

Solitons and dynamic properties of the coupled semidiscrete Hirota equation

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Abstract:

In this talk, we will give the coupled bright-bright and the coupled dark-dark soliton solutions for the integrable coupled Hirota equation (ICDHE) using bilinear method. These solutions have both singular and nonsingular behaviors depending upon the choice of parameters. The distinguishing feature of the ICDHE is that the singular solution can possess some nonsingular characteristics in the discrete space at some time. The asymptotic behavior of these coupled bright-bright and coupled dark-dark solitons is discussed in order to explain their collision properties. This is a joint work with Dr. Hai-qiong Zhao.

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