



Janice Mendoza

Faculty Mentor: Dr. Butler-Purry  
Department of Electrical Engineering  
Texas A&M University

## ABSTRACT

### Short Circuit Analysis on IEEE 34 Node Distribution Feeder

The IEEE 34 Node Distribution Feeder is an actual feeder located in Arizona. I have been modeling the feeder, along with Francisco, this past three weeks. We are using a program called PSS-ADEPT to model the feeder. My main components were the two transformers, two voltage regulators, the distributed loads, and spot loads. I have conducted numerous calculations for these components. Most of all the equations were taken from the book *Distribution System Modeling and Analysis* by William H. Kersting. I have also created numerous excel calculations for the calculating the spacing of the distributed loads. As of right now, we are in the process of constructing the model to have results similar to the IEEE data sheet. After we finish the model, I will then perform the short circuit analysis on the feeder. The program allows a short circuit calculation to determine the effect of a fault on the network. There are two types of faults that I can perform: *fault* and *a fault all*. A *fault* calculation will allow me to place the desired faults at single or multiple nodes in the network, while a *fault all* calculations conducts a series of faults in which I can specify what type of a fault it can be.