
Contribution ID : **707** Type : **Oral presentation**

# Lattice QCD studies of the leading order hadronic contribution to the muon g-2

*Saturday, 5 July 2014 12:00 (30)*

The anomalous magnetic moment of the muon, g-2, is one of the most promising observables to identify the signs of physics beyond the Standard Model. QCD contributions are currently responsible for the largest fraction of the overall theoretical uncertainty in the determination of the muon g-2, and in the running of the QED coupling constant. Studies of the vacuum polarisation function and of the Adler function, currently being carried out by the Mainz lattice group, will be presented. The various systematic effects present in the lattice QCD determinations of the muon g-2 and of the running of the QED coupling will be discussed.

## Summary

**Primary author(s) :** HERDOIZA, Gregorio (KPH Mainz & IFT Madrid)

**Co-author(s) :** FRANCIS, Anthony (KPH Mainz); JÄGER, Benjamin (Swansea University); HORCH, Hanno (KPH Mainz); WITTIG, Hartmut (KPH Mainz); MEYER, Harvey (KPH Mainz); GÜLPERS, Vera (KPH Mainz)

**Presenter(s) :** HERDOIZA, Gregorio (KPH Mainz & IFT Madrid)

**Session Classification :** Lattice QCD

**Track Classification :** Lattice QCD