



# **EINLADUNG**

im Rahmen des Seminars für Mathematische Physik  
(Joint TU/UV Theory Seminar)

zum Vortrag

von

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über

**„Quantum Null Energy Condition –  
Analytic, Perturbative and Numerical Results“**

**Abstract:**

The quantum null energy condition (QNEC) is the only known local energy condition which holds in any quantum field theory in more than two dimensions (given some assumptions like unitarity). The QNEC relates the null-projection of the energy momentum tensor to the second variation of the entanglement entropy with respect to a deformation of the entangling region along the same null direction.

After studying QNEC in four dimensional holographic conformal field theories, we consider similar setups in two spacetime dimensions, where the QNEC takes a sharper form. We are especially interested in the saturation behavior of the QNEC inequality and its relation to matter in the bulk of the dual theory as well as in the leading corrections to the supergravity approximation from quantum backreactions for finite Newton coupling.

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Boltzmanngasse 5

gez.: S. Fredenhagen, D. Grumiller, D. Erkinger, R. Wutte