Joint Annual Meeting of SPS and OPG 2019



Contribution ID: 98 Type: Poster

[557] Measurable Inequalities for higher dimensional Quantum Secret Sharing Protocols

Wednesday 28 August 2019 19:08 (1 minute)

Distributing a secret to many parties such that none alone can reveal it was first proposed by Shamir (1979) and applied in the quantum scheme by Hillery, Bužek and Berthiaume (1999). By a modification of this HBB protocol Hiesmayr, Huber and Schauer showed that the security against eavesdropping or a dishonest party can be based on the physical property due to entanglement, more precise genuine multipartite entanglement of the Greenberger-Horne-Zeilinger-type. In this poster we extend the protocol to higher dimensional quantum systems, show that they provide more aspects and study its security by inequalities witnessing the specific genuine multipartite entanglement.

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Session Classification: Poster Session

Track Classification: Quantum Science and Technology