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Finsler geometry as a window to Planck scale physics

We discuss the problem of describing the effective quantum spacetime probed by a high energetic particle by Finsler Geometry. We highlight the main theoretical gains and challenges of this approach in quantum gravity.
We also discuss the use of present and future experiments and observations to constrain Finslerian departures of Riemannian Geomety at the Planck scale and the prospects for future tests.

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