

Explicit quasi-periodic wave solutions and asymptotic analysis to the supersymmetric Ito's equation

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Based on a Riemann theta function and the super-Hirota bilinear form, we propose a key formula for explicitly constructing quasi-periodic wave solutions of the supersymmetric Ito's equation in superspace $\mathbb{C}_{\Lambda^{2,1}}$. Once a nonlinear equation is written in bilinear forms, then the quasi-periodic wave solutions can be directly obtained from our formula. The relations between the periodic wave solutions and the well-known soliton solutions are rigorously established. It is shown that the quasi-periodic wave solutions tends to the soliton solutions under small amplitude limits.

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