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Locally noncommutative space-times. (English) Zbl 1127.81027
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Summary: Localized noncommutative structures for manifolds with connection are constructed based on the use of vertical star products. The model's main feature is that two points that are far away from each other will not be subjected to a deviation from classical geometry while space-time becomes noncommutative for pairs of points that are close to one another.

MSC:

81R60 Noncommutative geometry in quantum theory
83C65 Methods of noncommutative geometry in general relativity
81T75 Noncommutative geometry methods in quantum field theory

Keywords:

locally noncommutative space-time; star products; vertical formality theorem

Full Text: DOI arXiv

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