# Short CV


## José Ferreira

jpferreira.me jose@jpferreira.me jpmvferreira InspireHEP


## Education

**PhD in Physics** 08/2023 - PRESENT
*University of Aveiro*
*Supervisors:* Miguel Zilhão, Carlos Herdeiro and Raimon Luna

**Master in Physics** 09/2020 - 09/2022
*Faculty of Sciences of the University of Lisbon*
*Thesis:* Constraining $f(Q)$ Cosmology with Standard Sirens
*Supervisors:* Nelson Nunes and Tiago Barreiro

**Bachelor in Physics** 09/2017 - 07/2020
*Faculty of Sciences of the University of Lisbon*

## Research Institutes

**Gr@v** 08/2023 - PRESENT
Member of the Gravitation group integrated in the Center for Research & Development in Mathematics and Applications (CIDMA) of the University of Aveiro, Portugal.

**Institute of Astrophysics and Space Sciences** 09/2021 - 07/2023
Member of the cosmology group at the Institute of Astrophysics and Space Sciences, Lisbon node, Portugal.

## Teaching

**Assistant** 02/2022 - 07/2023
*Faculty of Sciences of the University of Lisbon*
Courses: Experimental Physics I, Elements of Physics, Mathematical Methods for Physicists, General Physics

## Fellowships

**PhD scholarship** 01/2024 - PRESENT
*Portuguese National Foundation for Science and Technology*
A PhD scholarship to perform numerical evolution of hairy black holes in General Relativity.

**Research Fellowship** 08/2023 - 01/2024
*Gr@v*
A fellowship to study hairy black holes, properties and stability, in General Relativity.

**Research Fellowship** 02/2023 - 07/2023
*Institute of Astrophysics and Space Sciences*
A fellowship to study cosmological models based on non-metric gravity using current and forecast gravitational wave events.

## Publications


**José Ferreira**, Tiago Barreiro, José Mimoso, and Nelson J. Nunes. "Testing $\Lambda$-free $f(Q)$ cosmology". **Phys. Rev. D** 108 (6 Sept. 2023), p. 063521. doi: 10.1103/PhysRevD.108.063521.

**José Ferreira**, Tiago Barreiro, José Mimoso, and Nelson J. Nunes. "Forecasting $F(Q)$ cosmology with $\Lambda$CDM background using standard sirens". **Phys. Rev. D** 105 (12 June 2022), p. 123531. doi: 10.1103/PhysRevD.105.123531.

## Communications

### Contributed Talks

"(In)stability of Q-Hairy Black Holes". 20th-22th of May, 2025. NewFunFICO Meeting, Valencia, Spain. (Links: pptx )

"Non-linear Superradiance of Charged Black Holes: Beyond Spherical Symmetry". 18th-22th of November, 2024. *VI* Amazonian Symposium on Physics, Belém, Brazil. (Links: pptx, pdf )

"Using Standard Sirens to test non-metric theories of gravity". 19th-20th of December, 2023. *XVI* Black Holes Workshop, Porto, Portugal. (Links: pptx, pdf )

"Forecasting $F(Q)$ Cosmology with $\Lambda$CDM Background using Standard Sirens". 4th-6th of May, 2022. Iberian Cosmology Meeting 2022, Barcelona, Spain. (Links: recording, pdf, pptx)

### Seminars

"Cosmological Tests on Non-Metricity Based Theories of Gravity". 20th of September, 2023. Gr@v, Aveiro, Portugal. (Links: recording, pptx, pdf )

### Posters

"Testing $\Lambda$-Free $f(Q)$ Cosmology". 3th-5th of May, 2023. Dark Matter and Stars, Lisbon, Portugal. (Links: pdf)

## Digital Skills

**High Level Languages** Julia, Python, Mathematica
**Low Level Languages** C, Fortran, CUDA
**Multimedia Editing** GIMP, Photoshop, Inkscape, Kdenlive, Audacity
**Web Development** Quarto, Hugo

I consider myself an advanced Linux user, with experience using it on personal machines, servers, clusters and microcontrollers. I work mostly on a terminal based ecosystem, creating and making use of terminal utilities to develop my projects.

## Academic Activities

**Supervisor at the IAstro Summer Internships 2023** 07/2023
*Institute of Astrophysics and Space Sciences*

Supervisor of two undergraduate projects that consisted on constraining modified gravity cosmological models with current and forecast datasets coming from different sources.

**Podcast "Physically Speaking"** 12/2020 - 12/2022
Fisicamente Falando  Fisicamente Falando  fisicamentefalando.nfef  fisicamente_falando_

A student driven podcast created during the pandemic where we interviewed faculty members to speak about their lives, both inside and outside of academia. I am in charge of the audio and video editing and also take part in some of the interviews.

**Member of the Student Body for Physicists and Physical Engineers** 10/2020 - 10/2021
nfef-fcul.com  NFEFFCUL  nfeffcul

I was in charge for the development of the digital tools of the student body of physicists and physical engineers. This included the website, the online repository (which is made up of student provided content) and the Discord channel.

## Outreach

**"Echoes and Shadows: How to Detect Black Holes"** 03/05/2024
Presentation (.pptx)
A Presentation, for high school students, on what are black holes and how to find them.

**European Researchers' Night 2024** 27/09/2024

Coordinator of the participation of Gr@v in the European Researcher's Night in Aveiro, Portugal. Using digital content, we explained the physics behind Gravitational Waves and lensing around compact objects.

**"When a Black Hole Falls Inside... Another Black Hole"** 15/04/2023
Presentation (.pptx)
Presentation of an Ignite style talk in an event organized by the Institute of Astrophysics and Space Sciences that brings space sciences to cities far away from the main urban areas.