 2009 - Sep. 2010	**Graduate Teaching Assistant in Physics** Oriel College, Oxford, United Kingdom.
Jan. 2008 - Aug. 2009	**External Tutor in Physics** New College, Oxford, United Kingdom.
Oct. 2007- Aug. 2009	**External Tutor in Physics** Oriel College, Oxford, United Kingdom.

1.4 Awards and fellowships

From January 2013	**Postdoctoral Research Fellowship** SFRH/BPD/85969/2012 Fundação para a Ciência e Tecnologia, Portugal.
Oct. 2012 - Dec. 2012	**Postdoctoral Research Grant** FCT research project PTDC/FIS/116625/2010 University of Aveiro and I3N, Portugal.
May 2010	**Vice-Chancellors' Fund Award** University of Oxford, United Kingdom.
June 2006	**E. M. Burnett Prize** Hughes Hall, Cambridge, United Kingdom.
June 2006	**Tyson Medal in Astrophysics and Cosmology** (*sole awardee*) University of Cambridge, United Kingdom.
Jan. 2005 - Dec. 2009	**Doctoral Research Grant** SFRH/BD/23036/2005 Fundação para a Ciência e Tecnologia, Portugal.
September 2004	**Merit Diploma** Instituto Superior Técnico, Universidade Técnica de Lisboa, Lisbon, Portugal.

2 Research activities

2.1 Summary of research interests

My main research interests are focused on the interplay between theoretical particle and gravitational physics, with applications to cosmology, black hole physics and particle phenomenology. It is my overall research goal to develop extensions of the Standard Model of particle physics and general relativity that address their main shortcomings and to explore their phenomenological consequences. I am particularly interested in looking for signatures of novel physics in the context of astrophysics and cosmology and my current research focuses on two main topics:

1. **Dissipative effects in cosmology**

   Interactions between different fields in the early universe lead to time non-local effects that change their dynamical evolution and lead to particle production. I am currently collaborating with different international researchers on exploring how these effects modify the dynamics and observational predictions of inflation, namely in the context of beyond the Standard Model (BSM) scenarios. I am also exploring the impact of dissipative dynamics in other cosmological eras and how it helps addressing different cosmological puzzles such as the origin of dark matter, dark energy and the matter-antimatter asymmetry.

   Collaborators: Arjun Berera (U. Edinburgh), Mar Bastero-Gil (U. Granada), Rudnei O. Ramos (U. E. Rio de Janeiro), James Dent (U. Louisiana), Thomas Kephart (Vanderbilt U.), Heinrich Paes (T. U. Dortmund) and Roman Bunyi (Chapman U.)

2. **Black hole superradiance**

   The existence of an ergoregion around rotating Kerr black holes leads to the development of superradiant instabilities, in particular for ultra-light fields such as axions and hidden photons, with a plethora of potential observational signatures. My work has been devoted to studying the development of these instabilities for different fields and black hole geometries (namely in extra-dimensional models) and determining their particular observational signatures. I am also interested in exploring the impact of this process in (supermassive) black hole formation and in the context of primordial black holes in the early universe.

   Collaborators: Sam Dolan (Sheffield U.), Carlos Herdeiro (Aveiro U.) and John March-Russell (Oxford U.).

My past research activities have also included the search for novel physics at particle colliders, such as the Tevatron and the LHC, and other low energy experiments, as well as other aspects of early universe cosmology in BSM physics. As the currently best-known candidate for a theory of quantum gravity, string/M-theory has motivated a significant part of my past and current research, and this is a line of research that I intend to pursue.

2.2 Scientific research publications

	ISI Web of Science	Inspire HEP
Articles in refereed journals	17	18
Articles in conference proceedings	-	1
Single-authored articles	2	2
Number of citations	260	438
Number of citations (exc. self-citations)	240	324
Average citations per article	15.41	22.7
Articles with > 100 citations	1	1
h-index:	9	12

Table 1: Summary of scientific publications since 2005. Note that Inspire HEP, which is the reference database for theoretical particle and gravitational physics, includes citations to and by articles prior to publication (preprint format).

