QCD Vacuum Structure and Confinement



Contribution ID: 27

Type: not specified

Modified Villain formulation of axion-Maxwell theory and generalised symmetries.

Thursday 29 August 2024 16:30 (45 minutes)

Abstract: Recently, there has been a dramatic shift in our understanding of the notion of symmetry in a quantum field theory. Lattice gauge theory provides one of the best non-perturbative approaches to understanding QCD. This motivates the need to understand the recent generalised symmetries in the context of lattice gauge theory. In this talk I will use the lattice description of axion-Maxwell theory as a toy model to explore these ideas. This model exhibits a rich symmetry structure, including higher group, as well as non invertible symmetries. I will comment on how such structures are manifested in the lattice regularisation and comment on application to non-abelian generalisations.

Author: Dr AKHOND, Mohammad (Department of Physics, Kyoto University)

Presenter: Dr AKHOND, Mohammad (Department of Physics, Kyoto University)