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A Large family of solvable lattice models (round to face models) based on WZW models

Friday, 8 July 2022 11:30 (15 minutes)

In this talk we will talk about a large class of solvable lattice models, based on the data of conformal field theory. These models are constructed from any conformal field theory. The talk will be based on the results of a work titled "The crossing multiplier for solvable lattice models". We consider the lattice models based on affine algebras described by Jimbo et al., for the affine algebras (A,B, C,D) and by Kuniba et al. for G2. We find a general formula for the crossing multipliers of these models. It is shown that these crossing multipliers are also given by the principally specialized characters of the model in question. Therefore we conjecture that the crossing multipliers in this large class of solvable interaction round the face lattice models are given by the characters of the conformal field theory on which they are based. We use this result to study the local state probabilities of these models and show that they are given by the branching rule, in regime III.

In-person participation

No

Primary authors: Prof. GEPNER, Doron (Weizmann Institute, Israel); RAMOS, Juan (Ariel University); Prof. BELAVIN, Vladimir (Ariel University, Israel)

Presenter: RAMOS, Juan (Ariel University)

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