

Slava Rychkov : Real-space renormalization of lattice models using tensor networks

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Critical points of lattice models, such as the 3d Ising model, are conjectured by Kenneth Wilson in 1970's to correspond to fixed points of renormalization group transformations. I will discuss the status of this conjecture, a novel class of renormalization group transformations using the language of tensor networks, a few results which were recently obtained using this language for the high and low-temperature phases of 2d models, and the ongoing progress towards the construction of a nontrivial 2d fixed point. Joint work with Tom Kennedy and Nikolay Ebel.