

NEW PERSPECTIVES IN CONFORMAL FIELD THEORY AND GRAVITY

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Advances in finite temperature conformal field theories

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We are exploring the application of tools from Conformal Field Theories (CFTs) and (conformal) bootstrap to investigate Thermal CFTs. These theories, despite being non-critical, retain many fundamental structures of zero-temperature CFTs, such as the Operator Product Expansion, and maintain an identical conformal spectrum. However, one-point functions at finite temperature can be non zero and therefore new data (not present at zero temperature) are needed to compute correlation functions.

To delve into the study of thermal effects, we consider the theory on the “thermal” manifold $S^1 \times \mathbb{R}^{d-1}$. In this context, we present our findings based on recent work (arXiv:2306.12417) and ongoing research.

Summary

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