

Lattice calculations and the muon anomalous magnetic moment

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Anomalous magnetic moment of the muon, $a_\mu = (g-2)_\mu/2$, is one of the most precisely measured quantities in particle physics and it provides a stringent test of the standard model. With the planned improvement of the experimental precision at Fermilab and at J-PARC further reduction of the theoretical uncertainty is required, in order to be able to resolve the current discrepancy between the experimental measurement of a_μ and its theoretical prediction, and potentially gain insight into new physics. The dominant source of the uncertainty in the theoretical prediction of a_μ are the errors of the hadronic contributions. In this talk I will review recent progress on determination of leading hadronic contributions to a_μ from lattice calculations.