APCTP LECTURE SERIES

c-Functions in Flows Across Dimensions

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University of Michigan

August 22nd(Mon.) ~ 24th(Wed.) 15:00

#101, Hogil Kim Memorial Bldg. & Online via ZOOM

We explore the notion of c-function in renormalization group flows between theories in different spacetime dimensions. We discuss functions connecting central charges of the UV and IR fixed point theories on the one hand, and functions which are monotonic along the flow on the other. For flows across dimensions we use entanglement entropies associated with various regions and find functions which satisfy one of these criteria but not both. As concrete examples we holographically study twisted compactifications of 4d maximally supersymmetric Yang-Mills and compactifications of 6d (2,0) theories. For holographic c-functions, defined from geometric properties of the holographic duals and constrained by the null energy condition, we find the same dichotomy and are able to establish a holographic c-theorem across dimensions. For the entanglement entropies we discuss here there is an interesting connection between corner contributions and the topology of the compact space.

Date	Time	Title
8.22	15:00	c-Functions in RG Flows Across Dimensions
8.23	15:00	Entanglement Entropy in Flows Across Dimensions
8.24	15:00	RG Flows Across Dimensions and Black Hole Entropy

■ **ZOOM Webinar**

1) Please register through this ZOOM link (password is 0)
https://us06web.zoom.us/meeting/register/tZIqcuqqrzwvHNQow-GVuIVjNffdhvrQkIII
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