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Matching lattice QC+ED to Nature

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The first step in any QFT calculation of a phenomenological observable is the matching of the theory to Nature. The matching procedure fixes the parameters of the theory in terms of an equal number of external inputs that, if the theory is expected to reproduce observations, must be experimentally measured physical quantities. At the (sub)percent level of accuracy QED radiative corrections become important and it is QCD+QED that is expected to describe the hadronic Universe. At this level of precision phenomenological predictions deriving from lattice QCD calculations do depend on the choice of the external inputs used to match/define the approximate theory.
In the first part of this talk I will concentrate on the theoretical aspects of the matching procedure of lattice QCD and of the lattice calculation of strong-isospin and QED radiative corrections to hadronic observables. In the second part I will concentrate on the so called theory scales. By heavily relying on the work recently done by the scale setting working group in the last edition of the FLAG review, I will discuss the numerical results obtained by the different collaborations for these useful auxiliary quantities.

Author: Prof. TANTALO, Nazario (University and INFN of Rome Tor Vergata)

Presenter: Prof. TANTALO, Nazario (University and INFN of Rome Tor Vergata)

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