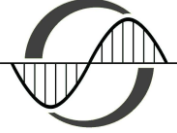




UNIVERSITÀ
degli STUDI
di CATANIA



DIPARTIMENTO DI FISICA E ASTRONOMIA
“ETTORE MAJORANA”

DOTTORATO DI RICERCA IN FISICA
CICLO XL A.A. 2024/2025

Use of the Geant4 Monte Carlo toolkit for particles transport

2 CFU

Teaching staff

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Program of the course:

1. Basis of the Monte Carlo method
2. Use of Monte Carlo to solve particles equations and transport in the matter
3. Basis of the use of the Geant4 Monte Carlo code
 - a. Installation
 - b. Description of the main Geant4 functionalities
 - c. How to retrieve information from a simulation
 - d. Realization of a simple Geant4 application: a
 - e. Particle beam interacting with a calorimeter detector
 - f. Hands-on sessions

Bibliography:

A Aghighat, Monte Carlo methods for particle transport, CRC.
press, Taylor and Francis

The Geant4 Users manual