



Contribution ID: 294

Type: **Talk**

Towards exact worldline models of lattice gauge theory at finite density

Tuesday, 24 June 2014 17:30 (20 minutes)

We integrate out all the link variables in the partition function of $SU(N)$ or $U(N)$ lattice gauge theory with the Wilson plaquette action, for arbitrary values of the lattice coupling. The partition function is recast as a Gaussian integral over auxiliary fields, after using suitable Hubbard-Stratonovich transformations. We extend our formalism to lattice gauge theories with staggered fermions at finite temperature and density, and show how to construct the corresponding monomer-dimer-polymer models for arbitrary values of the lattice coupling.

Primary author: VAIRINHOS, Helvio (University of Porto)

Co-author: DE FORCRAND, Philippe (ETH)

Presenter: VAIRINHOS, Helvio (University of Porto)

Session Classification: Nonzero temperature and Density

Track Classification: Nonzero Temperature and Density