Application of the Exp-Function Method to the Riccati Equation and New Exact Solutions with Three Arbitrary Functions of Quantum Zakharov Equations

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The Exp-function method with the aid of the symbolic computational system is used for constructing generalized solitary solutions of the generalized Riccati equation. Based on the Riccati equation and its generalized solitary solutions, new exact solutions with three arbitrary functions of quantum Zakharov equations are obtained. It is shown that the Exp-function method provides a straightforward and important mathematical tool for nonlinear evolution equations in mathematical physics.