Selected publications in refereed journals (from 2009)

1. **General dissipation coefficient in low-temperature warm inflation**,
   M. Bastero-Gil, A. Berera, R. O. Ramos and J. G. Rosa, JCAP **1301**, 016 (2013).
   [arXiv:1207.0445 [hep-ph]]
   Impact factor: 6.036; Citations: 11/40 (ISI WoS/Inspire HEP).

2. **Massive vector fields on the Schwarzschild spacetime: quasi-normal modes and bound states**,
   J. G. Rosa and S. R. Dolan, Phys. Rev. D **85** 044043 (2012).
   [arXiv:1110.4494 [hep-th]]
   Impact factor: 4.691; Citations: 19/24 (ISI WoS/Inspire HEP).

3. **Warm baryogenesis**,
   M. Bastero-Gil, A. Berera, R. O. Ramos and J. G. Rosa, Phys. Lett. B **712**, 425 (2012).
   [arXiv:1110.3971 [hep-ph]]
   Impact factor: 4.569; Citations: 12/21 (ISI WoS/Inspire HEP).

4. **Warming up brane-antibrane inflation**,
   M. Bastero-Gil, A. Berera and J. G. Rosa, Phys. Rev. D **84**, 103503 (2011).
   [arXiv:1103.5623 [hep-th]]
   Impact factor: 4.558; Citations: 13/21 (ISI WoS/Inspire HEP).

5. **The extremal black hole bomb**,
   J. G. Rosa, JHEP **1006**, 015 (2010).
   [arXiv:0912.1780 [hep-th]]
   Impact factor: 6.049; Citations: 19/34 (ISI WoS/Inspire HEP).

Additional publications in refereed scientific journals

Authors are listed alphabetically by default, indicating equal contributions. In articles [10] and [12] the first two authors are the main contributors and are listed alphabetically. I am the first author in article [9].

1. **Observational implications of mattergenesis during inflation**,
   M. Bastero-Gil, A. Berera, R. O. Ramos and J. G. Rosa, JCAP **1410** , 053 (2014).
   [arXiv:1404.4976 [astro-ph.CO]]
   Impact factor: n/a ; Citations: n/a /17 (ISI WoS/Inspire HEP).

2. **Delaying the waterfall transition in warm hybrid inflation**,
   M. Bastero-Gil, A. Berera, T. P. Metcalf and J. G. Rosa, JCAP **1403**, 023 (2014).
   [arXiv:1312.2961 [hep-ph]]
   Impact factor: 6.036; Citations: 0/2 (ISI WoS/Inspire HEP).

3. **The importance of being warm (during inflation)**,
   S. Bartrum, M. Bastero-Gil, A. Berera, R. Cerezo, R. O. Ramos and J. G. Rosa, Phys. Lett. B **732**, 116 (2014).
   [arXiv:1307.5868 [hep-ph]]
   Impact factor: 4.569; Citations: 5/23 (ISI WoS/Inspire HEP).

4. **Warming up for Planck**,
   S. Bartrum, A. Berera and J. G. Rosa, JCAP **1306**, 025 (2013).
   [arXiv:1303.3508 [astro-ph.CO]]
   Impact factor: 6.036; Citations: 1/11 (ISI WoS/Inspire HEP).

5. **Warm Inflection**,
   R. Cerezo and J. G. Rosa, JHEP **1301**, 024 (2013).
   [arXiv:1210.7975 [hep-ph]]
   Impact factor: 5.618; Citations: 4/14 (ISI WoS/Inspire HEP).

6. **Boosted black string bombs**,
J. G. Rosa, JHEP **02**, 014 (2013).
[arXiv:1209.4211 [hep-th]]
Impact factor: 5.618; Citations: 2/9 (ISI WoS/Inspire HEP).

7. **Gravitino cosmology in supersymmetric warm inflation**,
S. Bartrum, A. Berera and J. G. Rosa, Phys. Rev. D **86**, 123525 (2012).
[arXiv:1208.4276 [hep-ph]]
Impact factor: 4.691; Citations: 7/12 (ISI WoS/Inspire HEP).

