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Quantum Chromodynamics on the Lattice

An Introductory Presentation

The lattice formulation is at present the most successful approach to Quantum Chromodynamics - the theory of quarks and gluons. This book is intended for newcomers to the field and presents a clear and easy-to-follow path from the first principles all the way to actual calculations. It focuses on QCD and discusses mainly SU(3) lattice gauge theory, both with and without fermions. Numerical calculations in lattice field theory have now become the most effective approach for obtaining quantitative results, and thus three chapters include sections describing numerical techniques, as used in pure gauge theory, in quenched spectroscopy and in treating dynamical fermions. more on http://springer.com/978-3-642-01849-7

► Offers a practical guide to actual calculations  ► First introductory book for newcomers to the field