

1106-VT-1559      **Philip Joseph Lombardo\*** (plombardo@sjcny.edu). *GeoGebra 5.0 and Multivariable Calculus*. Preliminary report.

GeoGebra 5.0 is a free program that will graph surfaces and vector-valued functions in  $\mathbb{R}^3$ . In this talk, I share some of the visualizations that I created in GeoGebra 5.0 to teach critical topics in multivariable calculus. The program does not have heavy system requirements, it's freely available to students, and fairly easy to learn. (Received September 14, 2014)