Abstract

In this work we present a new and efficient recursive algorithm that enumerate all the s-t minimal cut sets (MCs) separating nodes s (source) and t (terminal) in a network system. The networks studied here are considered as the undirected graphs. Later enumerating all the MCs, the inclusion-exclusion principle is used to compute the network reliability based on the probabilities of the links.

References

- JGraphT, http://jgrapht. org/
- Lin, H. -Y. , Kuo, S. -Y. & Yeh, F. -M. , Minimal Cutset Enumeration and Network...

Index Terms

Computer Science  Algorithms

Keywords

Network Reliability  Minimal Cut Set  Undirected Graph  Inclusion Exclusion Principle  Algorithm