Contribution ID: **14** Type: **not specified**

Implications of lepton non-universality for BSM models and colliders

Thursday 1 November 2018 14:00 (2 hours)

Implications of the exciting hints for lepton-nonuniversality seen in ratios of rare B-decays into muons and electrons at the LHCb-experiment are discussed.
Iff indeed true and confirmed with more data in the future at the LHC and Belle II (KEK, Japan), this would constitute a spectacular breakdown of the standard model:
i) it would tell us that leptons are more different from each other than we thought and ii) there is an intriguing link to the flavor puzzle.
Leptoquarks provide natural explanations of the anomalies as they carry lepton and quark flavor charges and thus generically can induce
nonuniversality, and lepton flavor violation. B-physics data point to masses from just around the corner, at the present search limits, to the few multi-TeV range,
while viable flavor models suggest masses of a few TeV. Search strategies and next steps are discussed.

Presenter: HILLER, Gudrun (Technische Universitaet Dortmund (DE))