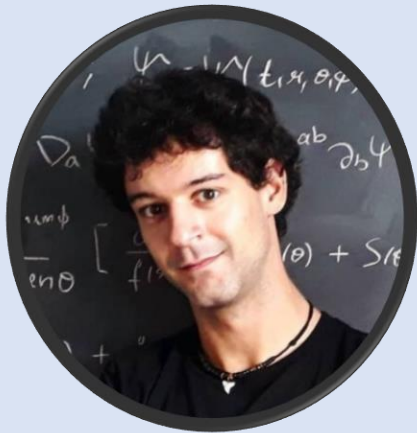


CV João Luís de Figueiredo Rosa



Personal Information



20th April 1992



Lisbon, Portugal



(+351) 918 137 037



joaoluis92@gmail.com

Summary

My name is João Luís de Figueiredo Rosa, I am a doctorate in physics in the areas of astrophysics and gravitation, and currently I am a research scientist at the Center for Astrophysics and Gravitation and a teacher in the Department of Physics of Instituto Superior Técnico in Lisbon. I was also a Fulbright research scholar at the Johns Hopkins University in Baltimore, Maryland. I have 5 years of experience in research, having published 6 papers and presented my work in 14 international conferences, and 4 years of official teaching experience plus 4 years of tutoring experience.

Research Interests

My research interests concern gravitational physics. More specifically, I have been working with black-hole perturbation theory; superradiant amplification and quasi-normal modes; gravitational wave physics; reconstruction methods in cosmology; the cosmological phase-space via the dynamical system approach; traversable wormholes satisfying the Null Energy Condition; junction conditions and the thin-shell formalism; the Derrick's theorem in the 1+1+2 covariant formalism; modified theories of gravity, more precisely scalar-tensor, $f(R)$ and the hybrid metric-Palatini gravity.

Table of contents

SHORT CV	2
EDUCATION.....	3
WORK EXPERIENCE	4
PERSONAL SKILLS.....	5
PRIZES AND AWARDS.....	7
PUBLICATIONS	7
CONFERENCES AND SEMINARS.....	9
COURSES AND SCHOOLS	11
OUTREACH	12
OTHER EVENTS.....	14



Education (more info p.3)

PhD Degree: *Diploma of Advanced Studies in Physics*, Instituto Superior Técnico, Universidade de Lisboa, Portugal. Approved with distinction and honour. Title: Cosmological and astrophysical applications of modified theories of gravity. Concluded October 2019.

MSc Degree: *Integrated Masters in Technological Physics Engineering*, Instituto Superior Técnico, Universidade de Lisboa, Portugal. Final grade: 19/20 (Excellent). Title: Superradiant amplification by stars and black-holes. Concluded July 2015.

BSc Degree: *Graduate in Engineering Sciences: Physics Engineering*, Instituto Superior Técnico, Universidade de Lisboa. Final grade: 17/20 (Very Good). Concluded June 2013.



Work Experience (more info p.4)

Research: 5 years of experience. **Research Scientist** at the Centre for Astrophysics and Gravitation at Instituto Superior Técnico, Universidade de Lisboa, Portugal, since September 2014. **Fulbright Foreign Student** at the Bloomberg Centre for Physics and Astronomy at the Johns Hopkins University, Baltimore, MD, USA, from September 2018 to January 2019.

Teaching: *Teaching Assistant*, Instituto Superior Técnico, Universidade de Lisboa, Portugal, since February 2016. Courses taught: "Thermodynamics and the Structure of Matter", "Electromagnetism and Optics", "Mechanics and Waves".



Publications (more info p.7)

Summary: 6 papers published in Physical Review D, plus 3 more papers in preparation.

Published papers: 6



Citations: 44



Impact factor: $h=4$



Prizes and Awards (more info p.7)

Grants: FCT-IDPASC PhD Scholarship, 4 years (October 2015 to September 2019), tuition, 980€ monthly salary, 600€ travel expenses; **Fulbright Foreign Student Program**, 5 months (September 2018 to January 2019), tuition, visa, travel support to attend seminars.

Teaching: 3 times Teacher of Excellency, for the excellent teaching of physics courses at Instituto Superior Técnico, Universidade de Lisboa, as evaluated by the students.

