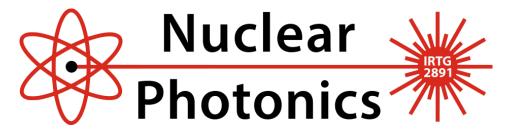
IRTG 2891 Nuclear Photonics - Annual Workshop 2024



Contribution ID: 27

Type: not specified

Exploring the Impact of Spatio-Temporal Couplings on Ultra-Intense Laser Pulses

Friday, 1 November 2024 12:45 (25 minutes)

The goal of this thesis is to explore the impact of Spatio-Temporal Couplings (STCs) on ultra-intense laser pulses and their role in relativistic particle acceleration. STCs, which link a pulse's spatial and temporal properties, can affect propagation and impact interactions with matter. The project implements advanced metrology methods and develops propagation simulations using real data from high-power laser systems to model and study STCs. By reconstructing laser beam propagation and analyzing spatio-temporal distortions, this work aims to apply the findings to particle acceleration experiments for improved performance in laser-driven particle acceleration and nuclear photonics.

Presenter: ALEXE, Cristian (ELI-NP)

Session Classification: Oral contributions X