

## Anti-de Sitter space interacting with quantum fields

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We compute the renormalized expectation value of the stress-energy tensor operator (RSET) for a quantum scalar field on three- and four-dimensional anti-de Sitter space-time (adS). Since adS is not a globally hyperbolic space-time, boundary conditions have to be applied to the field. We explore the effect of the boundary conditions on the RSET. The RSET then acts as a source term in the Einstein equations governing the quantum-corrected adS metric (QCadS). We describe some of the qualitative features of the QCadS space-time solutions.

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