Scientific: Best Presentation Award at IberiCos 2018; Best Pitch Presentation at the 2019 PhD Open Days in Instituto Superior Técnico; Best Student Oral Communication Award at the 9th IDPASC school and XXXI International Seminar of Nuclear and Subnuclear Physics "Francesco Romano"



Conferences and Seminars (more info p.9)

Summary: Attended 31 Conferences, at which presented 18 talks and 4 posters. Invited for 3 Seminars.

Invited Seminars: 3



Oral Presentations: 18



Poster Presentations: 4



PhD Degree (2015 - 2019)

Grade: Approved with distinction and Honour

Institution: Instituto Superior Técnico, Universidade de Lisboa

Name: Diploma of Advanced Studies in Physics

Supervisors: Prof. José P. S. Lemos, Dr. Francisco S. N. Lobo, Dr. Sante Carloni

Thesis title: Cosmological and astrophysical applications of modified theories of gravity

Funding: FCT-IDPASC PhD Scholarship grant PB/BD/114072/2015

Date of conclusion: 30th of October of 2019

Thesis available online at [arxiv:1602.07723](https://arxiv.org/abs/1602.07723) [gr-qc]



FCT Fundação para a Ciência e a Tecnologia

MSc Degree (2013 - 2015)

Grade: 19 out of 20 (Excellent)

Institution: Instituto Superior Técnico, Universidade de Lisboa

Name: Integrated Masters in Technological Physics Engineering

Supervisors: Prof. Vítor Cardoso

Thesis title: Superradiant amplification by stars and black-holes

Date of conclusion: 11th of July of 2015

Thesis available online at [arxiv:1911.08257](https://arxiv.org/abs/1911.08257) [gr-qc]



BSc Degree (2010 - 2013)

Grade: 17 out of 20 (Very good)

Institution: Instituto Superior Técnico, Universidade de Lisboa

Name: Graduate in Engineering Sciences: Physics Engineering

Date of conclusion: 29th of June of 2013



High-School Degree (2007 - 2010)

Grade: 18 out of 20 (Very good)

Institution: Instituto Superior Técnico, Universidade de Lisboa

Name: High School degree on Sciences and Technology

Date of conclusion: 11th of July of 2015

Funding: Top Gil prize for the highest grade in the science and technology course





WORK EXPERIENCE



Research Experience

Position: MSc Student, PhD Student, Research Scientist

Institution: Center for Astrophysics and Gravitation at Instituto Superior Técnico

Date: Since September 2014

Duties: Research in the areas of astrophysics and gravitation



Position: Fulbright Foreign Student Program

Institution: Bloomberg Center for Astrophysics at the Johns Hopkins University

Date: September 2018 to January 2019

Title: Black-hole oscillations in modified theories of gravity

Duties: Research in the areas of astrophysics and gravitation



FULBRIGHT
Association



Teaching Experience

Position: Teaching Assistant

Institution: Instituto Superior Técnico, Universidade de Lisboa

Date: Since February 2016

Duties: Lectures in physics courses, elaboration and correction of exams

Related awards: 3 times Teacher of Excellency (see “prizes and awards”)



2nd semester 2019/2020: Mechanics and Waves.

2nd semester 2018/2020: Mechanics and Waves, Thermodynamics and the Structure of Matter (Evaluation 9/9)

2nd semester 2017/2018: Thermodynamics and the Structure of Matter (Evaluation 9/9)

1st semester 2017/2018: Electromagnetism and Optics (Evaluation 9/9)

2nd semester 2016/2017: Thermodynamics and the Structure of Matter (Evaluation 8.88/9)

1st semester 2016/2017: Electromagnetism and Optics (Evaluation 8.94/9)

Position: Tutor

Institution: “Explicar-me” online tutoring center, Portugal

Date: Since October 2019

Number of students: 13



Courses taught: Linear Algebra, Mechanics and Waves, Fluid Mechanics, Complex Analysis and Differential Equations, General Chemistry, Mechanics and Relativity, Quantum Mechanics

Position: Tutor

Institution: “Portal da Sabedoria” tutoring center, Lisboa, Portugal

Date: September 2012 to October 2015

Number of students: 44

Courses taught: Linear Algebra, Differential and Integral Calculus, Mathematical Analysis, Mechanics and Waves, Electromagnetism and Optics, Vibrations and Waves, Biophysics, Biomechanics, Applied Optics, Quantum Mechanics, Atomic and Molecular Physics, Nuclear Physics, Radiation and Radiotherapy



