

# Application of New Triangular Functions to Nonlinear Partial Differential Equations

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The results of some new research on a new class of triangular functions that unite the characteristics of the classical triangular functions are presented. Taking into consideration the great role played by triangular functions in geometry and physics, it is possible to expect that the new theory of the triangular functions will bring new results and interpretations in mathematics, biology, physics and cosmology. New traveling wave solutions of some nonlinear partial differential equations are obtained in a unified way. The main idea of this method is to express the solutions of these equations as a polynomial in the solution of the Riccati equation that satisfy the symmetrical triangular Fibonacci functions. We apply this method to the combined Korteweg-de Vries (KdV) and modified KdV (mKdV) equations, the generalized Kawahara equation, Ito's 5th-order mKdV equation and Ito's 7th-order mKdV equation.

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