

# From Classical to Quantum Information Theory

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## Abstract

abstract

## 1 Introduction

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## 2 Background Knowledge

Background Knowledge

## 3 Quantum Information and Entropy

### 3.1 Entropy of Quantum States

TODO

### 3.2 Holevo Bound

TODO

## 4 Major Proofs

### 4.1 Proof

TODO

### 4.2 Proof of Holevo Bound

TODO

## 5 Conclusions

Conclusion

## **A Proof of some Lemma**

Appendix one text goes here.

## **B Proof of some other Lemma**