8. **On the possibility of light string resonances at the LHC and Tevatron from Randall-Sundrum throats**,
B. Hassanain, J. March-Russell and J. G. Rosa, JHEP **0907**, 077 (2009).
[arXiv:0904.4108 [hep-ph]]
Impact factor: 6.019; Citations: 11/25 (ISI WoS/Inspire HEP).

9. **Resonant particle production in branonium**,
J. G. Rosa and J. March-Russell, Phys. Rev. D **77**, 126004 (2008).
[arXiv:0711.0658 [hep-th]]
Impact factor: 5.050; Citations: 2/2 (ISI WoS/Inspire HEP).

10. **Scaling of variables and the relation between noncommutative parameters in noncommutative quantum mechanics**,
O. Bertolami, J. G. Rosa, C. M. L. de Aragão, P. Castorina and D. Zappalà, Mod. Phys. Lett. A **21**, 795 (2006).
[arXiv:hep-th/0509207]
Impact factor: 1.564; Citations: 28/33 (ISI WoS/Inspire HEP).

11. **Quantum and classical divide: the gravitational case**,
O. Bertolami and J. G. Rosa, Phys. Lett. B **633**, 111 (2006).
[arXiv:hep-ph/0508023]
Impact factor: 5.043; Citations: 7/8 (ISI WoS/Inspire HEP).

12. **Noncommutative gravitational quantum well**,
O. Bertolami, J. G. Rosa, C. M. L. de Aragão, P. Castorina and D. Zappalà, Phys. Rev. D **72**, 025010 (2005).
[arXiv:hep-th/0505064]
Impact factor: 4.852; Citations: 106/117 (ISI WoS/Inspire HEP).

13. **New bounds on cubic Lorentz-violating terms in the fermionic dispersion relation**,
O. Bertolami and J. G. Rosa, Phys. Rev. D **71**, 097901 (2005).
[arXiv:hep-ph/0412289]
Impact factor: 4.852; Citations: 16/19 (ISI WoS/Inspire HEP).

Publications in refereed conference proceedings

1. **Gravitational quantum well**,
O. Bertolami and J. G. Rosa, J. Phys. Conf. Ser. **33**, 118 (2006).
[arXiv:hep-th/0512084]
Proceedings of 4th Meeting on Constrained Dynamics and Quantum Gravity, Cala Gonone, Sardinia, Italy, 12-16 Sep. 2005.
Citations: 5 (Inspire HEP).

