Parton Distributions and Lattice Calculations (PDFLattice 2024)

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Extraction of Parton Structure including Lattice QCD

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QCD is a difficult theory of hadrons because it is described entirely unobservable partons, the quarks and gluons. In order to access parton distributions, hadronic observables such as experimental cross sections or lattice QCD matrix elements must have factorization approximations separated hadronic and partonic distance scales. These observables are sensitive to different regimes in momentum fraction x. This complementarity could be beneficial in extractions of PDFs, TMDs, and GPDs. In this talk I will highlight a few specific cases where modern lattice QCD can have significant impact.

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