Abstract

In this paper, we employ the exp(-?x)-expansion method to find the exact traveling wave solutions involving parameters of nonlinear evolution equations Fitzhugh-Nagumo (FN) equation and Modified Liouville equation. When these parameters are taken to be special values, the solitary wave solutions are derived from the exact traveling wave solutions. It is shown that the proposed method provides a more powerful mathematical tool for constructing exact traveling wave solutions for many other nonlinear evolution equations.

References

- S. A. EL-Wakil, M. A. Abdou, New exact travelling wave solutions using modified
- E. H. M. Zahran and Mostafa M. A. Khater, Exact solutions to some nonlinear evolution equations by the (G'/G) expansion method equations in mathematical physics, Jokull Journal, Vol. 64, No. 5; May 2014.
- E. Fan, J. Zhang, Applications of the Jacobi elliptic function method to special-type

Index Terms

Computer Science
Applied Mathematics

Keywords

The \( \exp(-?x) \)-expansion method; Fitzhugh-Nagumo (FN) equation; Modified Liouville equation; Traveling wave solutions; Solitary wave solutions; Kink-antikink shaped.