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A Feynman-Hellmann approach to nonperturbative renormalization of lattice operators

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Renormalization factors are needed to related lattice quantities to their corresponding continuum counterparts. In order to renormalize singlet observables one has to include connected and disconnected diagrams. Especially, the disconnected contributions are very difficult to calculate using the standard three-point function technique. The Feynman-Hellmann method provides the possibility to calculate the renormalization factors from two-point functions from which much better signals can be extracted. However, one has to simulate with additional modified actions.
In this talk we present first results for the Nf=2+1 SLiNC action. We compute the renormalization factors of selected local operators for the non-singlet and singlet cases.

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