The study for adjacent vertices fault-tolerance bifanability of hypercube

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ABSTRACT

Let Q_n = (V_b ∪ V_w, E) be the n-dimensional hypercube. Let F_a be the set of fa pairs of adjacently faulty vertices. Let s_1, t^2_1,..... t^{k_1}_1 ? V_b, t^1_1 ? V_w. In this thesis, we construct the spanning internally disjoint paths P(s_1, t^i_1) and of Q_n ? F_a for f_a + k ? n and 1 ? i ? k. Let s_1, t^1_2, t^2_1,...., t^{k_1}_1 ?V_b, s_2, t^1_1, t^2_2,...., t^{k_1}_2 ? V_w be arbitrary fault-free vertices of Q_n. In this thesis, we construct the spanning internally disjoint paths P(s_1, t^i_1) and P(s_2, t^j_2) of Q_n ? F_a for f_a + k_1 + k_2 ? n – 1 and 1 ? i ? k_1, 1 ? j ? k_2.

Keywords : hypercube、vertices fault-tolerance、Fanability、Hamiltonian-laceable、Bifanability

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