Seminários de MATEMÁTICA

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Título: Self-catalytic conversion of pure quantum states

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RESUMO

Conversion of entangled states under (Stochastic) Local Operations and Classical Communication, is driven by the majorization relation (a partial order in the probability simplex), and admits the phenomenon of catalysis. In this talk we will discuss the possibility of a copy of the initial state itself to perform as a catalyst, which we call a self-catalytic process. We will show explicit examples of self-catalysis. Necessary and sufficient conditions for the phenomenon to take place will be discussed. Furthermore, we numerically estimate how frequent it is and we will show that increasing the number of copies used as catalyst can increases the probability of conversion, but do not make the process deterministic. By the end we conjecture that under LOCC the probability of finding a self-catalytic reaction do not increase monotonically with the dimensions whereas SLOCC does increase.

PUBLICO ALVO

Alunos de graduação e pós-graduação. Palestra em Português

PROMOÇÃO

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Departamento de Matemática

MESTRADO em MATEMÁTICA