Bifanability of Bipartite Hypercube-like Networks

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ABSTRACT

In this thesis, we introduce the concepts of bifanability and fault tolerant bifanability. We show that the n-dimensional hypercube Qn and bipartite hypercube-like Xn are f edges fault tolerant k*-bifanable for n≧3,0≦f≦n-2,1≦k≦n-f. We also prove that the n-dimensional hypercube Qn is f edges fault tolerant k*-bifanable with one faulty node for n≧3,0≦f≦n-3,k=n-f-1.

Keywords : super bifanability, fault tolerant bifanability, hypercube, bipartite hypercube-like

Table of Contents

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