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Spectral methods in time for a class of parabolic partial differential equations. (English)

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J. Comput. Phys. 102, No. 1, 88-97 (1992).

The authors propose a fully spectral solution for the equation $u_t + uu_x + au_{xx} + bu_{xxx} + cu_{xxxx} = 0$ using a Fourier expansion in x and a Chebyshev expansion in t.

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MSC:

65M70 Spectral, collocation and related methods for initial value and initial-boundary value problems involving PDEs

35K50 Systems of parabolic equations, boundary value problems (MSC2000)

Keywords:

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