

Abstract Submitted
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A new paradigm for QCD global analysis NOBUO SATO, Jefferson Lab — Several decades of high-energy scattering experiments have given us intriguing, though limited, glimpses into the inner structure of protons and neutrons. With the 12 GeV nuclear physics program at Jefferson Lab underway, along with ongoing programs at RHIC and LHC and plans for a future Electron-Ion Collider (EIC) facility, we are at the threshold of imaging the nucleon's internal 3-dimensional quark and gluon structure in the theoretical framework of QCD. Compared with previous generations of experiments, the new facilities will deliver unprecedented quantities of high-precision data, posing new opportunities and challenges for accessing a variety of quantum correlation functions (QCFs), such as parton distribution functions (PDFs), parton to hadron fragmentation functions (FFs), transverse momentum dependent distributions (TMDs), and generalized parton distributions (GPDs). In this talk I will discuss the future directions for QCD global analysis.

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