europass Curriculum vitae

PERSONAL INFORMATION **Lorenzo Savino**

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🌐 https://phd.uniroma1.it/web/LORENZO-SAVINO_nP1655424_IT.aspx

Nationality italian

WORK EXPERIENCE

March 2024 – May 2024
Rome, IT

Tutor - Physics I
Department of Civil and Industrial engineering, Sapienza University.
Tutor for physics I exam (B. Sc in Chemistry Engineering).

March 2024 – May 2024
Rome, IT

Tutor - Physics I
Department of Civil and Industrial engineering, Sapienza University.
Tutor for physics I exam (B. Sc in Civil and Ambiental Engineering).

October 2023 – December 2023
Rome, IT

Tutor - Physics II
Department of Civil and Industrial engineering, Sapienza University.
Tutor for physics II exam (B. Sc in Energy Engineering).

October 2023 – December 20233
Rome, IT

Tutor - Physics II
Department of Civil and Industrial engineering, Sapienza University.
Tutor for physics II exam (B. Sc in Civil, Building, and Environmental Engineering).

March 2023 - November 2023
Darmstadt, DE

Internship
Focused Energy GmbH
Theory and simulation of interest for Fast Ignition Inertial Confinement Fusion.

March 2023 – May 2023
Rome, IT

Tutor - Physics I
Department of Civil and Industrial engineering, Sapienza University.
Tutor for physics I exam (B. Sc in Energy Engineering).

September 2022 – January 2023
Rome, IT

Tutor - Physics II
Department of Civil and Industrial engineering, Sapienza University.
Tutor for physics II exam (B. Sc in Civil, Building, and Environmental Engineering).

March 2022 – June 2022
Rome, IT

Tutor - Physics I
Department of Chemistry, Sapienza.
Tutor for physics I exam (B. Sc in Chemistry).

July 2021 – September 2021
Rome, IT

Tutor - Math OFA
Department of Mathematics of Sapienza University
Revision of the Sapienza online OFA (Obblighi Formativi Aggiuntivi) platform.

November 2021– June 2021

Tutor - INFN Lab2Go project

Rome, IT   Sapienza and INFN (Istituto Nazionale di Fisica Nucleare

Project in collaboration with the high schools (Licei) of Rome, whose goal is to bring students closer to the world of physics through experiences, lessons and enhancement of the museum heritage of the respective schools.

EDUCATION AND TRAINING

May 2023

Doctoral Training School "Plasmas in Extreme Environments: from Astrophysics to the Laboratory"

Les Houches, FR   Organized by LULI, SLAC, GoLP/IPFN, CEA.

November 2022

Course: Scientific calculation tools and Big data

IT   Sapienza's Soft skills courses for research.

November 2021 – Present

PhD student at Sapienza SBAI department

Rome, IT   Phd in mathematical models for engineering, electromagnetism and nanosciences at "Scienze di Base Applicate all'Ingegneria" department, Sapienza University of Rome

Research project: Innovative targets for laser-driven thermonuclear fusion energy: models, simulation, scaled-down experiments (in collaboration with Laboratory of Laser Energetics , University of Rochester USA). In 2023 internship at Focused Energy GmbH .

Tutors: Professor S. Atzeni and Professor A. Schiavi

July 2022

Summer school "Plasmas in Super-Intense Laser Fields"

Erice,IT   Organized by EUROFUSION, Université de Bordeaux, Politecnico di Milano, ENSURE project, HB11, ELI beamlines and ALP.

March 2022

Course: Parallel computing with MPI and OPENMP

IT   CINECA (PRACE partner), certificate ID: 409D4A50

November 2021

Course: Fortran for Scientific computing

IT   CINECA (PRACE partner), certificate ID: 3B8A2830

September 2019 - September 2021

Master Degree in Physics

Rome, IT   Department of Physics, Sapienza university of Rome

Curriculum: Particle physics

Title: Studio di target innovativi per la fusione inerziale via Laser.