Other Experience

Position: Monitor at Projecto Viver Astronomia

Institution: Institute for Astrophysics and Space Science, Universidade de Lisboa

Date: Since March 2013

Duties: Astronomy teaching, science communication, telescope handling, people management



PERSONAL SKILLS



Languages



Portuguese

Level: Native (C2)



English

Level: C1



French

Level: A2



Spanish

Level: A2

Certificate: International English Language Testing System (IELTS)

Grade: 8/9 (very good user, equivalent to C1)



Technical Skills

Skill: Oral Communication

Level: Excellent

Acquired Through: Broad experience as a public speaker, tutor and lecturer

Related awards: 3 Best oral communication / pitch awards (see “prizes and awards”)



Skill: Telescope Handling



Level: Excellent

Acquired Through: Regular use in astronomy events and continuous formation in Lisbon's Observatory

Skill: Management



Level: Good

Acquired Through: Attended two courses: the first regarding general management skills, economy, and accountability, with a final grade of 16/20 and the first place in the IST Management Challenge; and the second regarding science project management, organization, leadership and communication, with a final grade of 19/20;

Software Skills

Skill: Wolfram Mathematica



Level: Excellent

Acquired Through: Regular use for numerical and analytical calculations in research projects

Skill: LaTeX



Level: Excellent

Acquired Through: Regular use for writing scientific papers, thesis, and other reports

Skill: C and C++



Level: Good

Acquired Through: Attended two courses in the subject: the first regarding C and LaTeX with a final grade of 16/20 and the second regarding C++ and physical applications of programming with a final grade of 20/20

Skill: Microsoft Excell



Level: Good

Acquired Through: Used for data analysis of physics experiments in five different courses on experimental physics attended during my BSc degree

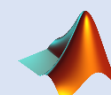
Skill: Microsoft Powerpoint



Level: Excellent

Acquired Through: Regular use for slideshow creation to scientific presentations and public talks

Skill: Matlab



Level: Basic

Acquired Through: Used for data analysis of astrophysical spectra in the course of "Laboratory of Astrophysics"



PUBLICATIONS



Published papers: 6



Citations: 44



Impact factor: $h=4$



Publication List

Status: Published

- (1) V. Cardoso, R. Brito, J. L. Rosa, “Superradiance in Stars”, Physical Review D91 124026 (2015); arxiv:1505.05509 [gr-qc].
- (2) J. L. Rosa, S. Carloni, J. P. S. Lemos, F. S. N. Lobo, “Cosmological solutions in generalized hybrid metric-Palatini gravity”, Physical Review D95 124035 (2017); arxiv:1703.03335 [gr-qc].
- (3) J. L. Rosa, J. P. S. Lemos, F. S. N. Lobo, “Wormholes in generalized hybrid metric-Palatini gravity obeying the matter null energy condition everywhere”, Physical Review D98 064054 (2018); arxiv:1808.08975 [gr-qc].
- (4) S. Carloni, J. L. Rosa, J. P. S. Lemos, “Cosmology of $f(R, \square R)$ gravity”, Physical Review D99 104001 (2019); arxiv:1808.07316 [gr-qc].
- (5) E. Berti, R. Brito, C. F. B. Macedo, G. Raposo, J. L. Rosa, “Ultralight boson cloud depletion in binary systems”, Physical Review D99 104039 (2019); arxiv:1904.03131 [gr-qc].
- (6) S. Carloni, J. L. Rosa, “Derrick’s theorem in curved spacetime”, Physical Review D100 025014 (2019); arxiv:1906.00702 [gr-qc].

Status: To be published

- (1) J. L. Rosa, S. Carloni, J. P. S. Lemos, “The cosmological phase space of generalized hybrid metric-Palatini theories of gravity”, submitted Aug 2019; arxiv:1908.07778 [gr-qc].
- (2) J. L. Rosa, J. P. S. Lemos, “Junction conditions of the generalized hybrid metric-Palatini gravity and their consequences”, in final stages of preparation.
- (3) J. L. Rosa, J. P. S. Lemos, F. S. N. Lobo, “Stability of Kerr black-holes in generalized hybrid metric-Palatini gravity”, in final stages of preparation.



