



Matteo Della Rocca

● EDUCATION AND TRAINING

1 NOV 2022 – CURRENT Pisa, Italy

DOCTOR OF PHILOSOPHY (PH.D.) Università di Pisa

Website <https://www.unipi.it>

MAR 2022 – SEP 2022 Rome, Italy

HONOURS PROGRAMME Università La Sapienza di Roma

Programme aimed to enhance the training of meritorious students who are enrolled in a degree programme and are interested in further studies and cultural integration activities. My programme was composed of two parts. In the first part I studied an introduction to the Renormalization Group in Statistical Field Theory. In the second one, I studied an Introduction to Gravitational Waves due to Inflation.

Address Piazzale Aldo Moro, 5, 00185, Rome, Italy | **Website** <https://www.uniroma1.it/>

2019 – SEP 2022 Rome, Italy

MASTER DEGREE Università La Sapienza di Roma

Address Piazzale Aldo Moro, 5, 00185, Rome, Italy | **Website** <https://www.uniroma1.it/> | **Field of study** Physics |

Final grade 110/110 Cum Laude

2016 – 2020 Rome, Italy

BACHELOR DEGREE Università La Sapienza di Roma

Address Piazzale Aldo Moro, 5, 00185, Rome, Italy | **Website** <https://www.uniroma1.it/> | **Field of study** Physics |

Final grade 110 cum Laude

2011 – 2017 Rome, Italy

DIPLOMA SCIENTIFICO Liceo Edoardo Amaldi

Address Via Domenico Parasacchi, 21, 00132, Rome, Italy | **Website** <https://www.liceo-amaldi.edu.it/>

● PUBLICATIONS

2024

[**Probing time-dependent scalar wigs with extreme-mass-ratio inspirals**](#)

Matteo Della Rocca, Georgios Antoniou, Leonardo Gualtieri, Andrea Maselli, Phys.Rev.D 112 (2025) 2, 024042

2024

[**Black hole spectroscopy in environments: detectability prospects**](#)

T.F.M. Spieksma, V.Cardoso, G.Carullo, M.Della Rocca, F.Duque, Phys.Rev.Lett. 134 (2025) 8, 081402

2024

[**Extreme mass-ratio inspirals as probes of scalar fields: Inclined circular orbits around Kerr black holes**](#)

M.Della Rocca, S.Barsanti, L.Gualtieri, A. Maselli Phys. Rev. D 109, 104079 – 31/10/24

● VISITING

JUL 2025

Visitor at the Max Planck Institute for Gravitational Physics (Albert Einstein Institute)

I visited Francisco Duque at the Max Planck Institute for Gravitational Physics (Albert Einstein Institute) for a week

5 MAY 2025 – 7 JUN 2025

Visitor at Johns Hopkins University (USA)

Write here the description...I visited the group led by Professor Emanuele Berti at the Johns Hopkins University (Baltimore, Maryland, USA)

SEP 2024

Visitor at Gran Sasso Science Institute

I visited the group led by Professor Andrea Maselli Berti at the Gran Sasso Science Institute (L'Aquila, Italy) for a week

24 FEB 2024 – 28 MAR 2024

Visitor at Johns Hopkins University (USA)

I visited the group led by Professor Emanuele Berti at the Johns Hopkins University (Baltimore, Maryland, USA)

MAR 2021 – JUN 2021

Visitor at Laboratori Nazionali di Frascati (Italy)

I was visitor at Laboratori Nazionali di Frascati (LNF), the largest laboratory of National Institute for Nuclear Physics (INFN), as "La Sapienza" student. I worked in a group composed of me and other two students. We had the aim to design the facsimile of a quadrupole to be inserted in the new branch of the linear collider accelerator Beam Test Facility at LNF.

● CONFERENCES AND SEMINARS

SEP 2025 Milan, Italy

XXVI SIGRAV Conference on General Relativity and Gravitation

I gave a talk about "Quasinormal ringing of Kerr black holes: Excitation coefficients by an equatorially plunging particle" at the SIGRAV2025 conference organized by the Italian Society of General Relativity and Gravitation (SIGRAV).

JUL 2025 Southampton, England, UK

Capra meeting

I gave a talk about "Modified EMRI Waveform (MEW): probing scalar fields with eccentric non-equatorial extreme mass ratio inspirals" at the 28th Capra meeting

JUL 2025 Glasgow, Scotland, UK

GR/Amaldi meeting

I gave a talk about "Quasi normal modes of gravitational atoms" at the 24th International Conference on General Relativity and Gravitation (GR24), which was held together the 16th Edoardo Amaldi Conference on Gravitational Waves (Amaldi16)

MAY 2025 Baltimore, Maryland, USA

Speaker at Johns Hopkins University

I gave a talk about "Probing Black Hole environment with ringdown" during my visiting period

OCT 2024 Pisa

Gravity Shape Pisa 2024 : Exploring New Sources of Gravitational Waves

Co-chair of the organising committee

Link <https://agenda.infn.it/event/40101/overview>

OCT 2024 L'Aquila

Invited speaker at Gran Sasso Science Institute

I was invited at Gran Sasso Science Institute to talk about the work "[Black hole spectroscopy in environments: detectability prospects](#)"

SEP 2024 Rome

1st TEONGRAV international workshop on theory of gravitational waves

Speaker. I gave a talk entitled "Probing time - dependent scalar field with extreme mass ratio inspirals"

Link <https://agenda.infn.it/event/39201/>

SEP 2024 Rome

Speaker at 1st TEONGRAV international workshop on theory of gravitational waves

I gave a talk entitled "Probing time-dependent scalar fields with extreme mass-ratio inspirals".

