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Non-renormalizable interactions of the Standard Model fields

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The Standard Model fields can interact through non-renormalizable operators, the simplest of which is the one mentioned by Weinberg, with dimension 5. The list of all such operators up to dimension 6 is known and, since the last few years, so is the number of all effective interactions up to dimension 15. However, counting operators and listing them explicitly are different things. In this presentation I will talk about the challenges associated with writing down the non-renormalizable interactions of Standard Model fields beyond dimension 6.

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