

Recent progress in partonic structure of the nucleon from lattice QCD

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We review the latest progress in lattice QCD calculations of x -dependent partonic distributions in the nucleon. These calculations rely on matrix elements probing spatial correlations between partons in a boosted hadron, that can be matched to light-cone correlations defining the relevant distributions. We discuss the recent theoretical and practical refinements of this strategy, as well as new exploratory directions. The latter include generalized parton distributions (GPDs), distributions beyond leading twist, flavor-singlet distributions and transverse-momentum dependent PDFs (TMDs). We also shortly consider the potential future impact of lattice data on phenomenology.

Primary author(s) : CICHY, Krzysztof (Adam Mickiewicz University)

Presenter(s) : CICHY, Krzysztof (Adam Mickiewicz University)

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