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Standard Model prediction for the muon g-2: a lattice perspective

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This spring, Fermilab's "Muon g-2" experiment is set to unveil its final results, targeting an unprecedented precision of 0.1 parts per million in measuring the muon's anomalous magnetic moment. To fully leverage this measurement in the quest for new fundamental physics, minimizing uncertainties in the Standard Model prediction is essential. This talk will review the various contributions to this prediction, focusing on the two most uncertain ones. In particular, it will explain how lattice QCD can be employed to compute those two contributions precisely. By comparing the resulting Standard Model prediction with the world-average measurement value, the extent to which new physics could be contributing to the muon g-2 will be assessed.

Secondary track

T05 - QCD and Hadronic Physics

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