Mathematical Physics

κ-Deformation and Spectral Triples

B. Iochum, T. Masson, Th. Schücker, A. Sitarz

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The aim of the paper is to answer the following question: does κ-deformation fit into the framework of noncommutative geometry in the sense of spectral triples? Using a compactification of time, we get a discrete version of κ-Minkowski deformation via C^*-algebras of groups. The dynamical system of the underlying groups (including some Baumslag--Solitar groups) is used in order to construct \emph{finitely summable} spectral triples. This allows to bypass an obstruction to finite-summability appearing when using the common regular representation.

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