Tohoku Forum for Creativity Thematic Program 2015

Fundamental Problems in Quantum Physics: Strings, Black Holes and Quantum Information

International Workshop on Strings, Black Holes and Quantum Information

Entanglement and C-theorems [Review]

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(Perimeter)

Schedule:

Wednesday, September 9, 11:00-12:00

Place:

TOKYO ELECTRON House of Creativity 3F, Lecture Theater

Katahira Campus, Tohoku University

Abstract:

C-theorems state that a certain function must decrease along any RG trajectory and so they illustrate the irreversible character of RG flow. The possibility of such a structure first emerged over twenty-five years ago with Zamolodchikov's proof of the c-theorem in two dimensions. This proof was later rephrased in terms of entanglement entropy and more recently the F-theorem in three dimensions was proved in terms of entanglement entropy. We review these entanglement formulations of C-theorems.