

Two-Loop Fermionic Integrals in Perturbation Theory on a Lattice

Friday, February 26, 2010 4:30 PM (30 minutes)

A comprehensive number of one-loop integrals in a theory with Wilson fermions at $r = 1$ is computed using the Burgio–Caracciolo–Pelissetto algorithm. With the use of these results, the fermionic propagator in the coordinate representation is evaluated, making it possible to extend the Luscher-Weisz procedure for two-loop integrals to the fermionic case. Computations are performed with FORM and REDUCE packages.

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