



# Gabriele Pignalberi

Date of birth: [redacted] | Nationality: [redacted] | Email address: [redacted]

## EDUCATION AND TRAINING

01/01/2021 – CURRENT Rome, Italy  
**MASTER'S DEGREE** Sapienza University of Rome

**Field of study** Physics | **Level in EQF** EQF level 7 | **Type of credits** CFU | **Number of credits** 120 |

**Thesis** Uses of Machine Learning Techniques of Physics to Eco-epidemiology

10/11/2017 – 20/04/2021 Roma, Italy  
**DEGREE OF ADVANCED STUDIES (SSAS)** Sapienza University of Rome

The Sapienza School of Advanced Studies (SSAS) offers students enrolled in a Sapienza course of study a highly-qualified complementary training pathway, which accompanies and complements the curricular courses with advanced courses and activities of disciplinary and interdisciplinary nature.

**Website** <https://web.uniroma1.it/ssas/> | **Final grade** 70/70 con lode | **Level in EQF** EQF level 6 |

**Type of credits** CFU | **Number of credits** 42 | **Thesis** Axion Electrodynamics

01/10/2017 – 14/12/2020 Rome, Italy  
**BACHELOR'S DEGREE** Sapienza University of Rome

**Field of study** Physics | **Final grade** 110/110 con lode | **Level in EQF** EQF level 6 | **Type of credits** CFU |

**Number of credits** 180 | **Thesis** Quantum mechanical local observer independence

## LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	C2	C1	C1	C1
<b>SPANISH</b>	B1	B1	B1	B1	B1

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

## DIGITAL SKILLS

C/C++ | R | Mathematica | Python | Pytorch | Matlab | Tensorflow/Keras | Machine Learning (DNN, GNN, ...)

## ADDITIONAL INFORMATION

### PROJECTS

14/02/2023 – 21/02/2023  
**MIRAI Project** I was selected as the Italian candidate for participation in the MIRAI (Mutual-understanding, Intellectual Relations and Academic Exchange Initiative) project, provided by the Japanese Ministry of

Foreign Affairs. As a participant, I was invited on an institutional trip to Japan to visit cutting-edge universities and research centres in the country.

**Link** [https://www.mofa.go.jp/erp/ep/page24e\\_000109.html](https://www.mofa.go.jp/erp/ep/page24e_000109.html)

08/07/2022 – 08/07/2022

**SSAS SYMPOSIUM: “THE FOOD”** I participated as a lecturer in the SSAS symposium entitled 'THE FOOD', held in the Aula Magna of Sapienza, presenting the interdisciplinary research project entitled 'How does food production affect the environment?', introducing the lectio magistralis by Maria Elena Ibanez, from the Institute of Food Science Research (CIAL) in Madrid.

**Link** <https://www.stoccolmaaroma.it/ssas-symposium-the-food/>

19/08/2020 – 27/08/2020

**JENNIFER2 Summer School** I was selected and I have participated to the JENNIFER2 Summer School, aimed to introduce undergraduate and beginning-graduate physics students to particle-physics research performed at the [KEK](#) laboratory in Japan.

**Link** <https://indico.belle2.org/event/4071/>

14/08/2020 – 14/08/2020

**SSAS SYMPOSIUM: “MODELS vs REALITY”** I participated as a lecturer in the SSAS symposium entitled “MODELS vs REALITY”, held online, presenting the interdisciplinary research project entitled 'The problem of time in theoretical physics', introducing the lectio magistralis by Carlo Rovelli, from the Centre de Physique Théorique (CPT) of the Aix-Marseille University.

19/08/2019 – 30/08/2019

**Utrecht - Geometry Summer School** I was selected and I have participated to the Utrecht Geometry Summer School. For two weeks, attendees of the Summer School interact with staff of the University of Utrecht, through lectures and tutorials, learning about some of the topics studied at the Utrecht Geometry Centre.

**Link** <https://utrechtgeometrycentre.nl/summer-school/>

## **NETWORKS AND MEMBERSHIPS**

2020 – CURRENT

**MIRAI Alumni** I am a member of MIRAI Alumni, a network of former MIRAI participants coordinated by [JICE](#). MIRAI Alumni aims to create a point of support for networking among former MIRAI participants, with the objective of boosting their careers by promoting collaboration between Europe and Japan, also through active participation in specific seminars organised by Japanese associations and universities.

2017 – CURRENT

**SSAS Alumni** I am a member of SSAS Alumni, a Network that promotes the communication and the collaboration of former students of Sapienza School of Advanced Studies (SSAS).

**Link** <https://web.uniroma1.it/ssas/alumni>

## **RELEVANT RESEARCH PROJECTS**

03/10/2023 – CURRENT

### **Application of advanced AI models to eco-epidemiology**

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The project's objective is the development of physics-inspired machine learning models to the field of ecoepidemiology, with the aim to quantify and fill the knowledge gap related to the actual diffusion of known virus families among known mammalian species worldwide.

01/01/2022 – 08/07/2022

### **How does food production affect the environment?**

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The project's objective was twofold: first, to investigate the impact of food production on both global and local biodiversity; second, to explore the repercussions of biodiversity loss on ecosystems by assessing its impact on the stability of their associated trophic networks.