

## Wess-Zumino-Witten term in QCD-like theories

*Friday, 29 June 2018 14:30 (30)*

The so-called chiral soliton lattice was recently found to describe the ground state of the dense QCD matter in strong magnetic fields. Such a state consists of a periodic array of topological solitons, spontaneously breaks the parity and the translational symmetry and is known to appear also in condensed-matter systems such as chiral magnets. Motivated by the fact that the QCD-like theories such as the two-color QCD are accessible to the lattice simulations even at finite densities, we continue this work by investigating the behavior of the two-color QCD in strong magnetic fields. The analytic approach of low-energy effective field theory is used, hence, as a first step the gauged Wess-Zumino-Witten term reproducing the chiral anomaly has to be found. The well-known shape of the WZW term relevant for the QCD symmetry breaking pattern was generalized in order to be applicable also to the QCD-like theories.

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**Session Classification** : Parallel