Lorenzo Piccari

EDUCATION AND TRAINING

Dottorato in Fisica
Sapienza Università di Roma [01/11/2023 – Current]

City: Rome │ **Country:** Italy │ **Website:** https://www.phys.uniroma1.it/fisica/

The focus of my Ph.D. project is gravitational-wave astronomy. I am mainly involved in studying compact binary coalescences through the analysis of gravitational-wave data produced by the LIGO-Virgo-KAGRA Collaboration, as one of its members.

I have gained, and I will continue to develop, expertise in:

- Gravitational-wave physics
- Data analysis and programming, including the development and application of advanced techniques to analyze GW signals from interferometric detectors

Laurea Magistrale in Fisica
Sapienza Università di Roma [09/2020 – 05/2023]

City: Rome │ **Country:** Italy │ **Website:** https://www.phys.uniroma1.it/fisica/ │ **Final grade:** 110/110 │ **Thesis:** Accounting for Neutron Star Tidal Deformability in Compact Binary Coalescence Template Banks

Laurea Triennale in Fisica
Università degli Studi Roma Tre [09/2016 – 12/2019]

City: Rome │ **Country:** Italy │ **Website:** https://matematicafisica.uniroma3.it/ │ **Final grade:** 110/110 Cum Laude │ **Thesis:** Reconstruction methods for the large-scale structure of the Universe

Diploma di Liceo Scientifico
Liceo Scientifico A. Avogadro di Roma [2011 – 2016]

City: Rome │ **Country:** Italy │ **Website:** https://www.liceoavogadro.edu.it/ │ **Final grade:** 95/100

Erasmus experience during Laurea Magistrale
Université de Genève [15/02/2021 – 30/06/2021]

City: Genève │ **Country:** Switzerland │ **Website:** https://www.unige.ch/sciences/physique/physics-section/section/

CONFERENCES AND SEMINARS

[04/11/2024 – 08/11/2024] Cascina, Italy
Virgo Week
Talk
Title: *"Accounting for Neutron Star Tidal Deformability in Compact Binary Coalescence Template Banks"*

[07/07/2024 – 12/07/2024] Pescara, Italy
Seventeenth Marcel Grossmann Meeting
Invited Talk in a parallel session.
Title: *"Compact Binary Coalescences Observed by the LIGO-Virgo-KAGRA Collaboration during the First Three Observing Runs"*

Link: https://indico.icranet.org/event/8/overview

[19/02/2024 – 23/02/2024] Vietri sul Mare, Italy
SIGRAV International School 2024 - Measuring Gravity
School attendance

Link: https://agenda.infn.it/event/38520/

[07/11/2022 – 11/11/2022] Cascina, Italy
Virgo Week
Talk
Title: *"Accounting for Neutron Star Tidal Deformability in Compact Binary Coalescence Template Banks"*

[05/09/2022 – 09/09/2022] Paestum, Italy
Amaldi Research Center Summer School
School attendance

Link: https://agenda.infn.it/event/28968/

[04/07/2022 – 08/07/2022] Cascina, Italy
Virgo Week
Talk
Title: *"Considering tidal deformability in the construction of template banks"*

PUBLICATIONS

[2025]
Search for continuous gravitational waves from known pulsars in the first part of the fourth LIGO-Virgo-KAGRA observing run

The LIGO Scientific Collaboration, the Virgo Collaboration, and the KAGRA Collaboration, 2025.

[2024]
Search for gravitational waves emitted from SN 2023ixf

The LIGO Scientific Collaboration, the Virgo Collaboration, and the KAGRA Collaboration, 2024.

[2024]
A Search Using GEO600 for Gravitational Waves Coincident with Fast Radio Bursts from SGR 1935+2154

The LIGO Scientific Collaboration, the Virgo Collaboration, and the KAGRA Collaboration, 2024, The Astrophysical Journal Letters. DOI: 10.3847/1538-4357/ad8de0

[2024]
Observation of Gravitational Waves from the Coalescence of a 2.5–4.5 M☉ Compact Object and a Neutron Star

Write here the description...

The LIGO Scientific Collaboration, the Virgo Collaboration, and the KAGRA Collaboration, 2024, The Astrophysical Journal Letters. DOI: 10.3847/2041-8213/ad5beb

TEACHING EXPERIENCE

[18/04/2024 – 22/04/2024]
Tutor - GW Open Data Workshop (2024)

I tutored workshop participants by assisting them with software tutorials, helping them learn and improve their skills in GW data analysis.

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English	Spanish
LISTENING C1 **READING** C1 **WRITING** C1	**LISTENING** A2 **READING** A2 **WRITING** A1
SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1	**SPOKEN PRODUCTION** A1 **SPOKEN INTERACTION** A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Programming Languages and Tools

Python / C++ / Bash scripting / Git / HTCondor

Other

Windows / Microsoft Office / MacOS / Linux / LaTeX

Date: 29 Jan 2025

Ai fini della pubblicazione

F.to Lorenzo Piccari