Abstract Submitted
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Relative entropy of conformal interfaces, boundary states, and the applications to Chern-Simons theories XUEDA WEN, UIUC, TOKIRO NUMASAWA, Yukawa Institute for Theoretical Physics, Kyoto University and KITP, TOMONORI UGAJIN, KITP, SHINSEI RYU, UIUC — Relative entropy is a measure to distinguish two quantum states. In this work, we study the relative entropy for a 1+1 dimensional CFT with different conformal interfaces/defects and conformal boundary conditions. By using relative entropy, we can extract the universal data of conformal interfaces/defects and conformal boundary states. In addition, we apply our methods to 2+1 dimensional Chern-Simons theories. It is found that the results are sensitive to whether the theory is Abelian or non-Abelian, and can be used to detect topological data without UV divergence.

Xueda Wen
Univ of Illinois - Urbana

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