Dynamic centrality in random subnetworks SCOTT HILL, Adrian College — Communication networks in social groups typically have a "scale-free" structure, dominated by a small fraction of highly-connected "hubs". This long-tail degree distribution exists even if one considers the communication that occurs on a particular day; however, it has been shown that the identity of the hubs in a real-world email network can shift dramatically from day to day, a property which has been termed dynamic centrality. In this presentation, we show that dynamic centrality arises naturally when the daily networks are simply random subsets of nodes and links from the underlying long-term network.

Scott Hill
Adrian College

Date submitted: 11 Sep 2016   Electronic form version 1.4