

Resummations (or how pairs are created in quantum field theory)

Wednesday, January 22, 2025 2:30 PM (40 minutes)

Recently there has been a considerable debate about possible novel mechanisms for pair creation in the context of quantum field theories in external backgrounds. These results are based on appropriate resummation techniques that allow a nonperturbative analysis of the corresponding theory.

In this talk, we will review new developments in resummations for scalar, gauge and gravitational backgrounds, together with their physical applications. In particular we will focus on pair creation, summarizing the state of the art and explicitly showing the analogue of the Schwinger effect in gravity, as well as the role played by static fields.

Primary author: FRANCHINO-VIÑAS, Sebastian (Università di Genova)

Co-authors: BOASSO, Andrés (Instituto Balseiro); GARCÍA-PÉREZ, César (Università di Genova); Prof. MAZZITELLI, Diego (Instituto Balseiro); Dr PLA, Silvia (Technische Universität Munchen); VITAGLIANO, Vincenzo (University of Genova)

Presenter: FRANCHINO-VIÑAS, Sebastian (Università di Genova)