

Correlations beyond entanglement

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Separable states may have a kind of correlation which cannot be captured by standard measures of entanglement. These states do not violate Bell inequality and yet they can give computational power to quantum computers which surpass any classical computer. We discuss these states and in particular we focus on a well-known subclass of them called Werner states. We point out an intriguing property of these states and relate it to the impossibility of a universal NOT operation in quantum mechanics.

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