



Contribution ID: 117

Type: not specified

The $(1 + 1)$ -dimensional Gross-Neveu model at non-zero μ , T and finite N

Monday, 25 July 2022 17:20 (1h 15m)

We investigate the Gross-Neveu model for a finite number of fermions N . The solution of the Gross-Neveu model is well known in the large- N limit ($N \rightarrow \infty$) but unknown for finite N . We approach the finite- N case with a FRG method, more precisely the Wetterich equation. By using the local potential approximation the resulting flow equation for the scale dependent effective potential can be transformed into a non-linear diffusion equation. This equation is solved numerically by applying a finite volume method. No discrete chiral symmetry breaking is observed for any finite number of fermions, arbitrary chemical potentials as long as the temperature is non-zero.

Presenter: ZORBACH, Niklas

Session Classification: Poster