



**Jacob T. Schwartz International
School For Scientific Research**

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To whom It may concern.

This is to certify that **Mattia Merenda** attended the "Jacob T. Schwartz International School for Scientific Research - Lipari Summer School on Abstract Interpretation" entitled *Lipari Summer School on Abstract Interpretation* (September 1st - September 7th, 2024), in Lipari Island, Italy.

This also certifies that **Mattia Merenda** passed the final exam with a grade of **Excellent**.

The amount of hours of the Lipari School course corresponds to a **6** credits course. The school included the following courses:

- An Introduction to Abstract Interpretation With an Application to the Design of Logics
- Widening operators
- Program analyses for software security
- Information flow analysis
- Numerical Abstract Domains
- Mopsa tutorial
- Abstract Interpretation for Industry
- Applied static analysis: the design of Astrée
- Formal Methods for Machine Learning Pipelines
- Getting started with LiSA
- Taming floating-point errors in avionics applications at NASA

Lipari, September 7th, 2024

Alfredo Ferro
Director of the School