FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 24.10.2019, 16^{15} Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Chandan Hati

(Physik Department, TU München)

Hunting new physics using lepton universality, flavour and number violation

With the discovery of the Higgs boson, the last missing piece of evidence confirming the Standard Model (SM) of particle physics has been obtained. However, the observation of neutrino oscillations has established non-vanishing neutrino masses, which are undeniable evidence of physics beyond the SM. Many new phenomena can emerge from various New Physics (NP) constructions beyond the SM, among which one finds processes that violate lepton number, charged lepton flavours, or even the universality of lepton flavors. These rare observables are currently being studied in various high-intensity facilities, and if observed, will indicate a clear sign of New Physics. After a brief overview of the experimental status of some of the dedicated searches (with some of them hinting towards potential anomalies), we will discuss the prospects of some well-motivated NP scenarios in the context of above mentioned observables, also discussing how the interplay of these observables and the neutrino data can shed light on the underlying NP model.

gez. Peter Thirolf
Tel. 289-14064

gez. Norbert Kaiser
Tel. 289-12367