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Masses and mixings in minimally parameterised UV completions of the Standard Model

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Simple parameterisations of new physics that results in an ultraviolet complete gauge-fermion sector of the Standard Model are explored. Specifically, we add an anti-screening contribution to the beta functions of the gauge couplings and a flavour-independent, anti-screening contribution to the beta functions of the quarks' and leptons' Yukawa couplings. These two free parameters give rise to a number of Renormalization Group fixed points. Some of them lead to a low-energy flavour structure and mixing pattern in agreement with the Standard Model. Successes and failures of this attempt to determine some of the free parameters of the Standard Model by the Renormalization Group flow will be discussed.

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