

Free fields and discrete symmetries in κ -Minkowski

Thursday 10 July 2025 11:25 (20 minutes)

I will present recent advances in the theory of free scalar and fermionic fields defined on κ -Minkowski noncommutative spacetime, emphasizing how the choice of Lagrangian (which becomes trivial in the commutative limit) affects the canonical conserved charges associated with κ -Poincaré symmetries and their algebra. These results will be analyzed through the lens of discrete symmetries $-C$, P , T and their combinations. I will introduce a novel approach in which discrete symmetries can be deformed at the Planck scale, providing new insights into the implications of κ -Poincaré for quantum gravity phenomenology.

Working Group

WG1 - High Energy QG Theory

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