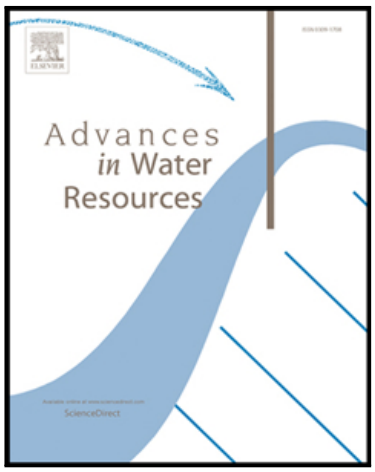

Modeling Shallow Water Flows on General Terrains

Ilaria Fent, Mario Putti, Carlo Gregoretti, Stefano Lanzoni

PII: S0309-1708(17)30197-5
DOI: 10.1016/j.advwatres.2017.12.017
Reference: ADWR 3051

To appear in: *Advances in Water Resources*

Received date: 1 March 2017
Revised date: 15 December 2017
Accepted date: 18 December 2017

Please cite this article as: Ilaria Fent, Mario Putti, Carlo Gregoretti, Stefano Lanzoni, Modeling Shallow Water Flows on General Terrains, *Advances in Water Resources* (2017), doi: 10.1016/j.advwatres.2017.12.017

Highlights

- A new model for Shallow Water flow in general terrains is proposed.
- The model intrinsically contains the bottom geometry information.
- A centered Godunov scheme based on the FORCE flux evaluation discretizes the model.
- Numerical results on synthetic cases show that the effects of bottom curvatures on the simulation results are non negligible even under the SW assumptions.