



Multiquadric and Compactly Supported Radial Basis Functions for Shallow Water Equations

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Meshfree methods have gained much attention in recent years, not only in the mathematics but also in the engineering community. The computer and numerical methods are powerful tools of analysing wide range of engineering and industrial application. For long time researchers recognised problems when using a mesh-based method. Developing the meshless methods overcome these problems. In the present paper, we present the application of both the global and the compactly supported radial basis functions (CSRBFs) for solving a system of shallow water hydrodynamic model for marine environments. As the technique is based on the collocation formulation and does not require the generation of a grid and any integral evaluation, the technique is considered as purely meshless method. The Computational efficiency and accuracy of both used functions are verified by comparing the analytic and observed solution.