



UNIVERSITÀ DI PAVIA
Dipartimento di Fisica
"Alessandro Volta"



HAS QCD
HADRONIC STRUCTURE AND
QUANTUM CHROMODYNAMICS

Dr. Ignacio Borsa

University of Tübingen

terrà un seminario
martedì 23 giugno 2026
alle ore 11,00
Sala Riunioni INFN

dal titolo

"The spin structure of the proton beyond NLO"

Abstract: The study of the internal spin structure of the proton in terms of the contributions from quarks, anti-quarks and gluons is a key focus of modern particle physics. These contributions can be described in terms of the longitudinally polarized parton distribution functions (pPDFs) or helicity PDFs, which are probed in high-energy scattering processes involving polarized nucleons.

In this seminar I will present the results of our recent next-to-next-to-leading order (NNLO) fully-global QCD analysis of the proton's helicity PDFs, as well as some recent theory developments for precision calculations for polarized processes. Before commenting on the method and obtained results, I will make a short introduction about longitudinally-polarized collisions and the spin content of the proton.