PRIZES AND AWARDS



Research Grants

Grant: Fulbright Foreign Student Scholarship

Duration: September 2018 to January 2019 (5 months)

Program: Fulbright Foreign Student Program with the support of FCT

Funding Institution: Fulbright Association

Amount: J1 Visa + visiting PhD student tuition + flights and accommodation to seminars



Grant: FCT-IDPASC PhD Scholarship

Duration: October 2015 to September 2019 (4 years)

Program: International Doctorate Network in Particle Physics, Astrophysics and Cosmology

Funding Institution: Portuguese Foundation for Science and Technology

Amount: PhD student tuition + 980€/month + 600€ travel expenses



Teaching

Award: Teacher of Excellency 2018/2019



Date: To be awarded May 2020

Institution: Instituto Superior Técnico, Universidade de Lisboa

Description: Award for the excellent teaching of “Mechanics and Waves” and “Thermodynamics and the Structure of Matter”, during the 2nd semester 2018/2019, as evaluated by the students.

Award: Teacher of Excellency 2017/2018



Date: May 2019

Institution: Instituto Superior Técnico, Universidade de Lisboa

Description: Award for the excellent teaching of “Electromagnetism and Optics”, during the 1st semester 2017/2018, and “Thermodynamic and the Structure of Matter”, during the 2nd semester 2017/18, as evaluated by the students.

Award: Teacher of Excellency 2015/2016

Date: May 2017

Institution: Instituto Superior Técnico, Universidade de Lisboa

Description: Award for the excellent teaching of “Thermodynamics and the Structure of Matter”, during the 2nd semester 2015/16, as evaluated by the students.



Scientific

Award: Best Student Oral Communication Award



Institution: Istituto Nazionale de Fisica Nucleare

Amount: 1 Apple Watch Series 3

Description: Award for the best oral communication in the students' presentation session of the 9th IDPASC school and XXXI International Seminar of Nuclear and Subnuclear Physics "Francesco Romano" among 20 participants

Award: Best Pitch Presentation 2019



Institution: Instituto Superior Técnico, Universidade de Lisboa

Amount: 1 Ticket to Web Summit 2019

Description: Award for the first place in the Pitch Competition among 16 participants at the 5th PhD Open Days

Award: Best Presentation Award 2018

Institution: Faculdade de Ciências, Universidade de Lisboa

Amount: 300 CHF + free publication in the journal Universe

Description: Award for the best presentation in the IBERICOS 2018 cosmology meeting.



Award: Top Gil 2010

Institution: Escola Secundária de Gil Vicente

Amount: 500€

Description: Award for the highest grade in the Science and Technology course.



CONFERENCES AND SEMINARS



Invited Seminars: 3



Oral Presentations: 18



Poster Presentations: 4



Seminars

Year: 2019

- (1) “Generalized hybrid metric-Palatini gravity”, Centre for Astrophysics and Gravitation, Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal. (2019)
- (2) “Hybrid metric-Palatini gravity: cosmological and astrophysical applications”, Institute for Astrophysics and Space Sciences, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal. (2019)
- (3) “Stability of Kerr black-holes in the generalized hybrid metric-Palatini gravity”, Bloomberg Center for Physics and Astronomy, Johns Hopkins University, Baltimore, Maryland, USA. (2019)



Conferences

Year: 2019

- (1) *XII Black Hole Workshop Workshop*, Universidade do Minho, Guimarães, Portugal. Conference on General Relativity and Gravitation. **Contributed talk:** “Stability of Kerr black-holes in the generalized hybrid metric-Palatini gravity”.
- (2) *Strong Gravity 2019 Workshop*, Instituto Superior Técnico, Lisboa, Portugal. Conference on General Relativity and Gravitation. **Contributed talk:** “Black-hole perturbations in modified theories of gravity”.
- (3) *22nd International Conference on General Relativity and Gravitation GR22 and 13th Edoardo Amaldi Conference on Gravitational Waves AMALDI13*, Palau de Congressos de Valencia, Valencia, Spain. Conference on General Relativity and Astrophysics.
- (4) *5th IDPASC Student’s Workshop*, Universidade do Minho, Braga, Portugal. Workshop on particle physics, astrophysics and cosmology. **Contributed talk:** “Cosmological and astrophysical applications of modified theories of gravity”.

