ABSTRACT

The exact reliability of a complicated network system is usually difficult to determine, and numerical approximations may play a crucial role in indicating the reliable probability that a system is still operational under a specified suite of conditions. In this paper, we establish upper and lower bounds on the first-order subsystem reliability of bubblesort networks using the probabilistic fault model. Numerical results show that the curves of upper- and lower-bounded reliability are in good agreement, especially when the node reliability is at a low level.

Keywords: reliability, bubblesort networks, probabilistic fault model, lower-bounded reliability

REFERENCES


