

# Seminar

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## Complex Langevin simulations and the QCD phase diagram

The sign problem appears in lattice QCD as soon as a non-vanishing Baryon chemical potential is studied. This prevents direct simulations to determine the phase structure of the strongly interacting matter. Complex Langevin simulations have been successfully used for various models or approximations of QCD. However, in some scenarios it converges to incorrect results. Here I will discuss a new method that keeps complex Langevin simulations close to the  $SU(3)$  manifold and hereby improving the convergence. I will further discuss its application towards the ultimate goal of simulating fully dynamical QCD.

**Tuesday, 14.11.2017, 14:15 Uhr**

**Place: D6-135**