

# Min-Cuts Algorithms

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# Motivation

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This here is the introduction of Cut Problems.

# Definition



# Karger's Algorithm

- Contraction method is used.
- Randomized selection of Edges.
- Running multiple times of the algorithm will provide more accurate result.

# Karger's Algorithm

- Basically one run of Karger's Algo takes  $O(n^2)$  time.
- It achieves error probability of  $\frac{1}{\text{poly}(n)}$  with  $O(n^4 \log n)$  time.

# Algorithm



# References