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Zhaosheng Feng* (zhaosheng.feng@utrgv.edu), University of Texas-Rio Grande Valley,
Edinburg, TX 78539. *Wave solutions to Kuramoto-Sivashinsky Equation.*

In this talk, we are concerned with the Kuramoto-Sivashinsky equation which occupies a prominent position in describing physical processes in unstable systems. 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 wave phenomena are illustrated, which provide us rich dynamic information and are in agreement with our theoretical analysis. (Received January 02, 2017)