

The paper studies slow RG evolution called walking in 2D Potts model with $Q > 4$. There are two main parts of the study. Firstly the authors define new complex CFTs obtained by analytic continuation in Q from $Q < 4$ and for which the authors compute a number of non-perturbative quantities. Secondly these new CFT's are used to develop a conformal perturbation approach to describing a slow rolling real coupling trajectory that passes in the vicinity of these complex CFTs. It is this trajectory that describes walking in 2D Potts model. The authors use the exact CFT data available to extract some first second order terms in small parameter perturbation theory (that in some sense is a complexification of the ϵ expansion used for two nearby fixed points linked by an almost marginal operator of dimension $2 - \epsilon$). As a consistency check the authors use these calculations to derive conformal dimensions at the conjugate fixed point $\bar{\mathcal{C}}$, and check that, to the second order, they are complex conjugates of those in \mathcal{C} . Also some interesting physical quantities such as drifting scaling dimensions are calculated (in first order in conformal perturbation theory).

I find the paper very interesting and well written with a thorough discussion of all conceptual issues. I recommend it for publication as is.

I would like to bring to the attention of the authors two papers in which two loop integrals of conformal perturbation theory are calculated for nearby fixed points (they appear to be essentially the same as those in section 4.4):

- A. W. W. Ludwig and J. Cardy, Nuclear Physics B285, 687
- M. Lässig, Nuclear Physics B334, 652

A couple of typos were spotted:

- On page 15, next to last sentence in section 3: "form" should be changed to "from"
- On page 20, just before formula (4.22) an "echo" of "with" should be removed