1120-15-181 **Jane Breen*** (breenj3@myumanitoba) and **Steve Kirkland**. *Mean first passage times and load-balancing for Markov chains.* Preliminary report.

For a Markov chain described by an irreducible stochastic matrix T of order n, the mean first passage time $m_{i,j}$ measures the expected time for the Markov chain to reach state j given that the system begins in state i, thus quantifying the short-term behaviour of the chain. In this talk, we give a lower bound for the maximum mean first passage time in terms of the stationary distribution vector of T, and characterise some matrices for which equality is attained. We also discuss the restrictions placed on the directed graph corresponding to the matrix T if equality is to be attained. (Received February 21, 2016)