

Extended Jacobi Elliptic Function Rational Expansion Method and Its Application to (2+1)-Dimensional Stochastic Dispersive Long Wave System

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Abstract: In this work, by means of a generalized method and symbolic computation, we extend the Jacobi elliptic function rational expansion method to uniformly construct a series of stochastic wave solutions for stochastic evolution equations. To illustrate the effectiveness of our method, we take the (2+1)-dimensional stochastic dispersive long wave system as an example. We not only have obtained some known solutions, but also have constructed some new rational formal stochastic Jacobi elliptic function solutions.

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Key words: stochastic evolution equations, (2+1)-dimensional stochastic dispersive long wave system, rational formal stochastic Jacobi elliptic function solutions

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