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Type: **Talk**

Theory predictions for $g-2$ of the muon

Tuesday, June 12, 2018 3:00 PM (30 minutes)

The magnetic moment of the muon $g - 2$ is sensitive to all interactions of the Standard Model and to a variety of hypothetical new physics scenarios. Future measurements will lead to important constraints on new physics, and they might even establish the existence of new physics contributions to $g-2$. The talk will describe the theoretical calculations of $g-2$ both in the SM and beyond the SM. Improvements in the SM prediction for $g-2$ have already significantly sharpened the current deviation from the measured value. In selected new physics models similarly accurate predictions are available. The talk will also give a phenomenological overview of the range and model dependence of new physics contributions to $g - 2$.

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Session Classification: muon $g-2$