

## عنوان مقاله:

2D Numerical Modeling of Hydrodynamics and Contaminant Dispersion in Shallow Waters in Curvilinear Coordinates

## محل انتشار:

نهمین همایش بین المللی مهندسی سواحل، بنادر و سازه های دریایی (سال: 1391)

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## خلاصه مقاله:

This paper is concerned with development of a two-dimensional (2D) depth-averaged curvilinear model of hydrodynamics and transport of contamination in shallow waterways. The model is a numerical hydrodynamic-advection-dispersion model which can handle rivers with variable width, depth, and path and is capable of grid generation, input data preparation, and processing of output results. The model is formulated in curvilinear coordinates. The governing two-dimensional unsteady depth-average Navier-Stokes equations are solved numerically using an implicit finite difference technique. The numerical scheme used is a second order accurate in time and space and its stability is controlled by Courant number. The model is verified with hydraulic problems, including flow modeling in a converging channel and a 90 degree bend, and flow and pollutant dispersion in a simple bend

## کلمات کلیدی:

Hydrodynamics, Pollutant Dispersion, Numerical Modeling, Shallow Waters

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/256943>

