

Paolo Cremonese, Ph.D.

PostDoc Researcher

UIB @ Palma, Spain



paolocremonese.com



cremonesep25 |at| gmail.com



PaoloCremo

About me —

I am a PostDoc researcher at the Universitat de las Illes Balears, in Palma, Spain. I work on gravitational lensing of gravitational waves.

I am passionate about finance, technologies, data analysis, travelling and learning new things. Like, for example, how to create a website! You can find it at paolocremonese.com, with more information about me.

Skills ——

Python macOS

Linux Mathematica

IATEX

Git

HTML/CSS Apple Keynotes

Languages -

Italian - Mother Tongue

English - Fluent

Spanish - Basics

Polish - Very Basic

Interests -

Gravitational Waves & Lensing

Data Analysis

Finance and Investments

Sports, Books & Piano.

Work Experience

Current PostDoc Researcher UIB, Palma, Spain

Member of LIGO collaboration. Gravitational Waves Data Analysis

2018 Internship as Data Scientist DBA Group, Italy

I worked in a group developing methods and knowledge on how to record and elaborate different type of data, from meteorological to in-

dustrial

Education

2022 Ph.D. in Physics Szczecin, Poland

Gravitational lensing of Gravitational Waves

2017 M.Sc. in Astronomy Padova, Italy & Stockholm, Sweden

Thesis on lensing of gravitational waves done at Stockholm university

2015 B.Sc. in Astronomy Padova, Italy

Thesis on dark matter in spiral galaxies

[Projects

• #research I build and use models to analyze Gravitational Waves data with a focus on identifying lensed events. Additionally, I am actively contributing to a project aimed at organizing and automating different pipelines for the detection of such events.

- #personalfinance #appdevelop #sideprojects I am developing a mobile application to keep track of personal finance. This project involves the creation of a dedicated Python package designed to efficiently track expenses and investments. Along with it, I am currently having fun coding a package to control Spotify custom playlists and a bot to get daily new papers from ArXiv based on user-defined topics.
- \bullet #website I designed and coded my own website, where I keep my info, thoughts and different things.

Main Publications

- #6 Invariance transformations in wave-optics lensing: implications for gravitational-wave astrophysics and cosmology
- #5 Follow-up Analyses to the O3 LIGO-Virgo-KAGRA Lensing Searches
- #4 Characteristic features of Gravitational Wave lensing as probe of lens mass model
- #3 Breaking the mass-sheet degeneracy with gravitational wave interference in lensed events
- #2 High accuracy on H measurements from gravitational wave lensing events
- #1 The lensing time delay between gravitational and electromagnetic waves

The complete list at inspirehep.net/authors/1859874

Mentions

#2 Top ArXiv papers from week15, 2021 - S.Vagnozzi - Link to article

#1 Constraining the Hubble Constant with Lensed Gravitational Wave Events, 2019 - K. Shin - Link to article

Main Conferences

Talks & Posters

- \bullet "Mass-Sheet Degeneracy in Gravitational Wave Lensing" @ NBI Strong Group seminar, 2023/12; LVK meeting, 2023/09
- "Wave Optics in Gravitational Wave Lensing" @ UBC Gravity seminar, 2023/09
- "Divulgative talk on Dark matter" @ YouTube, 2022/10
- \bullet "Wave-optics in Gravitational Waves lensed events" @ UIB Relativity and Gravity group seminar, 2021/11
- Presented paper #3 @ GWverse, 2021/09; Gravitex 2021, 2021/08; COSMO '21, 2021/08; Amaldi 14, 2021/07 Cosmology from Home, 2021/07; Ibericos 2021/04
- Presented paper #2 @ Cosmic controversies, 2019/10
- \bullet Member of organizing committee @ The 6th Conference of the Polish Society on Relativity, 2019/09

The complete list with slides and link to conferences at paolocremonese.com/CV