Thesis Advisor: S. Atzeni | Collaboration with university of Rochester NY, USA

Final grade : 107/110

June 2021

Summer school "International School on Energy Energy Innovation and Integration for a Clean Environment"

IT   Course 6 - Joint EPS-SIF

2014–2019

Bachelor Degree in Physics

Rome, IT   Department of Physics, Sapienza university of Rome

Curriculum: physics

Title: Il filtro ottimo applicato all'esperimento CUORE

Thesis Advisor: M. Vignati

2009–2014

Scientific high school diploma

| Naples, IT | Liceo Calamandrei |
| | Final grade : 100/100 |

2014 Masterclass in crystallography
Naples, IT Department of Physics, Federico II university

2013 Masterclass in Particle physics
Naples, IT Department of Physics, Federico II university

November 2012 English intensive school
London, UK Bell Centers

2012 "Lauree Scientifiche" Project in mechanics and thermodynamics
Naples, IT Department of Physics, Federico II university

ACHIEVEMENTS AND AWARDS

2023 Outstanding Presentation by Early Career Scientist
ES 4th Fusion HPC Workshop

Award: Free publication on Plasma and controlled fusion journal.

2021 Best Communication
IT 107th SIF (Società Italiana di Fisica) National congress

Award: Free publication on " Il Nuovo Cimento C", see Papers section.

2013 Gaetano Balzano philosophy award
Naples, IT 2nd classified

2013 Publication of two short novels
IT titles: "Lost in his mind" and "baby story of DNA"
book: Merk-Serono award book "la scienza narrata 2013".

2012 Publication of a short novel
IT title: "Yuri Gagarin"
book: Merk-Serono award book "la scienza narrata 2012".

2012 EU PON scholarship
London, UK One month scholarship for intensive course at Bell centers in London.

GRANTS

2023 "International Mobility grant for PhD students", Sapienza University
IT 2100 Euro.

2022 "Progetti per Avvio alla Ricerca Tipo 1", Sapienza University
IT 1000 Euro.

CONGRESS

2024 19th Direct Drive and Fast Ignition Workshop
Contributed talk Paris, 21-24 May 2024

2023	**4th Fusion HPC Workshop**
Contributed talk	Spain, 29-30 November 2023

2021	**107th SIF (Società italiana Di Fisica) Congress**
Oral contribution	Italy, 13-17 September 2021.

PAPERS

[1] L. Savino et al. "Studies on dynamical shell formation for direct-drive laser fusion". In: *Nuovo Cimento C 10* (2022).

[2] I. V. Igumenshchev et al. "Proof-of-principle experiment on the dynamic shell formation for inertial confinement fusion". In: *Phys. Rev. Lett. 131, 015102* (2023).

[3] F. Barbato et al. "Feasibility study of an XPCI diagnostic to observe the evolution of micro-voids in an ICF target". In: *PPCF-104410* (2023).

[4] L. Savino et al. "A GPU based 3D raytracing algorithm for DUED laser fusion code (sumbitted)". In: *PPCF* (2024).

ABSTRACTS

[5] L. Savino et al. *Studies on dynamical shell formation for direct-drive laser fusion, Atti del 107 congresso SIF*. 2021.

[6] I. Igumenshchev et al. *Dynamic Shell Stability to Low-Mode Perturbations, 63rd Annual Meeting of the APS Division of Plasma Physics*. Pittsburgh, PA, USA, 2022.

[7] W. Trickey et al. *IFE target designs to capitalize on next-gen laser technologies, 64rd Annual Meeting of the APS Division of Plasma Physics*. Spokane, Washington, USA, 2022.

[8] F.Barbato et al. *X-Ray synthetic diagnostics for laser-driven implosions, 36th European Conference on Laser Interaction with Matter*. 2022.

[9] L. Savino et al. *A GPU baser raytracing algorithm for DUED code*. 2023.

POSTERS

[10] L. Savino et al. *ICF target with dynamical shell formation: design of a proof -of-principle experiment, Summer school "Plasmas in Super-Intense Laser Fields"*. 2022.

[11] L. Savino et al. *Experimental Demonstration of dynamically shell formation for DD-IFE, Doctoral Training School "Plasmas in Extreme Environments: from Astrophysics to the Laboratory"*. 2023.

PROGRAMMING

Languages	C, C++, Fortran, Python
HPC API	MPI, OpenMP, OpenCL
Frameworks and visualization	ROOT, Matlab, Gnuplot, Numpy/Matplotlib, Julia/Makie
Scripting	Bash, Python
Office	MS Office, Inkscape

PERSONAL SKILLS

Driving licence	B

Mother tongue	Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	C1	C1
	English Certificates: PET, B2+ British Council				
French	A2	A2	A1	A1	A2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital competences - Self-assessment grid