## **SAIP2016**



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## Multiparty Quantum State Sharing of an arbitrary unknown three particle state with GHZ state measurements

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Abstract content <br/> &nbsp; (Max 300 words)<br/> dry-<a href="http://events.saip.org.za/getFile.py/starget="\_blank">Formatting &<br/> &classed chars</a>

We propose a scheme for sharing unknown three-particle state to n agents using Greenberger-Horne-Zeilinger (GHZ) states. Firstly, we introduce the five party QSTS of arbitrary three particle unknown state where Alice start by sharing four GHZ entangled states with her four agents and performs three GHZ state measurements on her particles followed by two single particle measurements on the Hadamard basis. One of the agents Bob1 performs single measurement on her particle and the three other agents each perform unitary transformation on their particle to recover the unknown state. Subsequently we propose the generalised multiparty QSTS of an arbitrary three particle state.

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