

## 應用數值航空攝影測量於地滑位移分析

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**摘 要** 山區地質災害中，大多數山坡地點偏僻甚至無法開車進入，步行可能需要花費許久時間，使用遙測可大範圍監測，也可快速得到所要的資料；有別於一般將遙測影像用於崩塌前後的比較，本研究使用不同年份的航空影像，交互比對邊坡的位移速率，評估航空影像做為監測工具的適用性。在坡地完全崩塌前可能有滑動跡象，而滑動發生前通常並未設置相關監測儀器，故本文由目前國內已知的案例，如國道三號崩塌與廬山地滑，以農林航空測量所歷年來的航空影像結合 GIS，評估地表特徵物之位移量來分析案例邊坡，探討這些邊坡在不同的地質狀況下其地表位移速率的變化或潛移狀況。

**關鍵詞**：航空攝影測量、國道三號崩塌、廬山地滑、地表位移速率。

## The Assessment of Landslide Displacements Using Digital Photogrammetry

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**ABSTRACT** Hazards among mountains are usually located on off-track areas and some of them are even difficult to reach to. However, remote sensing is used to monitor a large scale of areas and required data can be easily obtained in a jiffy. Instead of comparing remote sensing images between before and after a landslide event, this study compares aerial photographs over the years with the velocities of surface movements of landside to evaluate the feasibility of aerial photographs as a monitor. Before total collapse occurs, there are signs show that the slope is sliding, but no equipment is set up for monitoring, so this study takes Formosa highway landslide and Lushan landslide for example, uses GIS to discriminate aerial photographs of Aerial Survey Office over the years, evaluate the displacement of the characteristic marks and analyze the displacement rate or creep behavior of these slopes under different geological conditions.

**Key Words:** Digital photogrammetry, Formosa highway landslide, Lushan landslide, displacement rate.

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