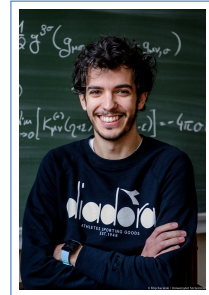


Paolo Cremonese

Curriculum Vitae

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Personal details

First name Paolo
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Education

2018-current **PhD**, *Szczecin University*, Mathematics and Physics department, Szczecin, Poland.
subject Multi-messenger astrophysics, gravitational lensing, gravitational waves, data analysis
supervisor prof. Vincenzo Salzano
web page cosmo.usz.edu.pl/pcremonese
2015-2017 **Master's Degree in Astronomy**, *Università degli Studi di Padova*, Padova, *Final result*: 110L/110.
2011-2015 **Bachelor's Degree in Astronomy**, *Università degli Studi di Padova*, Padova, *Final result*: 98/110.

Publications

on-line list [arXiv - Paolo Cremonese](#)
[INSPIRE - Paolo Cremonese](#)

[List](#)

- 11/2019 *High accuracy on H_0 measurements from gravitational wave lensing events*, (arXiv:1911.11786)
- 08/2018 *The lensing time delay between gravitational and electromagnetic waves*, (arXiv:1808.05886), a reviewed copy of the master thesis work. Submitted to A&A.

Mention

- 12/2019 **Astrobites**, *the astrophysical literature journal published an article about my second paper - arXiv:1911.11786*, astrobites.org/2019/12/02/constraining-the-hubble-constant-with-lensed-gravitational-wave-events/.

Conferences attendance

- 10/2019 **Cosmic Controversies**, Chicago, Illinois (USA), Presented a poster titled "*Hubble tension: a Gravitational Wave lensing approach*".
- 09/2019 **The 6th Conference of the Polish Society on Relativity**, Szczecin, Poland.

Doctoral schools attendance

- 12/2019 **XIII Tonale Winter School on Cosmology**, *Theory for Observers & Observations for Theorists*, Institute of Theoretical Physics Heidelberg University, Passo del Tonale (TN), Italy.
- 12/2019 **IPARCOS School on Gravitational Waves**, Facultad de Ciencias Físicas, Universidad Complutense de Madrid, Madrid, Spain.

Master's Thesis

- Title *Delay in arrival time between Gravitational Waves and Electromagnetic signal due to Gravitational Lensing*
- Supervisor Professor Edvard Mörtzell *from the Department of Physics at Stockholm University*
- Supervisor Professor Sabino Matarrese *from the Department of Physics at Università degli Studi di Padova*

Description I studied the arrival time difference, due to gravitational lensing, between two signals of different nature, gravitational and electromagnetic, coming from the same source. I studied the problem both from a theoretical and observational point of view. It was an extremely useful experience because, in order to fully understand and properly work on my thesis, I had to study many different subjects from different fields. In particular, I expand my knowledge above academic standard on gravitational waves, gravitational lensing, millisecond pulsars, pulsar timing array, super massive binary BHs and electromagnetic signal from those. A reviewed copy of the work was submitted for publication to *A&A* on July the 9th, 2019.

Bachelor's Thesis

Title *Materia oscura nelle galassie a spirale / Dark matter in spiral galaxies*
Supervisors Professor Alessandro Pizzella & Professor Enrico Maria Corsini
Description In this thesis I studied the presence of dark matter in two spiral galaxies, using their velocity curve shaped through observation data of doppler shift of some fundamental spectral lines. I modelled a dark matter halo fitting the velocity curve and the "regular" matter curve, obtained through photometric data. In parallel to that, I also explained the velocity curve through the *MOND* theory. During this work I learned to use *IDL* and I studied more in detail dark matter.

Observing experience

13-14 January 2016 **Asiago Astrophysical Observatory**, 122 cm, Asiago, Italy.
Adaptive Optics speckle interferometry of a sample of unresolved binary stars.
November 2013 **Asiago Astrophysical Observatory**, 122 cm, Asiago, Italy.
Data reduction of photometric images with pre-reduction for bias and flat field.

Experience

Vocational

Feb-Jul/2018 **Internship**, *data science, DBA group*, Treviso, Italy.
I took part in an 6 months internship. I worked in a group developing methods and knowledge on how to record and elaborate different type of data, from meteorological to industrial. There, I had the opportunity to deepen my knowledge of *PYTHON* language and learning also some statistics topics, especially neural networks and classification methods.
summer 2012 and 2013 **Part time job**, Treviso, Italy.
I spent some time, during late summer, working in a stationery shop, where I had the opportunity to develop my social skill with customers and my team work skill as an employee.

Miscellaneous

- 2016–2017 **Erasmus experience**, Stockholm.
I spent the last year of my master degree in Stockholm thanks to the *Erasmus+* project. That gave me the opportunity to live in a different country and in a large city. There, I experienced a total independent life and made a lot of important experiences useful for my growth as student and, most of all, as person.
- summer **Volunteering**, Summer school camp.
2006–2011 I used to organize summer school camp for children of my town. We worked in group and I expand my skill in the leadership of a group.

Awards

- 2016 Erasmus + scholarship

Computer skills

- Intermediate OpenOffice, Linux, Microsoft Windows, Mathematica
Advanced PYTHON, L^AT_EX

Languages

- Italian Mother tongue
English Advanced *Fluent in writing and speaking*
Spanish Basic/Learning *Basic words and phrases only*

Interests

- Travelling Discover and live new cultures and countries is for sure one of my goal for the present and the future.
- Data analysis Besides my academic work, I like to study and be informed about machine learning and data science in general.
- Piano I took piano lessons for several years, since I was a kid, and it is still a special thing for me.
- Sports I played football for many years in a team, and I still play it sometimes. I also love lots of other sport and physical activities, one in particular is cycling.
- Books Reading has always been vital to me. To learn always new stuff and plunge into books is my thing.
- Technologies I am interested in all technologies regarding both my field of study and not, and I try to keep informed on this topic as much as I can.