

# DARIO PARTIPILO

*Research Scientist in Theoretical Physics and AI*

## PROFILE

I am a Research Scientist working on String Theory Phenomenology and Supergravity theories. I am also a tech passionate and my research lies at the interface between Theoretical High Energy Physics and Artificial Intelligence.

## AREAS OF COMPETENCE

- Physics
- Mathematics
- Algorithms and implementations

## TECHNICAL SKILLS

- Problem Solving
- Parallel programming
- Python, Mathematica, Latex
- Machine Learning and optimization
- English

## SOCIAL SKILLS

- Leadership
- Team-oriented personality
- Open-minded
- Led by a genuine desire to achieve knowledge, excel and evolve
- Driven by progress and science
- Strong intercultural communication skills

## CONTACTS

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## WORKING EXPERIENCES

### Consultant

Italian Ministry of Economic Development

July - November 2022

- Attendance to Board of Expert
- Delivering of ideas, proposals and projects wrt advanced technologies and highly-innovative industries

### Data Analyst and Software Developer

Esim Group

2017 - 2018

- Developing and implementing algorithms for the Train Running Control system (SCMT)
- FPGA programming
- Lab testing of different tech-equipments

### Tutor

University of Pisa

2014 - 2016

- Teaching Physics and Mathematics to University students
- Teaching Physics, Mathematics, Chemistry and Biology to High School students

## ACCADEMIC CAREER

### University of Padua

Ph.D. in Physics, 2022

- Ph.D. students' representative in the Council of the Ph.D. school
- Ph.D. students' representative in the Council of the Physics Department
- INFN member
- Optimization Algorithms for String Theory computations
- Application of crittografic techniques to Supergravity problems

### University of Cambridge

Master in Applied Mathematics, 2017

- Selwyn College
- Member of Physics Society (CUPS)
- Graduated with Distinction

## University of Pisa

Bachelor in Physics, 2016

- Graduated with 110/110 cum Laude
- Thesis on the Unruh Effect, Supervisor: Prof. M. D'Elia

## RELEVANT PUBLICATIONS

### **(Machine) Learning Supergravity Vacua**

Ph.D. Thesis (2022)

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### **New methods for old problems: vacua of maximal $D = 7$ supergravities**

arXiv:2205.06245 [hep-th] (2022)

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### **Old and new vacua of 5D maximal supergravity**

J. High Energ. Phys. 2021, 39 (2021).

[https://doi.org/10.1007/JHEP04\(2021\)039](https://doi.org/10.1007/JHEP04(2021)039)

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