

1096-VG-1658 **Felicia Maria G Magpantay*** (felicigm@umich.edu). *Numerical analysis of delay equations*. Preliminary report.

As with ordinary differential equations (ODEs), delay differential equations (DDEs) generally have to be solved numerically. The standard approach to do this is to look at existing ODE methods and extend them to accommodate the delay terms. However there is a lot to consider when making this extension, especially when the delay is state-dependent. In this talk we will consider some of the issues that arise when numerically integrating delay equations. We will also look at some applications to state-dependent delay equations such as an age-structured population model consisting of the McKendrick partial differential equation and a threshold condition. (Received September 16, 2013)