

# Entanglement renormalization of non-Hermitian critical systems and emergent dS space

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One of the most important development in AdS/CFT correspondence is the RT formula[1]. This formula states that entanglement entropy of boundary CFT will equal to bulk AdS minimum surface

$$\begin{equation}$$

$$S(V) = \min[\frac{A(m)}{4G_N}]$$

$$\end{equation}$$

Which gives a big convenience to calculate entanglement entropy in CFT.

Later research[2] shows that this conjecture becomes obvious in the AdS/MERA.

Since our universe is a dS space, so people have a big interest in dS/CFT. Research[3] shows that here the dual CFT will be a non-unitary one with negative/complex central charge. Recent research[4] shows that non-Hermitian system can have a negative central charge. Therefore, to push the understanding of RT formula in dS/CFT case and learn more about dS/CFT, we study the cMERA of non-Hermitian system.

**Primary author:** 周, 鄭宏 (NTHU PHYS)

**Presenter:** 周, 鄭宏 (NTHU PHYS)

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