最佳多容錯環狀與線性陣列網路之建構

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摘 要

連結網路連結了平行電腦上的處理器，環狀網路與線性陣列網路都算是最基本的網路結構，它們可以 在分散式系統中執行排序與搜尋等等的工作，環狀網路也常用來當作區域網路的連接結構，就像號誌環 網路。容錯性質也是一個很重要的研究主題，特別是當連結網路所連結的處理器很大時。在此論文中， 我們將研究環狀網路與線性陣列網路的容錯性質，分別探討處理器故障或是處理器之間連線的情形，也 探討兩者同時發生的情形。 在這篇論文中，我們介紹(點和邊)的漢米爾頓連通圖形和強的K漢米爾頓圖形。而且我們提出建立可容 錯的漢米爾頓圖形和漢米爾頓連通圖形的方式。 我們將提出一種新的漢米爾頓容錯圖形，稱為強的K-漢米爾頓圖形，我們還針對強的K漢米爾頓圖形 提出(K + 2)-連接和K2笛卡兒乘積兩種建構方式。應用此建構方式，我們可以建構出很多新的堅固地的 K漢米爾頓圖形。

關鍵詞 : K漢米爾頓圖、(K + 2)-連接、內部連結網路、(點、邊)漢米爾頓連通圖形、強的K漢米爾頓圖形、笛卡 兒乘積、容錯性質。

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