

## 台灣中部地區土石流災害溪流之地形特性

陳晉琪<sup>[1]</sup> 謝正倫<sup>[2]</sup> 林慶偉<sup>[3]</sup>

**摘 要** 本文收集近年來台灣中部地區發生土石流災害地點資料，從地形圖中決定各溪流之長度、溪流平均坡度及集水區面積等地形參數。根據所決定之地形參數，探討溪流長度、溪流平均坡度、集水區面積及集水區形狀因子等之統計分佈特性，並分析各地形參數之相關性，建立溪流長度與集水區面積之關係式，以及土石流發生溪流平均坡度與集水區面積之臨界條件。此外，探討 921 集集地震效應對土石流發生溪流地形特性之影響。

**關鍵詞：**溪流長度、溪流平均坡度、集水區面積、地震。

## Topographic Properties of Debris Flow in Central Taiwan

Jinn-Chyi Chen<sup>[1]</sup> Chjeng-Lun Shieh<sup>[2]</sup> Ching-Weei Lin<sup>[3]</sup>

**ABSTRACT** This paper collects the events of debris flow which have occurred in central Taiwan in recent years and determines their topographic parameters, such as gully length, average slope of gully bed, and watershed area. According to the determined topographic parameters, the distributions of the gully length, average slope, watershed area and the form factor of the watershed are presented using a statistical method. The relationships of gully length and watershed area as well as the critical condition of the gully length and watershed area are developed. In addition, the effects of the Chi-Chi earthquake on the topographic properties are examined in this paper.

**Key Words:** gully length, average slope of gully bed, watershed area, earthquake.