Wavelet-Based Numerical Scheme Compared with VIM for Solving Kawahara Equation

Kamel Al-Khaled

Department of Mathematics and Statisic, Jordan University of Science and Technology, Jordan

E-mail: kamel@just.edu.jo

ABSTRACT

This paper aims to introduce a comparison of variation iteration method (VIM) and the wavelet basis method for the numerical solutions of the Kawahara equation, that arise naturally in modeling many physical phenomena. The comparison shows that VIM is efficient and easy to use. On the other hand, the Wavelet method is more stable as time increases.