<u>Prof. Dr. Pietro Vischia</u>
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CERTIFICATE

This is to certify that Prof. Dr. Pablo Martínez Ruiz del Árbol contributed to the following workshops organized by the MODE Collaboration:

24/07/2023-27/07/2023 "Third Mode Workshop on Differential Programming", Princeton University

> **Roles:**
> - Oral presentation, "Use of Machine Learning Techniques for Muography Applied to Industrial Applications"
> - Member of the Organizing Committee.

12/09/2022-16/09/2022 "Second Mode Workshop on Differential Programming", OAC conference center, Kolylmbari, Crete.

> **Role:**
> - Oral presentation, "Ultra-fast muon tomography simulations using Adversarial Neural Networks".

6/09/2021-8/09/2021 "First Mode Workshop on Differential Programming", Louvain

> **Role:**
> - Oral presentation, "Role of the IA in the industrial applications of Muography"

In Oviedo, on 19 March 2024.

Prof. Dr. Pietro Vischia

Main organizer of the workshop series
and deputy coordinator of the MODE Collaboration