Accepted Manuscript

A new efficient implicit scheme for discretising the stiff friction terms in the shallow water equations

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 PII:
 S0309-1708(18)30212-4

 DOI:
 10.1016/j.advwatres.2018.05.004

 Reference:
 ADWR 3137

To appear in: Advances in Water Resources

Received date:7 March 2018Revised date:2 May 2018Accepted date:7 May 2018

Please cite this article as: Xilin Xia, Qiuhua Liang, A new efficient implicit scheme for discretising the stiff friction terms in the shallow water equations, *Advances in Water Resources* (2018), doi: 10.1016/j.advwatres.2018.05.004

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Highlights:

- A new implicit scheme is developed for discretising the friction source terms in the shallow water equations.
- The new scheme can relax flow velocities towards the correct equilibrium state.
- The new scheme is numerically stable and accurate for simulating very shallow flows.
- The new scheme is easy to implement and computationally efficient.

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