

FAKULTÄT für PHYSIK  
LUDWIG-MAXIMILIANS-UNIVERSITÄT  
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT  
TECHNISCHE UNIVERSITÄT MÜNCHEN  
MÜNCHEN/GARCHING

## MLL-KOLLOQUIUM

Donnerstag, 04.12.2014, 16<sup>15</sup> Uhr

Seminarraum 127, TUM, Physik II, Erdgeschoss/Nord  
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Martin Hoferichter

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### Hadronic light-by-light scattering in the muon g-2: a dispersive approach

The uncertainty in the Standard-Model prediction for the anomalous magnetic moment of the muon is dominated by strong interaction contributions. While the accuracy of hadronic vacuum polarization can be improved by dedicated  $e^+e^- \rightarrow$  hadrons cross-section measurements, the evaluation of hadronic light-by-light scattering currently relies on models and is likely to constitute the road block for fully exploiting the upcoming g-2 experiments at FNAL and J-PARC. In the talk I will review our recently developed dispersive formalism that allows for a data-driven analysis of the most important hadronic channels in the light-by-light tensor, and discuss the experimental ingredients required for the evaluation of one- and two-pion intermediate states.

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