2.3 Scientific conferences and presentations

Participation in international conferences and workshops

Jun. 16-21, 2014	"Fluctuation-dissipation dynamics in the early universe" workshop, Higgs Centre for Theoretical Physics, U. Edinburgh, UK.
Apr. 28-30, 2014	IX Iberian Cosmology Meeting, U. Aveiro, Portugal.
Jan. 6-10, 2014	"Testing General Relativity with Astrophysical Observations", U. Mississippi, Oxford MS, USA.
Dec. 19-20, 2013	VI Workshop on Black Holes, U. Minho, Portugal
Apr. 24-26, 2013	VIII Iberian Cosmology Meeting, U. Granada, Spain (*Session chair*).
Mar. 5-8, 2013	"Strong gravity beyond General Relativity: from theory to observations" workshop, IST, Lisbon, Portugal.
Dec. 17-18, 2012	V Workshop on Black Holes, IST, Lisbon, Portugal.
Dec. 3-7, 2012	"Quantized Flux in Tightly Knotted and Linked Systems", Isaac Newton Institute, U. Cambridge, UK.
July 9-13, 2012	First NRHEP Network meeting, U. Aveiro, Portugal.
Jan. 4-8, 2012	"The State of the Universe", Stephen Hawking's 70th Birthday conference, U. Cambridge, UK.
Dec. 19-20, 2011	IV Workshop on Black Holes, U. Aveiro, Portugal.
Aug. 22 - Aug. 26 , 2011	COSMO 11, U. Porto, Portugal.
May 30 - Jun. 3 , 2011	PLANCK 2011, IST, Lisbon, Portugal.
Dec. 20-21, 2010	III Workshop on Black Holes, U. Minho, Braga, Portugal.
Dec. 21-22, 2009	II Workshop on Black Holes, IST, Lisbon, Portugal.
May 25-29, 2009	PLANCK 2009, Centro Culturale Altinate (San Gaetano), Padova, Italy.
Dec. 16, 2008	UK Cosmology Meeting, Queen Mary, London, UK.
Oct. 30-31, 2008	Strings and Cosmology Student Conference, I. Henri Poincaré, Paris, France.
Sep. 15-17, 2008	UK Cosmology Meeting, U. Manchester, UK.
May 19-23, 2008	PLANCK 2008, CosmoCaixa, Barcelona, Spain.
May 6, 2008	Graduate Cosmology, Astrophysics and Theory Seminars, King's College, London, UK.
Apr. 10, 2008	UK Cosmology Meeting, U. Cambridge, UK.
Mar. 6- 7, 2008	3rd Iberian Cosmology Meeting, U. Lisbon, Portugal.
Dec. 17-19, 2007	Annual Theory Meeting, U. Durham, UK.
Nov. 28, 2007	UK Cosmology Meeting, University College London, UK.
Jun. 25 - Aug. 10, 2007	LHC-Cosmology Interplay, CERN Theory Division, Geneva, Switzerland.

Participation in international schools

Sep. 28 - Oct. 3, 2009	Third UniverseNet School and Meeting, U. Autonoma de Barcelona, Spain.
Sep. 22-26, 2008	Second UniverseNet School and Meeting, U. Oxford, UK.
Mar. 27- Apr. 4, 2008	Spring School on Superstring Theory and Related Topics, ICTP, Trieste, Italy.
Sep. 24-29, 2007	First UniverseNet School and Meeting, Mytilene, Greece.
May 14-18, 2007	SIGRAV Graduate School "The Dark Side of the Universe", Villa Olmo, Como, Italy.
Aug. 29 - Sep. 3, 2002	First School of Astrophysics and Gravitation, IST, Lisbon, Portugal.

Invited talks at academic institutions

Jun. 2, 2014	"Observational implications of mattergenesis during inflation", U. Lisbon, Portugal.
Feb. 7, 2014	"Black hole bombs: unveiling an exotic universe", U. Porto, Portugal.
Jan. 17, 2014	"Black hole bombs: unveiling an exotic universe", Vanderbilt U., Nashville, TN, USA.
Jan. 14, 2014	"Black hole bombs: unveiling an exotic universe", U. Louisiana, Lafayette, LA, USA.
Jul. 11, 2013	"Warm inflation and Planck", T. U. Dortmund, Germany.
Dec. 10, 2012	"Inflationary cosmology in the Planck era", U. Regensburg, Germany (colloquium).
Nov. 28, 2012	"A boson named Higgs", U. Aveiro, Portugal (colloquium).
Oct. 25, 2012	"Boosted black string bombs", IST, Lisbon, Portugal.
May 31, 2012	"Warm baryogenesis", U. Glasgow, UK.
Apr. 11, 2012	'Warm inflation in beyond the Standard Model scenarios", U. Granada, Spain.
Apr. 2, 2012	"Warm inflation in beyond the Standard Model scenarios", U. Aveiro, Portugal.
Dec. 13, 2011	"Warm baryogenesis", Perimeter Institute, Canada.
Feb. 17, 2010	"Warped string resonances", U. Cambridge, UK.
Sep. 1, 2010	"On the possibility of light string resonances at the LHC and Tevatron from Randall-Sundrum throats", U. Edinburgh, UK.
Feb. 25, 2010	"The extremal black hole bomb", U. Southampton, UK.

