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Symmetries and deformations in noncommutative geometries based upon operads

Abstract: In this talk I will explain that some basic results of noncommutative geometry first suggested in the context of quantum groups can be generalized from noncommutative rings to a much wider class of operads with a presentation. Constructions of "white" and "black" products in the category of quadratic rings are particular cases of these results.

First proved (in greater generality) by Dennis Borisov and the speaker, these results were recently developed by Bruno Vallette and other researchers. This talk is intended to be an introduction to this topic.