

超立方體相同顏色起點之雙扇形相鄰點容錯性質之研究

晏慶展、洪春男

E-mail: 321996@mail.dyu.edu.tw

摘要

本篇論文是研究出 n 維超立方體圖形具有相鄰壞點容錯性質的相同顏色起點雙扇形圖形。令 Q_n 是一個 n 維超立方體圖形，令 F_a 為相鄰壞點 f_a 的集合，令 s_1, t_1, \dots, t_{k_1} , s_2, t_2, \dots, t_{k_2} 屬於 V_j , t_1, t_2 屬於 V_j , $\{i, j\} = \{b, w\}$ 是 Q_n 上好的點。在這篇論文，我們建構一個 $f_a \neq n-3$, $f_a + k_1 + k_2 = n-1$, $1 \leq i \leq k_1$, $1 \leq j \leq k_2$ 條件下 $Q_n - F_a$ 生成內部不相交路徑 $P(s_1, t_{i_1})$ 和 $P(s_1, t_{j_1})$ 。

關鍵詞：超立方體 雙扇形 相鄰壞點 容錯

目錄

封面內頁 簽名頁 授權書.....iii 英文摘要.....iv 中文摘要.....v 誌謝.....vi 目錄.....vii 圖目錄.....viii Chapter 1 Introduction.....1
Chapter 2 Main result.....3 2.1 Preliminaries.....3 2.2 The adjacent vertices fault-tolerance of bifanability.....9 Chapter 3
Conclusion.....31 Reference.....32

參考文獻

- [1] Rostislav Caha and V. Koubek, Hamiltonian cycles and paths with a prescribed set of edges in hypercubes and dense sets, " J. Graph Theory, 51 (2005), pp.137- 169.
- [2] Rostislav Caha and Vclav Koubek, Spanning multi-paths in hypercubes," Dis- crete Mathematics, 307 (2007), pp.2053-2066.
- [3] Yi-Hua Chang and Chun-Nan Hung, Adjacent Vertices Fault-tolerance Hamil- tonian Laceability of Hypercube," Workshop on Combinatorial Mathematics and Computational Theory, (2005), pp.301-309.
- [4] Chung-Haw Chang and Cheng-Kuan Lin, Hua-Min Huang, and Lih-Hsing Hsu, The super laceability of the hypercubes," Information Processing Letters, 92 (2004), pp.15-21.
- [5] Y-Chuang Chen and Chang-Hsiung Tsai, Lih-Hsing Hsu, Jimmy J.M. Tan, On some super fault-tolerant Hamiltonian graphs," Applied Mathematics and Com- putation, 148 (2004), pp.729-741.
- [6] Xie-Bin Chen, Hamiltonian paths and cycles passing through a prescribed path in hypercubes," Information Processing Letters, 110 (2009), pp.77-82.
- [7] Xie-Bin Chen, Many-to-many disjoint paths in faulty hypercubes," Information Sciences, 179 (2009), pp.3110-3115.
- [8] Chia-Cheng Chen and Chun-Nan Hung and Ko-Chen Hu, Edge Fault-tolerant of k^* -bifanability for bipartite Hypercube-like graphs," Workshop on Combinatorial Mathematics and Computational Theory, (2005), pp.134-139.
- [9] Tomas Dvorak and Petr Gregor, Hamiltonian fault-tolerance of hypercubes," Electronic Notes in Discrete Mathematics, 29 (2007), pp.471-477.
- [10] Tomas Dvorak and Petr Gregor, Hamiltonian paths with prescribed edges in hypercubes," Discrete Mathematics, 307 (2007), pp.1982-1998.
- [11] Jung-Sheng Fu, Fault-tolerant cycle embedding in the hypercube," Parallel Computing, 29 (2003), pp.821-832.
- [12] Ko-Chen Hu and Chun-Nan Hung and Chia-Cheng Chen, Edge Fault-tolerant Hamiltonian Laceability of Bipartite Hypercube-like Networks," Proceedings of the 22nd Workshop on Combinatorial Mathematics and Computational Theory, (2005), pp.129-133.
- [13] Ko-Chen Huand and Chun-Nan Hung and Chia-Cheng Chen, Edges fault- tolerant Hamiltonian laceability of bipartite hypercube-like networks," Workshop on Combinatorial Mathematics and Computational Theory, (2005), pp.129-133.
- [14] Chun-Nan Hung and P. Lin, The Study for Adjacent Vertices Fault-Tolerance Bifanability of Hypercube," Proceedings of the 2009 National Computer Sympo- sium Workshop on Algorithms and Bioinformatics, (2009), pp.215-224.
- [15] Chun-Nan Hung and Guan-Yu Shi, Vertex fault tolerance for multiple span- ning paths in hypercube," Proceedings of the 24th Workshop on Combinatorial Mathematics and Computational Theory, (2007), pp.241-250.
- [16] Chun-Nan Hung and K.C. Hu, Fault-tolerant Hamiltonian laceability of bipar- tite hypercube-like networks," The Proceedings of the 2004 International Com- puter Symposium, (2004), pp.1145-1149.
- [17] Di Liu and Jing Li, Many-to-many n -disjoint path covers in n -dimensional hy- percubes," Information Processing Letters, 110 (2010), pp.580-584.
- [18] Chong-Dae Park and K.Y. Chwa, Hamiltonian properties on the class of hypercube-like network," Information Processing Letters, 91 (2004),

pp.11-17.

[19] Wen-Yan Su and Chun-Nan Hung, "The longest ring embedding in faulty hypercube," Workshop on Combinatorial Mathematics and Computational Theory, (2006), pp.262-272.

[20] Chang-Hsiung Tsai and Jimmy J.M. Tan and Tyne Liang and Lih-Hsing Hsu, "Fault-tolerant Hamiltonian laceability of hypercubes," Information Processing Letters, 83(2002), pp.301-306.

[21] Aniruddha S. Vaidya, "A Class of Hypercube-like Networks," Parallel and Distributed Processing, 1993. Proceedings of the Fifth IEEE Symposium, (1993), pp.800-803.