

# 應用色彩與紋理於自然影像之階層式分割技術

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這篇論文提出一個階層式的影像分割技術。此技術分別使用色彩與紋理資訊於第一階段與第二階段之影像分割。第一階段色彩分割將影像分割成具有相同顏色的區域，其具有抵抗非均勻照明的能力。這些第一階段分割出的區域將於第二階段分割中再區分出紋理與非紋理區域。對於自然影像而言，這個方法傾向於得到有類似顏色與紋理的分割區域。這篇論文也做了一些實驗與比較來展示此方法的效能。

# **A Hierarchical Segmentation for Natural Images**

## **Using Color and Texture**


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### **ABSTRACT**

The logo of National Chiao Tung University is a circular emblem with a gear-like border. Inside the circle, there are stylized letters 'E', 'S', and 'A' arranged vertically, and the year '1896' at the bottom. The logo is semi-transparent and overlaid on the abstract text.

A hierarchical scheme for image segmentation is proposed in this thesis. This method uses color and texture information for the first and second stage segmentation, respectively. The first stage segmentation by color divides an image into regions with similar color, which has a resistance to the influence of non-uniform illumination. And, then, the second stage segmentation by texture uses the regions obtained in the first stage to further divide them into textured and non-textured regions. For natural images, this method tends to get regions with similar color and texture. Experiments and comparison are given to demonstrate the performance of the segmentation method in this thesis.