Contribution ID: **95** Type: **Talk**

The CP(2) Model at Nonzero Chemical Potential

Friday, July 29, 2016 2:20 PM (20 minutes)

CP(N-1) quantum field theories in (1+1)-d share important features with (3+1)-d QCD, such as asymptotic freedom, a dynamically generated mass gap and topological sectors. In the low energy limit the (2+1)-d SU(3) spin system undergoes spontaneous symmetry breaking and hence dimensional reduction to the (1+1)-d CP(2) model. By performing Monte Carlo simulations of (2+1)-d SU(3) spin systems at non-zero chemical potential we have gained access to the (1+1)-d CP(2) model at non-zero chemical potential. The theory which underpins our calculation will be reviewed and numerical results for the magnetisations and correlation functions as a function of the chemical potentials will be discussed.

Primary author: Dr EVANS, Wynne (University of Bern)

Co-authors: Dr GERBER, Urs (Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México); Prof. WIESE, Uwe-Jens (University of Bern)

Presenter: Dr EVANS, Wynne (University of Bern)

Session Classification: Nonzero Temperature and Density

Track Classification: Nonzero Temperature and Density