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Title: Fundamental limitations for qubit as an information carrier

Abstract:

It is one of the basic lessons of quantum information that a qubit can encode one bit of information. This is due to the fact that a qubit system has only two orthogonal pure states. However, certain different kind of messages can be encoded even with non-orthogonal pure states, and this raises the question on the fundamental limitations of qubit as an information carrier. In this talk, I will discuss about these limitations and also tell about their connection to the possible interpretations of the meaning of quantum states.