

## Measuring of chiral susceptibility using gradient flow

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In the lattice gauge theory with Wilson fermion, chiral symmetry is explicitly broken. A non-trivial additive correction is needed to renormalize the chiral condensate. In this study, we use gradient flow to avoid this problem. Gradient flow makes us possible to define correctly renormalized chiral susceptibility without additive renormalization.

We measure not only disconnected diagram but also connected diagram for chiral susceptibility. This measurement is on finite temperature full QCD with  $N_f=2+1$  Wilson fermion, and for temperature range 178-348 MeV.

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