

CURRICULUM VITAE

Personal Information

First name / Surname	Camilla Marella Italian
Nationality	
Date of birth (day, month, year)	
Gender	
Email address	

University Education

Specialization - Medical Physics School (ongoing)

Official duration in years	3
Dates (start–end or planned end)	13/11/2024 – 15/11/2027
Awarding institution	University of Bologna - Italy
Title of qualification awarded	Specialization in Medical Physics
Current year of attendance	1

Master

Official duration in years	2			
Dates (start–end or planned end)	15/09/2021 - 15/12/2023			
Awarding institution	University of Bologna - Italy			
Title of qualification awarded	MSc in Physics			
Marks	YOUR mark	Minimum PASS mark	Maximum mark	ECTS conversion (if available)
Final grade (if available)	110 con lode	66 18	110 30	
Weighted average of exam marks	29.42			
Title and topic of Master's Thesis	Mr-guided proton therapy: impact of magnet positioning uncertainties on proton trajectories			

Bachelor

Official duration in years	3			
Dates (start–end or planned end)	18/09/2018 - 14/12/2021			
Awarding institution	University of Padova - Italy			
Title of qualification awarded	BSc in Physics			
Marks	YOUR mark	Minimum PASS mark	Maximum mark	ECTS conversion (if available)
Final grade (if available)	99 66 110			
Weighted average of exam marks	25.87 18 30			
Title and topic of Bachelor Thesis	Effetti non lineari in un modello di un singolo neurone			

Employment

Currently employed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Summary of current employment	Research Fellow at Medical Physics Unit, Azienda Unità Sanitaria Locale-IRCCS di Reggio Emilia, Reggio Emilia, Italy (Fellowship Duration: from 30-09-2024 to 30-09-2025)

Past employment record	Research Fellow at DIFA (Dipartimento di Fisica e Astronomia “Augusto Righi”)– University of Bologna, Italy. (Fellowship Duration: from 01-04-2024 to 31-08-2024)
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Research and Study Abroad Experiences

<p>Scientific research (past and current activity)</p> <p>Past Research</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hardware acceleration of neural networks inference and training for quantitative image reconstruction. <input type="checkbox"/> MRI data analysis for atrophy study in Alzheimer's disease. <input type="checkbox"/> PET data analysis co-registered to MRI for progression of Alzheimer’s disease assessment. <p>Current Research</p> <p>Federated Learning in Digital Pathology: My ongoing research focuses on developing a Quality Assurance (QA) platform to support prostate cancer diagnosis using Whole Slide Images (WSIs) from core needle biopsies. This project involves:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Evaluating Artificial Intelligence (AI) systems: Including both Computer-Aided Diagnosis (CAD) tools and novel AI-driven QC solutions. <input type="checkbox"/> Ensuring AI reliability and generalizability: By addressing data heterogeneity and enabling privacy-preserving collaboration across institutions, particularly through the application of Federated Learning.
<p>Thesis Preparation Abroad: Medical University of Vienna – MedAustron (Austria)</p> <p>July 2023 – November 20223</p> <p>I conducted research and analysis for my thesis at the MedAustron Ion Therapy Center in Wiener Neustadt (Vienna, Austria), a leading medical facility specializing in ion therapy. As one of only four synchrotron-based centers in Europe capable of treating patients with both proton and carbon ions, MedAustron excels in both clinical treatment and research. Collaborating with international institutions to advance ion therapy and refine treatment protocols, it is one of only six comparable centers worldwide. Working in this innovative and international environment has enriched my academic background with a global perspective.</p> <p>Hospital del Mar Research Institute (Barcelona, Spain)</p> <p>July 2024</p> <p>I conducted an analysis of MRI data from patients with Alzheimer's disease, comparing volumetric results from Neurocloud software with PET data to assess disease progression and classification.</p>

Other qualifications

<p>Postgraduate training programmes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Deep Learning for Biomedical Applications (15 h course) - School of Specialization in Medical Physics at the University of Roma "Tor Vergata" <input type="checkbox"/> Reti Neurali in Imaging Medica: dalla Teoria alle applicazioni pratiche – Scuola dell’Equinozio, UNISER, Pistoia, Italy (23-25 Sept 2024)
<p>University teaching at any level</p> <p>Tutor for the general Physics course in Mechanical, Chemical, and Environmental Engineering degree programs at the University of Bologna.</p> <p>The role involves providing additional exercise lessons and assisting with examination activities.</p>

Other qualifications (prizes, grants etc.)

☐ Tutoring Positions : Winneroftwotutoring positions at the University of Bologna for the academic year 2023/24(BANDOPER L'ATTRIBUZIONE DI ATTIVITA' DI TUTORATO - A.A. 2023/24).

- 28628 - FISICA GENERALE T-B (Laurea in Ingegneria meccanica; Prof. Iacopo Vivarelli)
- 27996 - FISICA GENERALE T-1 (Laurea in Ingegneria chimica e biochimica, Laurea in Ingegneria per l'ambiente e il territorio; Prof. Ilaria Brivio)

☐ Master Thesis Preparation abroad Grant: Awarded by the Department of Physics and Astronomy (DIFA) of the University of Bologna for the preparation of the master's thesis abroad (Bando A.A. 2022/23 - Borse Di Studio Per La Preparazione All'estero Della Tesi Di Laurea Magistrale).

☐ Erasmus+ Internship Grant: Awarded by the Erasmus+ program for the academic year 2023/24 (Declined) (Bando Erasmus+ mobilità per tirocinio a.a. 2023/2024).

☐ GIDRM Mobility Grant 2024: Awarded by GIDRM (Gruppo Italiano Discussione Risonanze Magnetiche) for a project in collaboration with the Hospital del Mar Research Institute (Barcelona, Spain) involving data analysis to evaluate software measuring brain atrophy in patients with Alzheimer's disease.

IT Skills:

- ☐ Monte Carlo Simulations: Proficient with GATE and Geant4 for simulating particle interactions and radiationtransport,inparticular beams in magnetic fields.
- ☐ Programming: SkilledinPython for data analysis and algorithm development.
- ☐ Numerical Analysis: Experienced in applying numerical methods to solve complex physics problems.
- ☐ VHDL: BasicknowledgeofVHDL language for FPGA programming.

Language Proficiency

Mother tongue(s)	UNDERSTANDING		SPEAKING		WRITING
Other language(s)	Listening	Reading	Spoken interaction	Spoken production	
Language: English	Level: B2	Level: B2	Level: B2	Level: B2	Level: B2
	Language certificate: B2				
Language:	Level:	Level:	Level:	Level:	Level:
	Language certificate: Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user Common European Framework of Reference for Languages				

Bologna, 24/06/2025.