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# Renormalisation of the 3D SU(N) scalar energy-momentum tensor using the Wilson flow

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In the holographic approach to cosmology, cosmological observables are described in terms of correlators of a three-dimensional boundary quantum field theory. As a concrete model, we study the 3D massless SU(N) scalar matrix field theory with a $\phi^4$ interaction. On the lattice, the energy-momentum tensor (EMT) in this theory can mix with the operator $\phi^2$. We utilise the Wilson Flow to renormalise the EMT on the lattice, and present numerical results for the mixing coefficient for N=2. Obtaining the renormalised EMT will allow us to make predictions for the CMB power spectra in the regime where the dual QFT is non-perturbative.

**Primary author:** LEE, Joseph (University of Edinburgh)

**Presenter:** LEE, Joseph (University of Edinburgh)

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