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Non-perturbative renormalisation with interpolating momentum schemes

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We explore various non-perturbative renormalisation schemes in the framework of the Rome-Southampton method. In particular, we implement several non-exceptional interpolating momentum schemes, where the momentum transfer is not restricted to the symmetric point defined in RI/SMOM. Using flavour non-singlet quark bilinears, we compute the renormalisation factors of the quark mass and wave function for $N_f = 3$ flavours of dynamical quarks. We investigate the perturbative and non-perturbative scale-dependence and give the corresponding one-loop matching factors to \overline{MS} . Our numerical results are obtained from lattice simulations performed with Domain Wall fermions based on ensembles generated by RBC-UKQCD collaborations.

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