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Validating a novel approach to the two-dimensional Ising model phase transition

Tuesday 4 November 2025 18:00 (1h 30m)

The Ising model serves as a model for simple magnetic systems and as a testing ground for the study of strongly-coupled systems. The model is exactly solvable in two dimensions and can be simulated with relatively small computing resources. We investigate the phase transition of the Ising model through a novel scaling procedure first proposed to explore the phase structure of a theory with four $SU(2)$ doublet fermions in Butt et al. (PRL 134, 2025, 031602). We present a preliminary validation of this scaling procedure by demonstrating that the procedure aligns with the known properties of the two-dimensional Ising model.

Parallel Session (for talks only)

Theoretical developments and applications beyond Standard Model

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