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Mellin moments of proton unpolarized GPDs at nonzero skewness from lattice QCD with neural networks

Tuesday, 7 July 2026 16:30 (30 minutes)

This talk presents an extraction of Mellin moments of the proton unpolarized generalized parton distributions (GPDs) at nonzero skewness from lattice QCD. The analysis builds on the recent studies of GPDs at nonzero skewness, which, together with the polynomiality relations and short-distance factorization matching, connect the moments to generalized form factors. The present method uses artificial neural networks to parameterize the generalized form factors as functions of the invariant momentum transfer and to determine them from lattice data.

Primary author: COLAÇO, Manuel (Adam Mickiewicz University)

Presenter: COLAÇO, Manuel (Adam Mickiewicz University)

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