



Contribution ID: 67

Type: **Talk**

O(3) model with Nienhuis action

Tuesday, July 26, 2016 3:20 PM (20 minutes)

We study the O(3) sigma model on a D=2 lattice with a Boltzmann weight linearized in β on each link. While the spin formulation now suffers from a sign-problem the equivalent loop model remains positive and becomes particularly simple. By studying the transfer matrix and by performing MC simulations in the loop form

we study the mass gap coupling in a step scaling analysis. The question addressed is, whether or not such a simplified action still has the right universal continuum limit. If the answer is affirmative this would be helpful in widening the applicability of worm algorithm methods.

Primary author: Prof. WOLFF, Ulli (HU Berlin)

Co-author: Dr NIEDERMAYER, Ferenc (Bern University)

Presenter: Prof. WOLFF, Ulli (HU Berlin)

Session Classification: Theoretical Developments

Track Classification: Theoretical Developments