SFB/TRR 21 - Seminar

11. November 2011, Ulm

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## Tree Tensor Network ansatz states: criticality, boundary properties, and symmetries

Tensor Networks are a paradigm for building variational classes of tailored many-body wavefunctions, meant to be used as efficient tools in simulations of quantum many-body systems. Among them, Tree Tensor Networks (TTN) seem particularly suitable for addressing critical problems, as they bear the entanglement area-law violation typical of critical ground states. In this Talk, various structural properties of TTN will be investigated. In particular, it will be shown how an emergent criticality, identified by power-law scaling of two-point correlations, arises by simple homogeneity requirements.

**11. November 2011, 11:00 Uhr**

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