Presentations at international scientific conferences and meetings

Nov. 7, 2013	"Superradiant instabilities in warped geometries", VI Black Holes workshop (U. Minho, Portugal).
Apr. 25, 2013	"Recent developments in warm inflation", VIII Iberian Cosmology Meeting (U. Granada, Spain).
Dec. 17, 2012	"Boosted black string bombs", V Black Holes workshop (IST, Lisbon, Portugal).
July 13, 2012	"Superradiant instabilities for massive scalar fields around boosted Kerr black strings", First NRHEP Network Meeting (U. Aveiro, Portugal).
Dec. 20, 2011	"Massive vector fields on the Schwarzschild spacetime: quasi-normal modes and bound states", IV Workshop on Black Holes (U. Aveiro, Portugal).

Aug. 22 , 2011	"Warming up brane-antibrane inflation" (*poster*), COSMO 11 (U. Porto, Portugal).
Jun. 3, 2011	"Warming up brane-antibrane inflation", PLANCK 2011 (IST, Portugal).
Dec. 22, 2009	"The extremal black hole bomb", II Workshop on Black Holes (IST, Portugal).
Oct. 30, 2009	"The Black Hole Information Paradox and the String Fuzzball Proposal", Strings and Cosmology Student Conference (I. Henri Poincaré, France).
Sep. 23, 2008	"'Resonant Particle Production in Branonium", Second UniverseNet School (U. Oxford, UK).
Sep. 17, 2008	"Resonant Particle Production in Branonium", UK Cosmology Meeting (U. Manchester, UK).
May 21, 2008	"Resonant Particle Production in Branonium", PLANCK 2008 (Barcelona, Spain).
May 6, 2008	"Resonant Particle Production in Branonium", GradCATS (King's College London, UK).
Mar. 7, 2008	"Resonant Particle Production in Branonium" 3rd Iberian Cosmology Meeting (U. Lisbon, Portugal).
Sep. 29, 2007	"Primordial Gravitational Waves" First UniverseNet School and Meeting (Mytilene, Greece).

Other scientific talks and presentations

April. 8, 2014	"Evidence for primordial gravitational waves from the BICEP2 experiment", Gravitation Journal Club, U. Aveiro, Portugal.
Nov. 7, 2013	"Inflationary models with non-minimal gravitational couplings", Gravitation Journal Club, U. Aveiro, Portugal.
Mar. 25, 2013	"Summary of the first results from Planck", informal group seminar (U. Aveiro, Portugal).
Feb. 4, 2010	"The extremal black hole bomb", Phenomenology Journal Club (U. Oxford, UK).
Feb. 12, 2009	"The Black Hole Information Paradox and the String Fuzzball Proposal", Phenomenology Journal Club (U. Oxford, UK).
Nov. 27, 2007	"D-branes", Theoretical Physics Students Seminar (U. Oxford, UK).
Nov. 8, 2007	"Resonant Particle Production in Branonium", Phenomenology Journal Club (U. Oxford, UK).

2.4 Refereeing for international scientific journals and conference proceedings

- Physical Review D, European Physical Journal C and Physics Letters B;
- Proceedings of the workshop "Quantized Flux in Tightly Knotted and Linked Systems", Isaac Newton Institute (Cambridge, UK).

2.5 Membership of scientific societies and international networks

From Feb. 2013	Higgs Centre for Theoretical Physics, University of Edinburgh (Affiliate Member).
From Oct. 2012	Marie Curie Action "Numerical Relativity and High Energy Physics" (NRHEP- 295189-FP7-PEOPLE-2011-IRSES).
Oct. 2006 - Sep. 2010	Marie Curie Research and Training Network "UniverseNet" (MRTN-CT-2006-035863).

