

Renormalization of the SMEFT to dimension eight: Fermionic interactions I

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This is the third of a series of works aimed at renormalizing the Standard Model effective field theory at one loop and to order $1/\Lambda^4$, with Λ being the new physics cut-off. In this occasion, we concentrate on the running of two-fermion operators induced by pairs of dimension-six interactions. We work mostly off-shell, for which we obtain and provide a new and explicitly Hermitian basis of dimension-eight Green's functions. All our results can be accessed in SMEFT Dimension-8 RGEs.

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