(5) 14th Iberian Cosmology Meeting (IBERICOS), Bizkaya Aretoa, Bilbao, Spain. Conference on cosmology. **Contributed talk:** “The cosmological phase space of the generalized hybrid metric-Palatini gravity”.

(6) 5th PhD Open Days, Instituto Superior Técnico, Lisboa, Portugal. **Contributed poster:** “Cosmological and astrophysical applications of modified theories of gravity”. **Contributed pitch:** “Revealing the true face of gravity”.

(7) 4th CENTRA meeting day 16rd March, Faculdade de Ciências da Universidade de Lisboa, Lisboa, Portugal. Conference on Astrophysics and Gravitation. **Contributed talk:** “Generalized hybrid metric-Palatini gravity”.

(8) 1st EPS conference on Gravitational Physics, University of Rome “La Sapienza”, Rome, Italy. Conference on Theory and Experimental Gravitation, Gravitational Waves and Modified Gravity.

Year: 2018

(1) Parametrized tests of General Relativity, Bloomberg Center for Physics and Astronomy, Johns Hopkins University, Baltimore, USA. Conference on Gravitation and applications. **Contributed talk:** “Black-hole perturbations in $f(R)$ and hybrid metric-Palatini gravity”.

(2) 15th Marcel Grossmann Meeting MG15, University of Rome “La Sapienza”, Rome, Italy. Conference on General Relativity and Astrophysics. **Contributed talk:** “Wormholes in generalized hybrid metric-Palatini gravity”.

(3) 4th IDPASC Student’s Workshop, Universidade do Coimbra, Coimbra, Portugal. Workshop on particle physics, astrophysics and cosmology. **Contributed talk:** “Generalized hybrid metric-Palatini gravity”.

(4) 13th Iberian Cosmology Meeting (IBERICOS), Faculdade de Ciências da Universidade de Lisboa, Lisboa, Portugal. Conference on cosmology. **Contributed talk:** “Cosmology in generalized hybrid metric-Palatini gravity”.

(5) 4th PhD Open Days, Instituto Superior Técnico, Lisboa, Portugal. **Contributed poster:** “Cosmological and astrophysical applications of modified theories of gravity”.

(6) 3rd CENTRA meeting day 3rd March, Instituto Superior Técnico, Lisboa, Portugal. Conference on Astrophysics and Gravitation. **Contributed talk:** “Generalized hybrid metric-Palatini gravity”.

Year: 2017

(1) X Black Hole Workshop, Universidade de Aveiro, Aveiro, Portugal. Conference on General Relativity and Gravitation. **Contributed talk:** “Wormholes in generalized hybrid metric-Palatini gravity”.

(2) EREP2017: Spanish-Portuguese Relativity Meeting, Escuela de Ingenierías Industriales, Malaga, Spain. Conference on General Relativity. **Contributed talk:** “Cosmological solutions in generalized hybrid metric-Palatini gravity”.

(3) 3rd IDPASC Student’s Workshop, Universidade do Minho, Braga, Portugal. Workshop on particle physics, astrophysics and cosmology. **Contributed talk:** “Generalized hybrid metric-Palatini gravity”.

(4) 3rd PhD Open Days, Instituto Superior Técnico, Lisboa, Portugal. **Contributed poster:** “Cosmological and astrophysical applications of modified theories of gravity”.

(5) 2nd CENTRA meeting day 25th March, Reitoria da Universidade de Lisboa, Portugal. Conference on Astrophysics and Gravitation. **Contributed talk:** “Generalized hybrid metric-Palatini gravity”.

Year: 2016

(1) IX Black Hole Workshop, Universidade do Minho, Guimarães, Portugal. Conference on General Relativity and Gravitation.

(2) Gravitational Lensing and Black Hole Shadows Workshop, GRAV, Universidade de Aveiro, Aveiro, Portugal. Conference on General Relativity and Gravitation with a practical workshop on GYOTO and PyHole software.

(3) EREP2016: One Hundred Years of the Schwarzschild Solution, Fundação Calouste Gulbenkian, Lisboa, Portugal. Conference on General Relativity. **Contributed talk:** “Wormholes in generalized hybrid metric-Palatini gravity”.

