

## ***Edge Centrality Via The Holevo Quantity Aston University***

### ~~Edge Centrality Via The Holevo~~

A related problem is that of measuring the centrality of an edge. In this paper, we propose a novel edge centrality index rooted in quantum information. More specifically, we measure the importance of an edge in terms of the contribution that it gives to the Von Neumann entropy of the graph. We show that this can be computed in terms of the Holevo quantity, a well known quantum information theoretical measure.

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