Contribution ID: **110**   Type: **not specified**

Towards a precise and accurate non-perturbative determination of the strong coupling constant at the electroweak scale.

Friday, 11 March 2016 12:05 (30 minutes)

Relating the value of the strong coupling at the electroweak scale with the experimental value of hadronic quantities is a theoretical challenge that requires a non-perturbative formulation of the strong interactions. Lattice QCD provides an adequate theoretical framework to attack this problem. Our collaboration has developed a systematic strategy to connect non-perturbatively the low energy region of QCD with its high energy perturbative domain. After many years of applications to the pure gauge theory and two-flavour theory, we have applied this strategy to the three flavour theory. This study allow us to determine $\alpha_s(M_Z)$ in a controlled and precise fashion.

Primary author: RAMOS MARTINEZ, Alberto (CERN)

Presenter: RAMOS MARTINEZ, Alberto (CERN)

Session Classification: Friday Morning