

# Nonlinear wave phenomena to Korteweg-de Vries – Burgers-type equation

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## **Abstract:**

In this talk, our goal is to study a modified Korteweg-de Vries –Burgers equation with two higher-order nonlinearities. By means of the Lie symmetry reduction method and the Preller-Singer procedure, we show that there exist nontrivial bounded solitary wave solutions under certain parametric conditions. Numerical simulations of waves are illustrated, which provide us rich dynamic information and are in agreement with our theoretical analysis.