

عنوان مقاله:

Mathematical modelling of local scour depth in river bed applying Gaussian function

محل انتشار:

یازدهمین سمینار بین المللی مهندسی رودخانه (سال: 1397)

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خلاصه مقاله:

River bed is one of the most important regions in river systems, which is known as a high turbulence area with three-dimensional motion. Due to changes in speed, phenomena such as deep erosion occur in the bed. This causes damage to the adjacent building, and most importantly, the morphology of the river. Therefore, it is necessary to know the mechanism of erosion and sedimentation in this area. In the present study due to the complexity of the problem and the three-dimensional conditions governing the flow and the sediment, a field study was put on the agenda and by a famous mathematical function i.e. Gaussian, the values of the erosion depth which are monthly measured was modeled. Then to evaluate the performance of the mentioned function, the last 6 months data set of the study, was predicted. The results confirmed the verification and performance of the function considering $R^2=0.9914$

کلمات کلیدی:

Gaussian function, local Scour, River bed, River engineering

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