3 Teaching activities

3.1 Courses taught

Jan./Feb. 2015	**Non-equilibrium Quantum Field Theory at finite temperature** (T); Invited graduate mini-course at IPMU, Japan (*forthcoming*)
Sep. 2014 - Jan. 2015	**Quantum Mechanics** (TP); **Mathematical Methods in Physics** (T) University of Porto
Sep. 2013 - Dec. 2013	**Quantum Mechanics** (TP) University of Aveiro
Feb. 2013 - Jun. 2013	**Introduction to Cosmology** (T, extra-curricular) University of Aveiro
Nov. 2011	**Problem solving in Physics** (TP) University of Edinburgh (substitution for Dr. Jennifer Smillie)
Oct. 2011	**Statistical Mechanics** (TP); **Relativistic Quantum Field Theory** (TP) University of Edinburgh (substitution for Prof. Arjun Berera)
Sep. 2009 - Sep. 2010	**Quantum Mechanics** (TP) Oriel College, Oxford
Oct. 2007 - Sep. 2010	**Nuclear Physics** (TP) **Particle Physics and Special Relativity** (TP) Oriel College and New College, Oxford

Note: T = theoretical lectures; TP = tutorial and problem solving classes.

3.2 Supervision experience

Jul. 2013 - July 2014	**Eduardo Santana**, Physical Engineering "Licenciatura" thesis University of Aveiro (co-supervisor with Carlos Herdeiro). Thesis title: "Study of inflationary models of the universe".
Oct. 2011 - present	**Sam Bartrum**, Ph.D. Particle Theory project University of Edinburgh (unofficial co-supervisor with Arjun Berera).
Jan. 2011 - present	**Thomas Metcalf**, Ph.D. Particle Theory project University of Edinburgh (unofficial co-supervisor with Arjun Berera).

3.3 Pedagogical material

Books	**Mecânica Quântica, Volume I** (*Volume II in preparation*) M. Cardoso, M. M. Correia, S. F. Martins, R. Monteiro, M. F. Paulos, J. G. Rosa, J. E. Santos, P. Bicudo, P. Sacramento, (IST Press, Lisbon, 2013).
Online course	**Introduction to Cosmology** (videos and lecture notes) J. G. Rosa, `http://gravitation.web.ua.pt/cosmo`. (course given at U. Aveiro, Portugal).

4 Knowledge transfer

4.1 Outreach activities

May 2010	Co-organizer of the meeting "PARSUK Communicating Science", Oriel College, Oxford.
July 2008/July 2009	Physics Sutton Trust School Tutor University of Oxford, United Kingdom.
Jun. 2008 - Jun. 2010	Co-founder, Vice-President and President of the Portuguese Association of Researchers and Students in the United Kingdom (PARSUK).
Jun. 2008	Co-organizer of "LUSO2008 - Meeting of Portuguese Researchers and Students in the United Kingdom", Taylorian Institute, Oxford (200 participants).

4.2 Outreach talks

Nov. 19, 2013	"A boson named Higgs", invited talk, Escola Secundária Gonçalves Zarco, Matosinhos, Portugal.
Nov. 14, 2012	"A boson named Higgs", invited talk, Escola Secundária Dr. Jaime Magalhães de Lima, Aveiro, Portugal.
Apr. 29, 2009	"Strings and Branes: a Romance of Many Dimensions", Science Communication Seminars, Linacre College, Oxford, UK.

4.3 Outreach articles

1. "Ondas Gravitacionais" (*Gravitational Waves*)
   J. G. Rosa, Pulsar 19 (2003).
2. "Viagem ao Planeta Vermelho" (*Voyage to the Red Planet*)
   J. G. Rosa, Journal of APAA 109 (1997).

5 University and research management

5.1 Organization of local scientific activities

Jan. 2013 - Sep. 2014	Gravitation Seminars organizer, Department of Physics, University of Aveiro.
Jun. 2011 - Sep. 2012	Particle Theory Seminars organizer, University of Edinburgh.

5.2 Organization of international scientific meetings

18-19 Dec. 2014	Co-organizer of the "VII Black Holes Workshop", U. Aveiro, Portugal (*to be held*).
28-30 Apr. 2014	Leading co-organizer of the "IX Iberian Cosmology Meeting", U. Aveiro, Portugal.

5.3 Participation in evaluation panels

Oct. 2014	Member of the evaluation panel for the MAP-FIS doctoral programme first year essays of the students Helgi Rúnarsson and Miguel Oliveira.
Dec. 2009	Member of the recruitment panel for undergraduate student candidates, Oriel College, University of Oxford, UK.