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## Non-perturbative RG $\beta$ -function of 8-flavor SU(3) gauge theory

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Symmetric mass generation (SMG) is a new mechanism that leads to massive bound states without spontaneous symmetry breaking. An SMG phase could lead to a resolution of the chiral fermion problem on the lattice. Expectations from 't Hooft anomaly cancellation, combined with recent finite-size scaling results, indicate that the SU(3) gauge-fermion system with two sets of staggered fermions could support the existence of an SMG phase that is accessed by crossing a Berezinsky-Kosterlitz-Thouless (BKT)-like phase transition from weak to strong coupling. In this talk, we explore the  $\beta$ -function of this system. Using the gradient-flow-based “continuous  $\beta$ -function method”, our preliminary result for the continuum-extrapolated RG  $\beta$ -function shows signatures that are consistent with the development of a conformal fixed point.

### Topical area

Particle Physics Beyond the Standard Model

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