SMEFT-Tools 2022



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Matching dictionaries at one loop

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The complete matching between the SMEFT and any of its UV completions is known at tree level, and it has been collected in the form of a dictionary connecting BSM fields and their couplings to the corresponding low-energy effective interactions. The recent developments in matching codes will allow to extend this dictionary to one loop in the near future. The large amount of data generated in this setting makes it necessary to build automatic tools for its storage and practical use. In this talk, I will present a general abstract format and a concrete python implementation for this purpose. The applicability of these tools goes beyond this context, including, for instance, the matching between the SMEFT and the WET, and between EFTs with extra fields beyond the SM ones.

Primary author: CRIADO, Juan Carlos

Presenter: CRIADO, Juan Carlos **Session Classification:** Session