A numerical technique for applying time splitting methods in shallow water equations.

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In this talk we analyze the use of time splitting techniques for solving shallow water equations. We discuss some properties that these schemes should satisfy so that interactions between the source term and the shock waves are controlled. This work shows that these schemes must be well balanced in the meaning expressed by Greenberg and Leroux [3]. More specifically, we analyze in what cases it is enough to verify an Approximate C-property and in which cases it is required to verify an Exact C-property (see [1], [2]). We also discuss this technique in two dimensions and include some numerical tests in order to justify our reasoning.

References

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