(4) 2nd IDPASC Student’s Workshop, Faculdade de Engenharia da Universidade do Porto, Porto, Portugal. Workshop on particle physics, astrophysics and cosmology. **Contributed talk:** “Cosmology in generalized hybrid metric-Palatini gravity”.

(5) *11th Iberian Cosmology Meeting (IBERICOS)*, Municipal Theater of Vila do Conde, Vila do Conde, Portugal. Conference on cosmology. **Contributed talk:** “Cosmology in generalized hybrid metric-Palatini gravity”.

(6) *2nd PhD Open Days*, Instituto Superior Técnico, Lisboa, Portugal. **Contributed poster:** “Cosmological and astrophysical applications of modified theories of gravity”.

(7) *1st CENTRA meeting day 5th March*, Instituto Superior Técnico, Portugal. Conference on Astrophysics and Gravitation. **Contributed talk:** “Cosmology in modified theories of gravity”.

Year: 2015

(1) *VIII Black Hole Workshop*, CENTRA, Instituto Superior Técnico, Portugal. Conference on General Relativity and Gravitation. **Contributed talk:** “Superradiant amplification by stars and black-holes”.

(2) *GR 100 years in Lisbon*, Instituto Superior Técnico, Portugal. Conference on General Relativity and Gravitation.

Year: Before 2015

(1) *VII Black Hole Workshop*, Universidade de Aveiro, Aveiro, Portugal. Conference on General Relativity and Gravitation. (2014)

(2) *Strong Gravity Beyond GR*, Instituto Superior Técnico, Lisboa, Portugal. Conference on General Relativity and Gravitation. (2013)

(3) *V Black Hole Workshop*, Instituto Superior Técnico, Lisboa, Portugal. Conference on General Relativity and Gravitation. (2012)



COURSES AND SCHOOLS



Summer Schools

(1) *Physics and Astrophysics of Gravitational Waves*, Bad Honnef, Germany. Summerschool on gravitational waves. **Contributed talk:** “Cosmological and astrophysical applications of modified theories of gravity”. (2019)

(2) *9th IDPASC School and XXXI International Seminar of Nuclear and Subnuclear Physics "Francesco Romano"*, Otranto, Italy. Course and seminar on Particle and astroparticle physics, astrophysics and cosmology. Participation funded by LIP. **Contributed talk:** “Cosmological and astrophysical applications of modified theories of gravity”. (2019)

(3) *9ª Escola de Astrofísica e Gravitação*, CENTRA, Instituto Superior Técnico, Lisboa, Portugal. Summerschool on Astrophysics, Gravitation and Particle Physics. **Contributed lecture:** “Wormholes”. (2018)

(4) *School on Gravitational Waves for Cosmology and Astrophysics*, Centro de ciencias de Benasque Pedro Pascual, May 28th to June 10th. Summerschool on Gravitational Waves. (2017)

(5) *6th IDPASC School*, Vipava, Slovenia. Course on Particle and astroparticle physics, astrophysics and cosmology. Participation funded by LIP. **Contributed talk:** “Cosmology in generalized hybrid metric-Palatini gravity”. (2016)

(6) *7ª Escola de Astrofísica e Gravitação*, CENTRA, Instituto Superior Técnico, Lisboa, Portugal. Summerschool on Astrophysics, Gravitation and Particle Physics. (2014)

(7) *6ª Escola de Astrofísica e Gravitação*, CENTRA, Instituto Superior Técnico, Lisboa, Portugal. Summerschool on Astrophysics, Gravitation and Particle Physics. (2012)



Other Courses

- (1) *String Theory course*, Department of Mathematics, Instituto Superior Técnico, Lisboa, Portugal. Graduate course on String Theory by professor Gabriel Cardoso with a final grade of 19/20. (2017)
- (2) *Course of physics at the LHC*, LIP, Instituto Superior Técnico, Lisboa, Portugal. Course on particle physics by CERN researchers. (2016)
- (3) *Projecto Viver Astronomia Monitor Formation*, Astronomical Observatory of Lisbon, Lisboa, Portugal. Theoretical courses on Astronomy, Astrophysics, Cosmology, Gravitation, Optics, Meteorology; practical courses on telescope handling. Courses given by research scientists from the Institute for Astrophysics and Space Sciences. (Since 2013)
- (4) *International Masterclasses*, European Particle Physics Outreach Group (EPPOG), Instituto Superior Técnico, Lisboa, Portugal. School on experimental particle physics and accelerator physics. (2010)



