



Paolo Cremonese, Ph.D.  
PostDoc Researcher

- Treviso, Italy
- paolocremone.com
- cremonesep25[at]gmail.com
- PaoloCremo

About me

I am a Postdoctoral Researcher at the UIB in Palma, Spain, specializing in gravitational lensing of gravitational waves. I have a strong passion for finance, technology, data analysis, and continuous learning, complemented by a love for travel. I love tackling challenging problems and am now seeking to leverage my analytical skills and passion for innovation in a dynamic opportunity outside of academia, where I can combine my interests.

Skills

- Python, macOS, Linux, Mathematica, LaTeX, Slurm, Git, Apple Keynotes, HTML/CSS, SQL

Languages

- Italian - Mother Tongue
- English - Fluent
- Spanish - Basics

Interests

- Technology
- Data Analysis
- Finance and Investments
- Sports, Books & Piano.

Work Experience

- Current: PostDoc Researcher, Member of LIGO collaboration, Gravitational Waves Data Analysis, UIB, Palma, Spain
- 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 industrial

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 develop tools to analyze Gravitational Waves data, focusing on finding events that are bent or magnified by massive objects (i.e. lensing). Im also working on a project to organize and automate the process of detecting these lensed events more efficiently.
- #personalfinance #appdevelop #sideprojects I'm developing a personalised mobile app to help manage personal finances. This includes creating a custom Python package to track expenses and investments. On the side, I'm also working on a fun project that lets me control Spotify playlists and building a bot to send daily updates of new research papers from ArXiv based on topics of interest.
- #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

- “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
  - “Divulgate talk on Dark matter” @ YouTube, 2022/10
  - “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
  - 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 paolocremone.com/CV