

The study for adjacent vertices fault-tolerance bifanability of hypercube

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ABSTRACT

Let $Q_n = (V_b \cup V_w, E)$ be the n -dimensional hypercube. Let F_a be the set of f_a pairs of adjacently faulty vertices. Let $s_1, t_1, \dots, t_{k_1-1} \in V_b, t_k \in V_w$. In this thesis, we construct the spanning internally disjoint paths $P(s_1, t_i)$ and of $Q_n - F_a$ for $f_a + k \leq n$ and $1 \leq i \leq k$. Let $s_1, t_1, t_2, \dots, t_{k_1-1} \in V_b, s_2, t_1, t_2, \dots, t_{k_1-1} \in V_w$ be arbitrary fault-free vertices of Q_n . In this thesis, we construct the spanning internally disjoint paths $P(s_1, t_i)$ and $P(s_2, t_j)$ of $Q_n - F_a$ for $f_a + k_1 + k_2 \leq n - 1$ and $1 \leq i \leq k_1, 1 \leq j \leq k_2$.

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

Table of Contents

封面內頁 簽名頁 授權書.....	iii	ABSTRACT.....	iii
.....iv 中文摘要.....	iv	.....v 誌謝.....	v
.....vi 目錄.....	vi	.....vii 圖目錄.....	vii
.....viii Chapter 1. Introduction	1	.....1 Chapter 2. The adjacent vertices	1
fault-tolerance of Fanability.....3	3	.....18 Chapter 3. The adjacent vertices fault-tolerance of Bifanability.....18	18
.....18 3.1 Two spanning	18	disjoint paths	18
.....21 3.2 Adjacent vertices fault-tolerance for Bifanability of hypercube.....	21	.....41 Chapter 4. Conclusion.....	41
.....42 圖目錄	42	Figure2.1 The case1.1.1 of Theorem 2.1.....	4
Figure2.2 The	5	case1.1.2 of Theorem 2.1.....	5
Figure2.3 The case1.2 of Theorem 2.1.....	5	Figure2.4 The case1.3 of Theorem 2.1.....	6
Figure2.5 The case1.4 of Theorem 2.1.....	6	Figure2.6 The case1.4 of Theorem 2.1.....	7
Figure2.7 The case1.5 of Theorem 2.1.....	7	Figure2.8 The case1.6 of Theorem 2.1.....	8
Figure2.9 The case1.7 of Theorem 2.1.....	8	Figure2.10 The case1.8 of Theorem 2.1.....	9
Figure2.11 The case1.9 of	10	Theorem 2.1.....	10
Figure2.12 The case1.10 of Theorem 2.1.....	10	Figure2.13 The	11
case1.11 of Theorem 2.1.....	11	Figure2.14 The case2.1 of Theorem 2.1.....	11
Figure2.15 The case2.2 of Theorem 2.1.....	12	Figure2.16 The case2.3 of Theorem 2.1.....	12
Figure2.17 The case2.4 of Theorem 2.1.....	13	Figure2.18 The case2.5 of Theorem 2.1.....	13
Figure2.19 The case2.6 of Theorem 2.1.....	14	Figure2.20 The case3.1 of Theorem 2.1....	15
Figure2.21 The case3.2 of Theorem 2.1.....	15	Figure2.22 The case3.3 of	16
Theorem 2.1.....	16	Figure2.23 The case3.4 of Theorem 2.1.....	16
Figure2.24 The	17	case3.4 of Theorem 2.1.....	17
Figure3.1 The case1 of Lemma 3.2.....	19	Figure3.2 The case2 of Lemma 3.2.....	19
Figure3.3 The case3 of Lemma 3.2.....	19	Figure3.4 The case4 of Lemma 3.2.....	20
Figure3.5 The case4 of Lemma 3.2.....	20	Figure3.6 The case1.1 of Theorem 3.1.....	22
Figure3.7 The case1.1 of Theorem 3.1....	23	Figure3.8 The case1.2 of Theorem 3.1.....	23
Figure3.9 The case1.3.1 of	24	Theorem 3.1.....	24
Figure3.10 The case1.3.2 of Theorem 3.1.....	24	Figure3.11 The	25
case1.3.3 of Theorem 3.1.....	25	Figure3.12 The case1.4.1 of Theorem 3.1.....	26
Figure3.13 The case1.4.1 of Theorem 3.1.....	26	Figure3.14 The case1.4.2 of Theorem 3.1.....	27
Figure3.15 The case1.4.2 of Theorem 3.1.....	27	Figure3.16 The case1.4.2 of Theorem 3.1....	28
Figure3.17 The case1.4.3 of Theorem 3.1.....	28	Figure3.18 The case1.4.3 of	29
Theorem 3.1.....	29	Figure3.19 The case1.4.3 of Theorem 3.1.....	29
Figure3.20 The	30	case1.4.4 of Theorem 3.1.....	30
Figure3.21 The case1.4.5 of Theorem 3.1.....	31	Figure3.22 The case1.4.6 of Theorem 3.1.....	31
Figure3.23 The case2.1 of Theorem 3.1.....	32	Figure3.24 The case2.2.1.1 of Theorem 3.1.....	33
Figure3.25 The case2.2.1.2 of Theorem 3.1....	33	Figure3.26 The case2.2.1.3 of Theorem 3.1.....	34
Figure3.27 The case2.2.1.3 of	34		

Theorem 3.1.....	35	Figure3.28 The case2.2.1.4 of Theorem 3.1.....	35	Figure3.29 The case2.2.1.4 of Theorem 3.1.....	36
Figure3.30 The case2.2.1.4 of Theorem 3.1.....	37	Figure3.31 The case2.2.2.1 of Theorem 3.1.....	37	Figure3.32 The case2.2.2.2 of Theorem 3.1.....	38
Figure3.33 The case2.2.2.3 of Theorem 3.1.....	38	Figure3.34 The case2.2.2.4 of Theorem 3.1.....	39	Figure3.35 The case2.3.1 of Theorem 3.1.....	39
Figure3.36 The case2.3.1 of Theorem 3.1.....	40	Figure3.37 The case2.3.2 of Theorem 3.1.....	40		

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