OUTREACH



Public Talks: 25



Astronomy Events: 9



Others: 10



Public Talks

- (1) *Ciência Viva – O Espaço vai à Escola 2019 (7-11 October)*, Portugal. Public talks on Universe Structure and Evolution, Science communication. Schools: Escola Básica 2/3 D. Pedro IV, Extrenato João XXIII, Agrupamento de escolas de Camarate, Redbridge School, Escola Básica Integrada do Carregado, Agrupamento de escolas das Olaias. (2019)
- (2) *Speaker*, Escola Secundária Virgílio Ferreira, Lisboa, Portugal. Public talk on special and general relativity, astrophysics, wormholes, time traveling, and paradoxes. (2019)
- (3) *9ª Escola de Astrofísica e Gravitação*, CENTRA, Instituto Superior Técnico, Lisboa, Portugal. Lecture on special and general relativity, astrophysics, wormholes, time traveling, and paradoxes. (2018)
- (4) *Dia Nacional da Cultura Científica*, Escola Secundária Rainha D. Amélia, Lisboa, Portugal. Public talk on general relativity, gravitational waves, and the Nobel prize of physics 2017. (2017)
- (5) *Semana da Física NFIST 2017*, Instituto Superior Técnico, Lisboa, Portugal. Public Talks on Universe Structure and Evolution. (2017)
- (6) *Ciência Viva – O Espaço vai à Escola 2016 (3-7 October)*, Portugal. Public talks on Universe Structure and Evolution, Science communication. Schools: Extrenato Champagnat, Escola Profissional Gustave Eiffel, Escola Secundária de Alvide, Escola Secundária de Gil Vicente. (2016)
- (7) *Noite Europeia dos Investigadores (NEI) 2016*, Centro Ciência Viva de Sintra, Planetarium sessions; Astronomy and Astrophysics teaching. (2016)
- (8) *Ciência Viva – O Espaço vai à Escola 2015 (5-9 October)*, Portugal. Public talks on Universe Structure and Evolution, Science communication. Schools: Escola Secundária de Gil Vicente, Escola Secundária Rainha Dona Amélia, Escola Secundária Ibn Mucana, Escola Secundária de Miraflores, Escola Secundária du Bocage, Colégio Miramar Sá. (2015)
- (9) *Workshop de Astronomia NFIST 2013*, Instituto Superior Técnico, Lisboa, Portugal. Public talks on Universe Structure and Evolution; Telescope Handling, Science communication. (2013)
- (10) *Semana da Física NFIST 2013*, Instituto Superior Técnico, Lisboa, Portugal. Public Talks on Universe Structure and Evolution; Telescope Handling; Planetarium Sessions. (2013)
- (11) *Workshop de Astronomia NFIST 2012*, Instituto Superior Técnico, Lisboa, Portugal. Public talks on Universe Structure and Evolution; Telescope Handling, Science communication. (2012)

(12) *Semana da Física NFIST 2012, Instituto Superior Técnico, Lisboa, Portugal. Public Talks on Universe Structure and Evolution; Telescope Handling; Planetarium Sessions. (2012)*



Astronomy Events

(1) *Dark Sky Party Alqueva 2019, Campinho, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication; People management. (2019)*

(2) *50 anos chegada à lua, Palácio de Belém, Belém, Portugal. Celebration of the 50th anniversary of the moon landing. Astronomy teaching; Telescope handling; Science communication. (2019)*

(3) *Monitor, 20-25th August, Observatório Lago Alqueva, Monsaraz, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication. (2018)*

(4) *Astroparty 2017, Observatório Lago Alqueva, Monsaraz, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication; People management. (2017)*

(5) *Starlight Party at Dark Sky Alqueva 2017, Reguengos de Monsaraz, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication; People management. (2017)*

(6) *Starlight Party at Dark Sky Alqueva 2016, Mourão, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication; People management. (2016)*

