
ABDULLAHI ADEM, North-West University

Multiple wave solutions and conservation laws of the Date-Jimbo-Kashiwara-Miwa (DJKM) equation via symbolic computation

In this talk, we present soliton solutions and conservation laws for the DJKM equation with the aid of symbolic computation. The soliton solutions of the DJKM equation are constructed by using the multiple exp-function method, which is a generalization of Hirota's perturbation scheme. The solutions obtained involve generic phase shifts and wave frequencies. Furthermore, infinitely many conservation laws are derived by using the multiplier method which is an indicator of the integrability of the underlying equation.