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Advances in hadronic structure from Lattice QCD

MARTHA CONSTANTINOU, Temple University

Understanding nucleon structure is considered a milestone of hadronic physics and new facilities are planned devoted to its study. A future Electron-Ion-Collider proposed by the scientific community will greatly deepen our knowledge on the fundamental constituents of the visible world. To achieve this goal, a synergy between the experimental and theoretical sectors is imperative, and Lattice QCD is in a unique position to provide input from first principle calculations. In this talk we will discuss recent progress in nucleon structure from Lattice QCD, focusing on the evaluation of matrix elements using state-of-the-art simulations with pion masses at their physical value. The axial form factors, electromagnetic radii, the quark momentum fraction and the spin content of the nucleon will be discussed. We will also highlight quantities that may guide New Physics searches, such as the scalar and tensor charges. Finally, we will give updates on a new direct approach to compute quark parton distributions functions on the lattice.