(7) *Ciência Viva – Astronomia no Verão 2014, Couço, Évora, Beja, Sesimbra, Lisboa, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication. (2014)*

(8) *Ciência Viva – Astronomia no Verão 2013, Couço, Évora, Beja, Sesimbra, Lisboa, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication. (2013)*

(9) *Ciência Viva – Astronomia no Verão 2012, Couço, Évora, Beja, Sesimbra, Lisboa, Portugal. Astronomy and Astrophysics teaching; Telescope handling; Science communication. (2012)*



Other Events

(1) *Academia de Verão de Aprendizagem e Olimpíadas Científicas, Instituto Superior Técnico, Lisboa, Portugal. Workshop with 5th to 7th grade students about reading scientific papers and preparing oral presentations. (2019)*

(2) *Pulsar NFIST, Instituto Superior Técnico, Lisboa, Portugal. Written an article in the physics outreach magazine “PULSAR” about wormholes and time travelling. (2019)*

(3) *International Physics Olympiads 2018, Instituto Superior Técnico, Lisboa, Portugal. Correction, grading and moderation of theoretical physics exams. (2018)*

(4) *Translator, Heritage Malta, Tarxien Temples, Tarxien, Malta. Translation of the audioguide and smartphone application for the neolithic archaeological site Tarxien Temples in Malta. (2018)*

(5) *Your night out under the stars, Planetário Calouste Gulbenkian, Lisboa, Portugal. Public workshop on observational astronomy and astronomical distances. (2017)*

(6) *Monitor, Pavilhão do conhecimento, Lisboa. Science communication; Explainer; General sciences teaching; Work with children. (2016)*

(7) *ESA Citizens Debate 2016, Pavilhão do Conhecimento, Lisboa, Portugal. Facilitator/Moderator in a debate on the future role of the European Space Agency and its influence in the life of the citizens. (2016)*

(8) *Chairman, GRIT group meetings, 2nd semester (February to June). People Management, debate moderation, meeting organization, science communication. (2015)*

(9) *Projecto Pais com a Ciência, Escola Secundária de Gil Vicente, Lisboa, Portugal. Physics and Chemistry teaching; Laboratorial techniques teaching; Science communication; Public talks on Universe Structure and Evolution; Work with children. (2013-2014)*

(10) *Pulsar NFIST, Instituto Superior Técnico, Lisboa, Portugal. Written 4 articles in the physics outreach magazine “PULSAR” about night orientation using the stars and the history and mythology behind the constellations.*



(1) *Quiosque do Conhecimento*, Museu Nacional de História Natural e da Ciência, Lisboa, Portugal. Workshop on the development of new platforms and events for citizens to interact easily with the scientific community. (2019)

(2) *Fulbright Enrichment Seminar*, “The New South: Leveraging Diversity for Economic Growth”, Atlanta, Georgia, USA. Conference on entrepreneurship and economic growth for Fulbright grantees. (2019)

(3) *9º PubhD de Lisboa*, BIBO bar, Bairro Alto, Lisboa. Event on public talks by PhD students about their research topics. **Contributed talk**: “Astrophysical and cosmological applications of modified theories of gravity”. (2016)

(4) *Cozinhar A Ideia d'O Século*, McKinsey Portugal and Fundação O Século, Estoril, Portugal. Consultancy workshop to introduce high-performance students to a consultancy job. (2015)

(5) *Workshop de Bom a Excelente*, Instituto Superior Técnico, Lisboa, Portugal. Workshop for high performance students about time management, study methods, group and team work, preparation of reports and oral presentations. (2013)

(6) *EBEC 2013*, BEST Portugal, Instituto Superior Técnico – Taguspark, Lisboa, Portugal. Competition on consultancy and engineering. The consultancy part related to dynamic management and organization, and the engineering part consisting of building a chain reaction machine out of common materials. (2013)

(7) *EBEC 2012*, BEST Portugal, Instituto Superior Técnico – Taguspark, Lisboa, Portugal. Competition on consultancy and engineering. The consultancy consisting of solving a case of an enterprise that wanted to build a powerplant, and the engineering part consisting of building a vehicle that could move by using the potential energy of a bottle of water. (2012)

(8) *Engineering Competition*, NFIST, Instituto Superior Técnico, Lisboa, Portugal. Competition consisting on the construction of a bridge with common materials.