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## Entanglement asymmetry in the ordered phase of many-body systems: the Ising Field Theory

*Tuesday, 5 September 2023 12:00 (20 minutes)*

Global symmetries of quantum many-body systems can be spontaneously broken. Whenever this mechanism happens, the ground state is degenerate and one encounters an ordered phase. In this study, our objective is to investigate this phenomenon by examining the entanglement asymmetry of a specific region. We explicitly demonstrate our construction in the ordered phase of the Ising field theory in 1+1 dimensions, where a  $Z_2$  symmetry is spontaneously broken, and we employ a form factor bootstrap approach to characterise a family of composite twist fields. Analytical predictions are provided for the entanglement asymmetry of an interval in the Ising model as the length of the interval becomes large.

This is a joint work with Michele Mazzoni. Ref. arXiv:2307.12127

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