

# Extraction of Conformal Data in Critical Two-Dimensional Classical Models using Tensor Networks Renormalization

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We propose a scheme to extract the conformal data of critical two-dimensional classical models from tensor network renormalization based finite-size scaling. The key point is to identify the length scale below which the system is in the finite-size scaling regime. The scheme can work with any tensor network renormalization method that preserves the translation invariance. In particular, we benchmark against three tensor network renormalization methods: HOTRG, PTMRG, and CTRG. In this work, we apply the scheme to 2D Ising model and 3-state clock model at criticality. Our results show that all conformal data can be extracted with high accuracy. Moreover, we show how to define entanglement scaling for 2D classical systems, from which the central charge can be extracted accurately.

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