Contribution ID: **31** Type: **Talk**

Hadronic contributions to the muon $g-2$ from lattice QCD

Monday, July 25, 2016 11:30 AM (45 minutes)

The overall accuracy of the Standard Model prediction of the anomalous magnetic moment of the muon is currently limited by hadronic effects. I review the status of lattice QCD calculations, aimed at providing precise estimates for the hadronic vacuum polarisation and hadronic light-by-light scattering contributions, respectively. In the case of the leading hadronic vacuum polarisation contribution I will focus on systematic effects in current lattice simulations and outline the progress made in computing the contributions from quark-disconnected diagrams. For the hadronic light-by-light scattering contribution the different computational and conceptual strategies employed by various groups will be reviewed.

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Session Classification: Plenary Session

Track Classification: Plenary Session