



Contribution ID: 24

Type: talk

Testing dynamical stabilization of Complex Langevin simulations of QCD

Friday 24 January 2025 08:30 (45 minutes)

We study complex Langevin simulations of a toy model as well as QCD, supplemented with a dynamical stabilization (DS) term, which was proposed to regularize the complexified process at lower temperatures. We compare the results to reweighting from zero chemical potential to measure the bias that the inclusion of the stabilization term causes, depending on its strength. At high temperatures the stabilization term is not needed. At low temperatures (below deconfinement transition) the DS term has a beneficial stabilizing effect, but too strong DS term causes phase quenching on the system. We observed that the bias of the dynamical stabilization can be to a good accuracy removed by extrapolating to zero dynamical stabilization force using a sigmoid fit.

Authors: SIXTY, Dénes; HANSEN, Michael

Presenter: SIXTY, Dénes

Session Classification: Friday morning