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## **Progress in $x$ -dependent partonic distributions from lattice QCD**

*Thursday, 29 July 2021 09:30 (40 minutes)*

We review the latest progress in lattice QCD calculations of the partonic structure of hadrons. This structure is, in particular, described in terms of  $x$ -dependent distributions, the simplest of which are the standard parton distribution functions (PDFs). The lattice 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.

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