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Revisiting noncommutative spacetimes from the relative locality principle

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Relativistic deformed kinematics leads to a loss of the absolute locality of interactions. In previous studies, some models of noncommutative spacetimes in a two-particle system that implements locality were considered. In this talk, we present a characterization of the Poisson-Lie algebras formed by the noncommutative space-time coordinates of a multi-particle system and Lorentz generators as a possible restriction on these models. The relativistic deformed kinematics derived from these algebras are also discussed. Finally, we show its connection with cotangent bundle geometries.

Working Group

WG1 - High Energy QG Theory

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