

Consensus in heterogeneous networks containing both linear and linear impulsive dynamics is considered in this paper. The model applies for networks of interconnected dynamical systems, called agents, that are partitioned into several clusters. Most of the agents can only update their state in a continuous way using only inner-cluster agent states. On top of this, few agents also have the peculiarity to update their states in a discrete way by resetting it using states from agents outside their clusters. Our main result gives sufficient conditions for consensus in these networks. We firstly analyze the case when the reset sequence verifies some explicit time conditions. Secondly we consider the case when the reset instants are event-triggered, i.e., defined by the occurrence of specific events. Finally, we treat the case when the reset instants arrive stochastically following a Poisson renewal process.