"Cosmology from the two-dimensional renormalization group acting as the Ricci flow"

I describe first exploratory attempts at a top-down, first-principles calculation of macroscopic cosmology within the Standard Model (arXiv:1909.01374 [astro-ph.CO]). The 2d RG acting as the Ricci flow produces a specific 1+3d metric which describes an expanding universe that starts with a big bang then decelerates then accelerates until ending with a big blowup. This crude calculation of cosmology omits all but the gravitational field. The only energy-momentum is purely gravitational dark matter and energy. The second exploratory step adds in the SU(2) gauge field and the Higgs field. An early-time solution describes an inflating universe with cosmological CP violation during the end stage of inflation.