Contribution ID: **125**   Type: **Parallel talk**

Quantum scale-invariant effective potentials

Thursday, 22 June 2017 17:30 (15 minutes)

I will describe a modified version of the dimensional regularization of a classically scale invariant theory, motivated by the requirement to preserve scale invariance at the quantum level. The role of the subtraction scale μ is played be a dynamic scalar field. This field is assumed to have non-zero VEV thus triggering spontaneous breakdown of scale symmetry which in turn triggers EWSB. This approach is conjectured to be free of the anomaly associated with the broken scale invariance. On the other hand, the method requires non-polynomial operators in the original Lagrangian. It also results in a modification of the renormalization group functions, relative to their form in a similar model regularized in the usual way with μ=constant (field-independent). Application of this formalism to the unstable scalar potential of Standard Model is discussed.

Presentation type

Parallel talk

Primary author: Mr OLSZEWSKI, Paweł (University of Warsaw)

Presenter: Mr OLSZEWSKI, Paweł (University of Warsaw)

Session Classification: Parallel II