

New frontiers in PDF analyses in the HL-LHC era

Tuesday, 7 July 2020 11:00 (15 minutes)

A robust knowledge of the proton subnuclear structure is a crucial input at the LHC. The uncertainty on the Parton Distribution Functions (PDFs) often represents a limiting factor in the accuracy of theoretical predictions at hadron colliders and this will be even more crucial in the High Luminosity run. I will give an overview of the new exciting challenges that the precision frontier is presenting, such as the simultaneous determination of the parameters entering QCD fits, theoretical uncertainties affecting the predictions entering such fits and the interplay between the proton structure and the hunt for new physics beyond the Standard Model.

Primary author: UBIALI, Maria (University of Cambridge)

Presenter: UBIALI, Maria (University of Cambridge)

Session Classification: EF01+03+04+05+06

Track Classification: Session EF01+03+04+05+06: Predictions for SM processes (including higher-order corrections, PDF, parton shower, etc.)