

DECAY OF SOLUTIONS TO DAMPED KORTEWEG-DE VRIES TYPE EQUATION.

Abstract: Results of decay in time of the energy in  $L^2$ -level related to the damped Korteweg- de Vries equation posed on infinite domains, will be established in this talk. We prove exponential decay rates of the energy associated with the initial value problem if the dissipative mechanism is localized, that is, the dissipation is elective outside a compact set. If this mechanism is full, we get a similar result in  $H^k$ -level,  $k \in \mathbb{N}$ . In addition, we present the decay in time of the energy in  $L^2$ -norm with respect to the initial boundary value problem posed on the right half-line by considering convenient conditions on the initial data and on the dissipative effect.