

Review of some basic notions of the entanglement of quantum states and operations

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I give a literature survey of a few classes of quantum operations that are relevant to quantum information, including separable, PPT, and LOCC operations, including discussion of one or two applications. The talk will hence also review the notions of PPT/separable states, generalised measurements (POVMs), and completely positive maps.

References:

- Classes of Operations + application to distillation:
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- Hiding bits
D.P. DiVincenzo, D.W. Leung and B.M. Terhal quant-ph/0103098. T. Eggeling and R.F. Werner, Phys. Rev. Lett. 89, 097905 (2002). D.P. DiVincenzo, P. Hayden and B.M. Terhal, quant-ph/0210053.
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Phys. Rev. A. 67, 062308 (2003).
- Non-locality without entanglement:
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