JUL 2024 Lisbon

New horizons for Psi school & workshop

I attended the school and I presented a poster about the work "[Extreme mass-ratio inspirals as probes of scalar fields: Inclined circular orbits around Kerr black holes](#)"

Link <https://strong-gr.com/new-horizons-for-psi/>

DEC 2023 Naples

Workshop TEONGRAV 2023

I gave a talk about inclined extreme mass ratio inspirals to test scalar field

OCT 2023 Pisa

Gravity Shape Pisa 2023 : New Frontiers in Gravity Phenomenology

Chair of the organising committee

Link <https://agenda.infn.it/event/35400/>

OCT 2023 Atrani, Italy

6th School of Analytic Computing in High-Energy and Gravitational Theoretical Physics

SEP 2023 GSSI, L'Aquila, Italy

Asymmetric Binaries meet Fundamental Astro-Physics

JUN 2023 Aussois, France

Thematic school GWsNS-2023: Gravitational Waves from Neutron Stars

Link <https://indico.in2p3.fr/event/28236/>

WORK EXPERIENCE

 UNIVERSITY OF PISA – PISA, ITALY

TUTOR - UNDERGRADUATE COURSE "FISICA - CORSO B" FOR "SCIENZE BIOLOGICHE" – JAN 2025 – JUN 2025

I won the call "PROCEDURA COMPARATIVA FONDO GIOVANI 2023/2024 - Tutorato e attività didattiche integrative". My main tasks were

- supporting in the writing and correction of mid-term tests
- ~ 10 office hours

 UNIVERSITY OF PISA – PISA, ITALY

TUTOR - UNDERGRADUATE COURSE "FISICA - CORSO B" FOR "SCIENZE BIOLOGICHE" – NOV 2023 – MAY 2024

I won the call "PROCEDURA COMPARATIVA FONDO GIOVANI 2023/2024 - Tutorato e

attività didattiche integrative". My main tasks were

- supporting in the writing and correction of mid-term tests
- ~ 20 office hours

📍 - ROME, ITALY

APS PH LAB PRESIDENT – 20 FEB 2018 – 31 DEC 2023

I am the co-founder of a non-profit cultural organization, known as "PH Lab". The aim of the organization is scientific divulgation and research. At the moment, it carries on activities and physical laboratories in some High Schools of Rome and collaborates with "Centro Servizi del Volontariato Regione Lazio" to promote non-profit association. In the 2020, the organization became a Social Promotion Association (APS). Since its foundation, I have been the President, coordinating all organisation activities and leading the social transition in APS. Actively, I manage PCTO ("Path for Traversal Skills and Orientation") courses for High School students.

📍 - ROME, ITALY

COLLABORATION SCHOLARSHIP: LAB2GO – FEB 2022 – JUN 2022

Lab2Go is a project born in Rome at Univesità La Sapienza and managed by National Institute for Nuclear Physics (INFN). This project involves many schools from different parts of Italy. My main activity was to check, correct and reorganize the website pages dealing with physical experiments made by High School Students. Moreover, I was tutor in two different High Schools. I helped High School students to conduct the experiment, established by Sapienza Professor and High School teacher which were tutors for that school.

📍 - ROME, ITALY

STATISTICAL SCIENCE LECTURER – AUG 2021 – SEP 2021

I was lecturer of a 60 hours course in Statistical Science for Regione Abruzzo employees at Labour Information Services

● **HONOURS AND AWARDS**

1 NOV 2022

Doctor of Philosophy (Ph.D.) Fellowship – University of Pisa

2021

Deserving Student – "La Sapienza", University of Rome

I awarded "deserving student" (art. 25 of "Student Regulations" of "La Sapienza" , University of Rome) for having obtained an average grade over 28/30, no marks less than 27 and having achieved 40 European Credit Transfer System (ECTS). I paid only administrations fees to enrol on the second academic year of the Master Degree, but I did not have to pay tuition fee.

2020

Deserving Student – "La Sapienza", University of Rome

I awarded "deserving student" (art. 25 of "Student Regulations" of "La Sapienza" , University of Rome) as I have had graduated with 110 cum Laude within the third academic year of the Bachelor Degree. I paid only administrations fees to enrol on the first academic year of the Master Degree, but I did not have to pay tuition fee.

2019

Deserving Student – "La Sapienza", University of Rome

I awarded "deserving student" (art. 25 of "Student Regulations" of "La Sapienza" , University of Rome) for having obtained an average grade over 28/30, no marks less than 27 and having achieved 40 European Credit Transfer System (ECTS). I paid only administrations fees to enrol on the third academic year of the Bachelor Degree, but I did not have to pay tuition fee.

2018

Deserving Student – "La Sapienza", University of Rome

I awarded "deserving student" (art. 25 of "Student Regulations" of "La Sapienza" , University of Rome) for having obtained an average grade over 28/30, no marks less than 27 and having achieved 40 European Credit Transfer System (ECTS). I paid only administrations fees to enrol on the second academic year of the Bachelor Degree, but I did not have to pay tuition fee.

2017

Deserving Student – "La Sapienza", University of Rome

I awarded "deserving student" (art. 25 of "Student Regulations" of "La Sapienza" , University of Rome) for my High School final grade (100/100). I paid only administrations fees, but I did not have to pay tuition fee.

● LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
FRENCH	A1	A1	A1	A1	A1

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

● SKILLS

Programming Languages

C/ C++ (Excellent Knowledge) | Mathematica (Excellent Knowledge) | Matlab (Medium Knowledge) | Python (Good Knowledge) | Fortran (Basic Knowledge) | Arduino (Good Knowledge) | R/ R studio (Medium Knowledge)

Operating systems

Linux (Excellent Knowledge) | Microsoft Word (Excellent Knowledge) | iOS(Excellent Knowledge)