



Wits ICPP/iThemba LABS SEMINAR in Particle Physics

New results from the Muon g-2 experiment at Fermilab

Wednesday 30 June 2021

14:30 - 15:30 SAST (CET)

[Zoom link](#)

Meeting ID: 626 9233 5383 Passcode: 118966



Abstract:

At the beginning of 2000's the E821 experiment at Brookhaven (USA) has measured the anomalous magnetic moment of the muon (known also as muon g-2) with a precision of 0.54 parts per million, finding a discrepancy of about three standard deviations with the theoretical prediction of the Standard Model. This longstanding discrepancy is one of the most intriguing hints of new physics in particle physics. In order to understand this discrepancy a new Muon g-2 experiment has been approved at Fermilab (USA) and started taking data in 2018. We will report the first results of the new Muon g-2 Experiment at Fermilab which measured the muon g-2 with a precision slightly better than the BNL one.

Prof. Graziano Venanzoni

An exceptional physicist who has worked on Muon g-2 and related experiments for many years and also brings a very compassionate, empathetic element to the scientific leadership. The Muon g-2 experiment's collaborators have elected Graziano Venanzoni, a physicist at the Italian National Institute for Nuclear Physics, Pisa, to serve as their new co-spokesperson effective Sept. 1. Venanzoni succeeds University of Manchester's Mark Lancaster, who has completed his two-year term as co-spokesperson of the experiment. Venanzoni joined the Muon g-2 collaboration in 2009. He also participated in the KLOE experiment at the INFN Frascati National Laboratory in Italy from 1994 to 2012. That experiment was devoted to studying the decay of phi mesons.

Enquiries:

mukesh.kumar@wits.ac.za, bruce.mellado@wits.ac.za

