1145-93-2689   **Dylan R Poulsen*** (`dpoulsen2@washcoll.edu`), 300 Washington Ave, Chestertown, MD 21620.
Consensus of Multi-Agent Systems: A Time Scales Approach. Preliminary report.

We are motivated by the consensus problem for multi-agent systems, wherein agents try to reach global agreement about the value of a certain quantity by communicating only locally. If the line of communication between two agents is unreliable, then the time set on which the agents can communicate forms a so-called pulse time scale with varying and random gap sizes and interval lengths. Solving the consensus problem on time scales can be related to the asymptotic stabilization problem on time scales. Therefore, we discuss the stability theory for linear systems on such stochastic pulse time scales, where the length of communication uptime and downtime are random variables. (Received September 25, 2018)