Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Unimodular quantum gravity ASTRID EICHHORN, Perimeter Institute for Theoretical Physics — Unimodular gravity is classically equivalent to standard Einstein gravity, but differs when it comes to the quantum theory: The conformal factor is non-dynamical, and the gauge symmetry consists of transverse diffeomorphisms only. Furthermore, the cosmological constant is not renormalized. Thus the quantum theory is distinct from a quantization of standard Einstein gravity. Here I show that within a truncation of the full Renormalization Group flow of unimodular quantum gravity, there is a non-trivial ultraviolet-attractive fixed point, yielding a UV completion for unimodular gravity.

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Date submitted: 04 Jan 2013 Electronic form version 1.4