

Agoshkov, V. I.; Ambrosi, D.; Pennati, V.; Quarteroni, A.; Saleri, F.
Mathematical and numerical modelling of shallow water flow. (English) Zbl 0771.76032
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Summary: This paper deals with shallow water equations. We discuss the mathematical model, the admissible boundary conditions, some popular numerical methods in the specialized literature, as well as we propose new approaches based on fractional step and finite element methods.

MSC:

76M10 Finite element methods applied to problems in fluid mechanics
76M20 Finite difference methods applied to problems in fluid mechanics
76B15 Water waves, gravity waves; dispersion and scattering, nonlinear interaction

Cited in 11 Documents

Keywords:

weak formulation; fractional step methods; admissible boundary conditions

Software:

TELEMAC

Full Text: [DOI](#)

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