Mycielski 圖形的環著色數上界

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摘 要

在尋找不含三角形且有任意大的著色數圖形時，Mycielski([15]) 發展出一種圖形轉換方式，可以將一個圖形G變形成一個新圖形 M(G)，稱之為G的Mycielskian；重複此轉換，當t>=2時，可以令Mt(G) = M(Mt-1((G))。關於這些圖形之環著色數值(circular chromatic number; χc)的研究已經有一些發展。在這篇論文裡，我們主要探討 的是χc(Mt(G))可能的範圍，特別是當G是完全圖(complete graph; Kn) 或環完全圖(circular complete graph;Kkd)時。Chang、Huang及Zhu 等人在[3]中證明了當χc(G)<= χ(G)-r且r = 1/2或1/3時，可得到對任 意正整數t， χc(M2t(G))也會有<= χ(M2t(G)-r)的性質。我們進一步證 明了此一性質在r = 2/3時也會成立；換言之，當χc(G)接近χc(G)-1 時， χc(M2t(G))也會接近χc(M2t(G))-1。

關鍵詞 : Mycielski 圖，環著色數

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