1125-VW-2827 **Tucker L. Dowell*** (tucker.dowell@pop.belmont.edu), **Daniel Biles** and **Glenn Acree**.
Stochastic Social Network Model for the Dissemination of Ideas.

A lot of work has been done using graph theory to represent social networks. We use some of this knowledge to drive an idea for a model to map the dissemination of ideas within social networks. Each vertex of this graph represents a person, and weighted edges are used to represent connections between people while vertices are weighted based on network centrality measures. Associated with each vertex (person) is a set of Stochastic Differential Equations representing the disposition of the person toward a certain aspect of an idea. For example, if we were modeling a presidential election, there would be a certain probability a person would lean toward the Republican, Democratic, Libertarian, or Green Parties at any particular time. The goal of this research is to test the validity of the proposed model, seeing, in particular, if we can use the model to make predictions about how the disposition of the entire network will change over time. (Received September 20, 2016)