

On Solitary-Wave Solutions for the Coupled Korteweg – de Vries and Modified Korteweg – de Vries Equations and their Dynamics

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Analytic sech^4 -type traveling solitary-wave solutions of the coupled Korteweg-de Vries and modified Korteweg-de Vries equations proposed by Kersten-Krasil'shchik, are found by applying the auxiliary function method. The dynamical properties of the solitary-waves are studied by numerical simulations. – PACS numbers: 03.40.Kf, 02.30.Jr, 47.20.Ky, 52.35.Mw

Key words: Coupled Korteweg – de Vries and Modified Korteweg – de Vries Equation;
Analytic Solitary-Wave Solutions; Numerical Simulations; Stability; Interaction.