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UV divergent structure of supersymmetric gradient flow in N=1 SQCD

Wednesday, 8 December 2021 16:00 (20 minutes)

I will discuss perturbation theory of supersymmetric gradient flow in four-dimensional N = 1 SQCD and show one-loop calculations to the flowed fields. In flow theory, the perturbation theory consists of a perturbative expansion of the 4D gauge theory and an iterative expansion of the flow equations. We apply the same technique to SQCD in the Wess-Zumino gauge. Once the boundary theory is renormalized in the standard way, flowed two-point functions for the gauge multiplet are UV finite. The matter multiplets require extra renormalization, and its renormalization factor is the same for all component fields.

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Session Classification: Short talk