

1145-VT-1353 **Netra P Khanal*** (nkhanal@ut.edu), 401 W. Kennedy Blvd, Tampa, FL 33606. *Cybersecurity:
A New Predictive Analytical Model for Software Vulnerability Discovery Process.*

A software Vulnerability is defined as a flaw that exists in computer resources or control that can be exploited by one or more threats. In this presentation, we examine the existing models on the subject area and propose a new time-based differential equation model. We apply the proposed model in cumulative quarterly vulnerability data for three Operating Systems: Mac OS X, Windows 7, and Linux Kernel. Our model performs significantly better when compared with the existing models in terms of fitting and prediction capabilities. (Received September 21, 2018)