# Curved spacetime effective field theory (cEFT) – formalism and some applications

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The effective field theory (EFT) turns out to be an instrument of an immense value in all aspects of modern particle physics being theory, phenomenology or experiment. In this talk I will show how to extend the systematic top down approach to construction of the EFT proposed by Hitoshi Murayama (LBL, Berkeley) and separately by John Ellis (King's Coll. London) groups to the curved spacetime. To this end, I will take advantage of the heat kernel method so far extensively used in obtaining the one-loop effective action in curved spacetime. After an introduction of the formalism I will discuss its application to the problem of an influence of gravity on the stability of the Higgs effective potential. The talk is based on JHEP01(2019)034.