

# Curriculum Vitae: João Luís Rosa

## Personal information:

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## Education and teaching

- a) **Education:** *BSc degree* in Sciences of Engineering with specialization in Physics Engineering at Instituto Superior Técnico (IST) in Lisbon, Portugal with a final grade of 17/20 (2013); *MSc degree* in Physics at IST with a final grade of 19/20 (2015); *PhD degree* in Physics at IST with a final classification of “approved with distinction and honour” (2019).
- b) **Teaching:** I have 6 years of teaching experience at the university level. I taught the courses of “Thermodynamics and the Structure of Matter”, “Electromagnetism and Optics”, and “Mechanics and Waves” at IST (2016 to 2019), and the course of “Selected Topics in Theories of Gravity” at the University of Tartu (2021 and 2022)
- c) **Related awards:** I have been awarded the “Teacher of Excellency” award in IST for three times (2017, 2019, and 2020).

## Scientific production

- a) **Publications:** In my 7 years of research experience, I have published 34 papers. My papers have been published in the journals: Physical Review D; European Physical Journal C; European Physical Journal Plus; Classical and Quantum Gravity; and Journal of Cosmology and Astroparticle Physics, and International Journal of Modern Physics. I have earned ~700 citations, with an h-index of 19 and an i-10 index of 26 (INSPIRE). More information available here: <https://inspirehep.net/authors/1817599>
- b) **Talks in international meetings:** I have presented my work in a total of 34 international meetings, namely: Iberian Cosmology meeting (2016, 2018, 2019, 2021), Spanish-Portuguese Relativity Meeting (2016, 2017, 2021, 2022), Black-hole Workshop (2015, 2017, 2019, 2020, 2021, 2022, 2023), Marcel-Grossman meeting (2018, 5 talks in 2021), Parametrized tests of General Relativity (2018), Strong Gravity Workshop (2019), Geometric Foundations of Gravity (2021, 2022 and 2023), Polish Society on Relativity (2022, 2023), Fundamental physics at the Galactic Centre (2023), including two as an invited speaker: Winter Workshop in Theoretical Physics (2020, 2021, 2022, 2023), and a plenary talk: Black Holes Inside and Out (2021).
- c) **Invited seminars:** I have been invited to present my work in a total of 22 seminars worldwide, namely in the following universities: Johns Hopkins University, University of Lisbon, Instituto Superior Técnico, ETH Zurich, Imperial College London, Tokyo Institute of Technology, Rykkyo University, University of Tokyo, University of Aveiro, University of Nagoya, Sapienza University of Rome, Leiden University, University of Stavanger, Complutense University of Madrid, Scuola Internazionale Superiore di Studi Avanzati, Babes-Bolyai University, Jagiellonian University, University of Bremen, University of Bologna, University of Tartu.

- d) **Related awards:** I have been awarded the best presentation award in the IBERICOS2018 meeting, the 5<sup>th</sup> PhD Open Days at IST, and the 9<sup>th</sup> IDPASC summer school, as well as the best outreach video in the COSMO-21 meeting, and one of the best 4 posters in the BHIO2021 meeting.

## Research and supervision

- a) **Research positions:** Current position: *Assistant Professor*, Institute for Theoretical Physics, Informatics, and Astrophysics, University of Gdansk, Poland (since 2023); Other positions: *Research fellow*, Institute of Physics of the University of Tartu, Tartu, Estonia. (2020-2022); *Visiting PhD student*, Bloomberg Center for Physics and Astronomy, Johns Hopkins University, Baltimore, MD, USA. (2018-2019); *PhD Student*, Centro de Astrofísica e Gravitação, Instituto Superior Técnico, Lisboa, Portugal. (2015-2019).
- b) **Research grants:** *Mobilitas Pluss Postdoctoral Research Grant*, Mobilitas Pluss mobility funding, Estonian Research Council. (2020); *Fulbright Foreign Student Scholarship*, Fulbright Foreign Student Program with the support of FCT, Fulbright Association. (2018); *FCT-IDPASC PhD Scholarship*, International Doctorate Network in Particle Physics, Astrophysics and Cosmology, Portuguese Foundation for Science and Technology. (2015).
- c) **Supervision:** Supervised six students: *Pedro Piçarra* at the level of “Introduction to research” with the project “Existence and stability of relativistic fluid spheres supported by thin-shells” (2020), with the publication of one paper in PRD; *Helen Asuküa* at the MSc level, with the project “Quasi-normal modes of black-holes in teleparallel gravity” (2020 to 2021); *Tiago Gonçalves* at the PhD level, with the project “Modified gravity: cosmological and astrophysical applications” (since 2021). *Paul Martin Kull* at the BSc level (2021 to 2022); *Hanna Liis Tamm* at the BSc level (since 2022); Daniela Cordeiro at the MSc level (Since 2023); Nailya Ganiyeva at the MSC level (since 2023); *Miguel Pinto* at the PhD level (since 2023).
- d) **Refereeing:** I have refereed a total of 40+ papers from 12 different journals, namely: European Physical Journal C (10 reviews) and Plus (1 review); Physics of the Dark Universe (14 reviews); International Journal of Modern Physics A (2 reviews) and D (4 reviews); Letters in High Energy Physics (1 review); Galaxies (2 review); General Relativity and Gravitation (5 reviews); Symmetry (1 review); Results in Physics (1 review); Frontiers in Physics (1 review); Astronomy and Computing (1 review); Modern Physics Letters A (1 review).

## Knowledge dissemination

- a) **Public talks and lectures:** I have presented 50+ public talks in 15 different outreach events both in Portugal and in Estonia, namely: Physics Week NFIST (2012, 2013 and 2017); Astronomy Workshop NFIST (2012, 2013); Ciência Viva – Space goes to school (2015, 2016, 2019, 2021, 2022, 2023); European Night of the Researchers (2016); National day of Scientific Culture (2017); School for Astrophysics and Gravitation (2018); 15x4 Tartu (2020). These talks include the topics of universe structure and evolution, gravitational waves, wormholes and time machines, and planetarium sessions.
- b) **Astronomy events:** I have participated in a total of 8 public astronomy events in Portugal, namely Ciência Viva – Astronomy in the Summer (2012, 2013 and 2014); Starlight Party (2016, 2017); Astroparty (2017); 50 years of the moonlanding (2019) and Dark Sky Party (2019). I have also worked as a monitor in the Lake Alqueva Observatory in the summer (2018, 2020).
- c) **Other outreach activities:** I have participated in the ESA Citizens Debate as a facilitator/moderator (2016); volunteered as a grader in the International Physics Olympiads (2018); wrote articles for the outreach magazine Pulsar NFIST (2013, 2019); participated in the project “Parents with science” as a physics and chemistry teacher for high-school students; volunteered monthly in the Astronomical Observatory of Lisbon in the project “Viver Astronomia” as a monitor (2013 to 2020).

**Other experience:**

- a) **Organizational:** I have been part of the organizing committee of the conferences Geometric Foundations of Gravity 2021 and Metric-Affine Frameworks for Gravity 2022 in Tartu. Furthermore, I have also been the organizer or the group meetings of the Gravitation in Técnico research group (2015) and the Journal Club of the Laboratory for Theoretical Physics of the University of Tartu (2020 to 2021)
- b) **Languages:** *Portuguese*, as a native speaker; *English*, a very good user (scored 8/9 in the IELTS test); *French*, intermediate B1 level; *Spanish*, basic A2 level.