

Determination of α_s in $N_f = 3$ QCD from current-current correlation functions in position space

Thursday, August 6, 2020 2:20 PM (20 minutes)

In this talk, we present a lattice determination of the coupling constant α_s in $N_f = 3$ QCD for renormalization scales $\mu \in (1, 2)$ GeV.

The computation has been performed on ensembles generated by the Coordinated Lattice Simulations (CLS) consortium, with tree-level Symanzik-improved gauge action and Wilson O(a)-improved fermions. Our approach is based on the study of current-current correlation functions in position space and allows to determine α_s (or alternatively the Λ parameter) with a competitive precision.

Primary author: CALÌ (*), Salvatore (Jagiellonian University)

Co-authors: CICHY, Krzysztof; KORCYL, Piotr; SIMETH, Jakob

Presenter: CALÌ (*), Salvatore (Jagiellonian University)

Session Classification: Standard Model Parameters and Renormalisation

Track Classification: Standard Model Parameters and Renormalisation