“Temperature Corrections to Entanglement Entropy For Conformal Field Theories”

Chris Herzog, Stony Brook University

Measures of entanglement have become increasingly important in a growing variety of areas of theoretical physics. I will discuss a simple formula that in most cases gives the leading temperature correction to the entanglement entropy of a cap-like region for a conformal field theory on a sphere. The result holds in arbitrary dimension and depends only on the energy and degeneracy of the first excited state. I will also discuss how to resolve an apparent discrepancy between the general formula and a particular example, the conformally coupled scalar.