

## Abstract

In this thesis we have found new class of bound entangled state that are key distillable. We have shown that in certain cases Iteration operation which has a mapping  $\rho \rightarrow \rho + \epsilon \rho^2$  increases the lower bound  $K_{DWD}$  of key distillation value. The difference between the values of  $K_{DWD}$  before and after the Iteration protocol can be seen in figure 4:3. We have defined certain condition that were proposed in ([1]) and showed that even after violation of these condition, we can prove key distillability of bound entangled state using Iteration operation.