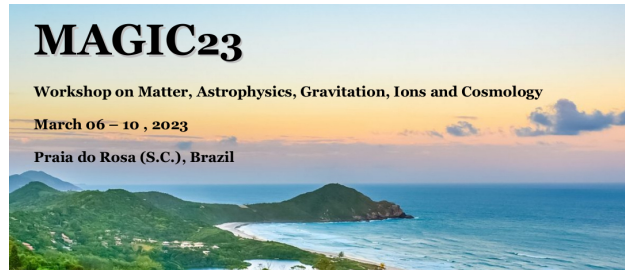


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Einstein tensor with quantum mechanical imprints on 3-sphere

With the relativistic generalized noncommutative Heisenberg algebra accommodating gravitational fields and emerging a minimal measurable length uncertainty and with the generalization of the four-dimensional pseudo-Riemann manifold, the fundamental tensor straightforwardly becomes modified. As this appears conformal, we compare it with Weyl's conformal theory. By constructing the Levi-Civita connections, we could determine the quantum-induced revisiting Riemann curvature tensor and its contractions. Consequently, the Einstein tensor, in which, besides the quantum mechanical imprints emerging in the relativistic regime, additional geometric structures and curvatures appear, is then applied to the 3-sphere. Such a graphical illustration highlights, at least qualitatively, the possible contributions that the quantization of curved spacetime likely comes up with in the relativistic regime.

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