Salah Mohammad Memorial

MATH
COLLOQUIUM SERIES

9-28-17
3:00PM
Neckers 156

Eric Chitambar
SIUC, Physics

Title
Transforming Resources within a Quantum Resource Theory

http://www.physics.siu.edu/~echitamb/

Reception immediately following in Math Library.

Place: Neckers 156

Time: 3:00pm

Abstract

A quantum resource theory studies what physical processes are possible when constraints are placed on an experimenter's operational capabilities. Under these restrictions, certain states become impossible to create, thereby rendering them as a "resource" for quantum information processing. The paradigm example of a quantum resource is entanglement, which cannot be generated by multiple experiments located in spatially separated laboratories.

In this talk I will discuss the mathematical structure of a general quantum resource theory and describe typical problems encountered. In particular, I will discuss the problem of resource transformation, which asks whether or not one state can be converted to another under the allowed operations of the theory. Recent work on the subject will be presented.

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