1125-37-395 **Erkan Nane** and **Yinan Ni*** (yzn0005@auburn.edu). *Stability of the solution of stochastic differential equation driven by time-changed Lévy noise.*

This paper studies stabilities of the solution of stochastic differential equation (SDE) driven by time-changed Lévy noise in both probability and moment sense. This provides more flexibility in modeling schemes in application areas including physics, biology, engineering, finance and hydrology. Necessary conditions for solution of time-changed SDE to be stable in different senses will be established. Connection between stability of solution to time-changed SDE and that to corresponding original SDE will be disclosed. Examples related to different stabilities will be given. We study SDEs with time-changed Lévy noise, where the time-change processes are inverse of general Lévy subordinators. These results are important generalization of the results in Wu's "Stability of stochastic differential equation with respect to time-changed Brownian motion, 2016". (Received August 31, 2016)