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未設測站日流量預測－以烏溪流域為例

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摘　　要　流量記錄是一般水利設施在規劃設計或操作管理上的基本資料。然而，水利工程在規劃設計時，卻常常面臨現址無流量記錄的情況。因此，流量資料的推估或生成便是一個相當重要的工作。由於降雨爲河川流量的主要來源，所以本文應用迴歸分析理論，建構日雨量與日流量之時間序列關係式；而各流量站的空間分布特性，則是運用區域化變數理論之克利金推估模式，建構各流量站之空間結構性關係式。此種結合時間及空間特性，運用迴歸分析理論及區域化變數理論所建立之日流量時間序列推估模式，對於推求出未設測站之流量時間序列有很大的助益。文中以烏溪流域爲案例研究對象，分析結果顯示克利金流量推估模式推估結果較傳統之集水區面積比推估方法爲佳。

關鍵詞：克利金法、迴歸分析、時間序列。

Streamflow Estimation for Ungaged Sites —A Case Study of the Wu-Xi Basin

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ABSTRACT　Stream flow records are essential data for hydraulic structure design and water resource management. However, in reality, many sites do not have any records; therefore, unknown flow data estimation becomes an important work. Rainfall is the basic source for streamflow, and so by using regression analysis in this study, the main purpose is to establish daily precipitation and daily streamflow discharge time series relationship formula, and further by using regional variable theory of Kriging Estimation Method, to establish spatial structure relationship formula for each flow station. Therefore, by taking time and spatial characters for establishing this time series estimation method can make a great deal of progress in estimating unknown flow station data statuses. In this study, we select Wu-Xi River Basin as the research site. Analysis result shows that Kriging method is better than traditional model. So it can be employed for future daily discharge time series estimation model.

Key Words:　kriging, regression analysis, time series.

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