Non-associative geometry and the spectral action principle

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Non-commutative Spectral Geometry has proven to be a remarkably well-suited framework for describing the standard model of particle physics (coupled to Einstein gravity). I will explain our recent efforts to extend this framework from non-commutative to non-associative geometries. From the physics standpoint, one of the main motivations is in exploring beyond the standard model physics – particularly the so-called grand unified theories. (arXiv:1303.1782)