

## 以指數平滑法擬合流量率定曲線

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**摘 要** 臺灣河川坡陡流急較難以傳統方法建構河川水力分析模式，國外常用水位流量率定之製作與校正方式難以適用於本地，本研究利用時間序列理論之觀念，導入單參數指數平滑法以應用於水位流量率定曲線之製作，指數平滑法可利用過去資料並藉由單參數適時地修正，製作出具可靠之水位流量率定曲線應用，可避免無足夠實測資料據以製作水位流量率定曲線的窘境，更比冒然採用前一年水位流量率定曲線更加可靠，尤其對河床變遷劇烈的河川實用性更高。

**關鍵詞：**水位流量率定曲線、指數平滑法、時間序列。

## Use of Exponential Smoothing to Fit Discharge Rating Curves

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**ABSTRACT** Most of the rivers in Taiwan are small and quiet steep. It is always tough to describe the relation between discharge and corresponding water level with the concept of determined models. In this study, the exponential smoothing model (ESM) is used to construct a discharge rating curve of the Choshui River at the ChangYun Bridge. The exponential smoothing function could simulate the time series variation of water level by adjusting the smoothing factor. One of the advantages of the exponential smoothing is that only one parameter has to be selected.

**Key Words:** discharge rating curve, exponential smoothing, time series.