

Weideman, J. A. C.; Herbst, B. M.

Split-step methods for the solution of the nonlinear Schrödinger equation. (English)

Zbl 0597.76012

SIAM J. Numer. Anal. 23, 485-507 (1986).

MSC:

76B15 Water waves, gravity waves; dispersion and scattering, nonlinear interaction

Cited in **95** Documents

65M12 Stability and convergence of numerical methods for initial value and initial-boundary value problems involving PDEs

35Q99 Partial differential equations of mathematical physics and other areas of application

76M99 Basic methods in fluid mechanics

Keywords:

weakly nonlinear periodic wave trains on deep water; split-step method; numerical solution; nonlinear Schrödinger equation; finite difference; Fourier method; conservation law; dispersion; instability; numerical instabilities; wave train solutions

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