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Renormalization of Horava gravity

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I will discuss quantum properties of the projectable Horava gravity – the first example of renormalizable, local and unitary gravity theory perturbatively consistent in UV domain and demonstrating asymptotic freedom in $(2+1)$ dimensions and possibly in $(3+1)$ dimensions. Correspondingly I will briefly dwell on gauge dependence issues, background field and heat kernel methods along with the dimensional reduction necessary for the computation of beta-functions and conformal anomalies in such a class of extraordinarily complicated Lorentz non-invariant theories. Possible dark energy and inflationary cosmology implications of this and related theories will be touched upon.

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