



Contribution ID: 268

Type: Talk

## Determination of $\langle c_{\text{sw}} \rangle$ in $(N_f=3+1)$ Lattice QCD with massive Wilson fermions

*Thursday, 26 June 2014 14:55 (20 minutes)*

We develop a strategy for the non-perturbative determination of the  $O(a)$ -improvement coefficient  $\langle c_{\text{sw}} \rangle$  for Wilson fermions with massive sea quarks. The improvement condition is defined via the PCAC relation in the Schrödinger functional. It is imposed along a line of constant physics designed to be close to the correct mass of the charm quark. The numerical work uses the tree-level improved Lüscher-Weisz gauge action in  $(N_f=3+1)$  Lattice QCD.

**Primary author:** STOLLENWERK, Felix (Humboldt University Berlin)

**Co-authors:** FRITZSCH, Patrick (Humboldt University Berlin); Prof. SOMMER, Rainer (DESY Zeuthen); Prof. WOLFF, Ulli (Humboldt University, Berlin)

**Presenter:** STOLLENWERK, Felix (Humboldt University Berlin)

**Session Classification:** Standard model parameters and renormalization

**Track Classification:** Standard Model Parameters and Renormalization