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## Nucleon matrix elements from lattice QCD WILLIAM DETMOLD, University of Washington

I provide an overview of recent attempts to calculate nucleon matrix elements, such as the electromagnetic form-factors and moments of parton distributions, in lattice QCD. Lattice QCD is a numerical approach to solving the field equations of QCD by discretizing space-time and directly integrating the QCD functional integral using Monte-Carlo techniques. As such, lattice calculations enable ab initio investigations of QCD. After introducing lattice QCD and highlighting some current limitations of the approach, I discuss the general principles of calculations of matrix elements. I then focus on recent results for electromagnetic form-factors and the moments of structure functions and generalized parton distributions. I emphasize the experimental relevance of such calculations and the insight they give into the structure of the nucleon. I conclude by discussing prospects for the future.