

1116-33-274

Ti-Jun Xiao* (tjxiao@fudan.edu.cn), School of Mathematical Sciences, Fudan University, Shanghai, Shanghai 200433, Peoples Rep of China. *Decay rates of energy functions for a system with memory.*

We study decay rates of energy functions associated with a system of coupled second order semilinear evolution equations with memory in Hilbert spaces. We present a new approach for obtaining optimal rates of uniform decay of the energy functions for the system. The same rate is also obtained for energy functions of the single second order evolution equations with memory. Moreover, applications to some partial differential equations are given. (Received August 19, 2015)