WWU MÜNSTER

FACHBEREICH PHYSIK

›Allgemeines Physikalisches Kolloquium

> Donnerstag, 9.05.2019 um 16 Uhr c.t.

apl. Prof. Dr. Jochen Heitger
apl. Prof. Dr. Christian Klein-Bösing
Priv.- Doz. Dr. Karol Kovarik

Westfälische Wilhelms-Universität Münster

Flavours of the Strong Interaction: Partons, Plasmas and Lattices

Quantum Chromodynamics (QCD) has been established as the theory of the strong interaction since more than fifty years. It describes the interactions of quarks and gluons and explains a wide range of observations, ranging from low-energy bound states, such as protons and pions, to high-energy collisions of protons and nuclei.
One challenge in QCD is the energy dependence of the interaction strength which leads, e.g., to the confinement of quarks into hadrons as well as asymptotic freedom. In order to fully explore the diversity of QCD phenomena, different theoretical and experimental approaches are required.

In this colloquium we present three "flavours" of investigating the properties of QCD in theory and experiment. We start by looking at the structure of protons and nuclei from the point of view of high-energy collisions. We then focus on the high-temperature phase of matter, where quarks and gluons are no longer confined. Finally, we sketch computations in the non-perturbative regime of QCD by means of lattice simulations.

Kolloquiums-Kaffee
ab 16 Uhr vor dem Hörsaal

Wilhelm-Klemm-Straße 10
Institutsgruppe 1 Hörsaal HS 2