

## عنوان مقاله:

An improved implicit solution for the two dimensional shallow water equations using unstructured grids

## محل انتشار:

کنفرانس بین المللی هیدرولیک سدها و سازه های رودخانه ای (سال: 1383)

تعداد صفحات اصل مقاله: 12

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## خلاصه مقاله:

In this paper, an implicit unstructured grid algorithm for solving 2-D Shallow Water Equations (SWE) has been developed. It is based on cell-centered Finite Volume Method (FVM) and can handle cells of triangular type. The model uses Roe's approximate Riemann solver to compute fluxes. In addition, a new technique is introduced to prevent instabilities and oscillations caused from the bed slope terms in the case of problems with arbitrary topography and hydraulic structures. The proposed method is validated and verified via solving an example and comparison of the results obtained from the new method with the physical model measurements. Second order accuracy in time and second or higher order accuracy in space can be achieved in this method.

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/3860>

